Discourse Analysis is left out, according to McLaughlin, for having contributed more to methodological issues than to theory. He does this despite the fact that Discourse Analysis has a particular explanatory thrust to describe the process of second language acquisition (Hatch, 1980), a thrust one might expect him to be in favor of. Actually, I think the emphasis on methodology is not his main reason for leaving out Discourse Analysis and related attempts, rather it is consideration of the individualizing aspects of this approach. Until now Discourse Analysis has provided us mainly with a posteriori analyses, and the interactive view it takes claims that contributions of the individual learner and of those who speak with the learner are both of importance in accounting for language acquisition. These individualizing aspects do not fit very well into a generalizing view of scientific theory.

McLaughlin’s view of scientific theory is a very popular but a very biased one. He does not see that an alternative, individualizing approach is valuable as well. According to the classic distinction between natural sciences and social sciences (Geisteswissenschaften) in the late 19th and early 20th centuries (cf. Dilthey, 1883; Rickert, 1921) individualizing approaches are supposed to be more appropriate in the social sciences. In our time, however, with its belief in technique and natural sciences, this does not sound good. Many linguists, psychologists and others who deal with SLR prefer to be regarded as natural scientists and McLaughlin is one of them. I don’t want to make a plea exclusively for individualizing approaches, rather, I argue in favor of considering individualizing and generalizing points of view. Both are valuable and can exist side by side or complementing each other.

Although McLaughlin’s book is biased it is a very useful book. It mirrors very well the bias toward generalizing approaches common in the study of SLR and, read thoroughly, it reveals the problems which are inherent in this point of view. This book is well organized and very informative. McLaughlin’s evaluating framework and his evaluations, regardless of all the caveats I have offered, give deep insights into the problems of the state of the art in SLR.

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Introduction

The papers contained in this special issue of *HJBS* on testing are the product of a year-long effort to compile a multidisciplinary assessment of Lloyd Dunn's monograph, *Bilingual Hispanic Children in the U.S. Mainland: A Review of Research on Their Cognitive, Linguistic, and Scholastic Development*, Minneapolis: American Guidance Service, 1987. A bit of background is necessary to explain to readers the context in which this critique evolved.

Canadian-born Lloyd Dunn, Ph.D., Affiliate Professor of Special Education, College of Education, University of Hawaii at Manoa and Senior Author, *Peabody Picture Vocabulary Test Series*, is a fellow of the American Psychological Association and a former president of the Council for Exceptional Children. An elementary and secondary education teacher in his early professional life and later on a psychometrician and test developer, Professor Dunn has done research on language development and test construction and has worked extensively in the fields of school psychology, remedial reading, and special education. Although retired, Dr. Dunn continues to be an active professional.

Early in 1987 a draft of the manuscript of Professor Dunn’s monograph began circulating in professional circles and soon reached major educational organizations as well as Congressional staff in Washington, D.C. In May, 1987 a copy of the document was forwarded to the Hispanic Research Issues Special Interest Group (SIG) of the American Educational Research Association (AERA) by James J. Lyons, Legislative Counsel to the National Association for Bilingual Education (NABE), who obtained it from a staff member of the House Committee on Education and Labor. The potential impact of this monograph was of concern to NABE, and Mr. Lyons suggested it might be appropriate for a professional organization to review it in a scholarly fashion in an attempt to offer alternative perspectives and interpretations and a more balanced analysis of the generally negative findings the document contains about Hispanic and other minority children and their parents, and on bilingual education.

The officers of the Hispanic Research Issues SIG agreed that Professor Dunn’s monograph was indeed worthy of scholarly scrutiny, given its potential impact on policy making related to His-
panic students and the Hispanic community at large. To facilitate this goal, a symposium was sponsored by the SIG with the support of the 1988 AERA Conference Program Chair, Leigh Burstein, and held in New Orleans on April 7, 1988. A distinguished panel of experts from various disciplines agreed to participate in the symposium and proceeded to prepare papers for the occasion. The disciplines represented covered the spectrum of the social and pedagogical sciences: anthropology (Trueba), sociolinguistics and special education (Cummins), educational psychology (Berliner, Prewitt-Diaz, and Willig), psychology (Padilla), and sociology and special education (Mercer).

Professor Dunn himself was invited to participate in the symposium but was unable to attend because of a conflict with previously scheduled travel. Copies of the papers were shared with him before the symposium, however, so that he might review and comment on them. His written reactions to these papers were distributed to all persons in attendance at the symposium along with copies of his monograph which he made available for the occasion. In addition, following the presentation of the individual papers, Professor Padilla as Session Chair presented a summary of Dunn’s comments prior to opening up the session for questions and answers. Thus, every attempt was made to insure that a fair and open scholarly debate would be held. Finally, Dr. Dunn was allowed to revise his initial reactions to the final versions of the papers, and his comments also appear in this issue.

The AERA Hispanic Research Issues SIG is pleased that the HIT/ES agreed to publish these papers as part of a special issue devoted to testing. This will allow for wide dissemination of the papers among the readership of the journal, which includes scholars, researchers, practitioners, teachers and other school staff, and many other professionals. All too often many worthy products of symposia and presentations at professional meetings do not receive the circulation they deserve among the academic community and the general public. That will definitely not be the case with the results from this symposium. Indeed, in addition to providing a permanent record for researchers and policy makers to draw from when studying the issue of testing and its impact on Hispanic students, this volume is likely to generate additional discussion on the topics discussed by the various authors.

The Dunn Monograph: Key Points

It is not possible to reproduce the entire 88-page monograph here due to limitations of space. Interested persons may request

a copy directly from Professor Dunn by writing him at: Box 706, 1525 Wilder Avenue, Honolulu, Hawaii 96822-4614. Nevertheless, it is essential for the reader to grasp the basic ideas that Professor Dunn has put forth in order to appreciate fully the substance of the critiques made of this work. Rather than attempt to summarize the entire document and in the process run the risk of excerpting phrases and paragraphs out of context, complete pertinent sections are cited below at length so that the reader can get the substance and flavor of the monograph. After reviewing these passages, it will be obvious to even the most casual reader why this document has provoked significant controversy among researchers and many others who have an interest in this population.

This monograph focuses primarily on a review of research concerning the cognitive, linguistic, and scholastic development of Hispanic children who live on the U.S. mainland. When these girls and boys are viewed as a group, with some exceptions, the overall picture portrayed is a dismal one. Because of the generally negative findings, one approach to writing this report would have been simply to catalog the studies without attempting to interpret the data. In my view, this would have been irresponsible. Therefore, a considerable portion of this paper is devoted to discussing and interrelating the results, and then applying them to education. As a result, much of the paper’s content has become “emotionally loaded.”

In the area of psychometrics, I have become increasingly alarmed about malpractices in test development, in the use of tests, and in research involving such scales, especially when children from a minority group are involved. But never before have I felt such a strong ethical need to write a paper to accompany the release of a test with which I am associated. This is because many TVIP users, though certainly not all, may be less well-informed than they would like to be about the psychoeducational characteristics of the various subgroups of Hispanic school children who now reside in the U.S. It is recognized that this body of knowledge has been largely outside the mainstream, up to now. As a result, few psychological examiners, researchers, and educators have been adequately exposed to it while in college. Even those who have this exposure may not have had the opportunity to keep current through reading recent publications. In ad-
dition, important, relevant unpublished data involving the test scores of Latin children on the PPVT-R, data that would not have been uncovered by a library search, are included in this report. While I do not expect everyone to agree with my treatment of this complex, controversial, and important topic, I hope that I have brought a reasonably objective and mature perspective to it, and have been fair and honest in reviewing the germane professional literature. As is my style, I have elected not to gloss over unpleasant findings. Whether my being an Anglo has clouded or enhanced my insights must be left to the judgment of individual readers.

Another prefatory comment is needed! This report focuses on group differences. Throughout this article, comparisons of average performance are made among various Hispanic-American subgroups, including Cubans, Mexicans, and Puerto Ricans, as well as Spaniards living in and around Madrid. Furthermore, Latinos are compared with non-Hispanic whites, non-Hispanic blacks, native Americans, and Asian Americans, each as a group. The flaw in this approach is obvious. By comparing average performance, one loses sight of the wide range of abilities and disabilities present in each group. Talking about the “average Hispanic” is a risky business. It’s like putting one foot in ice water and the other in very hot water, and saying that, on the average, you are very comfortable. Here is another example of the weakness of averages: Alaska has an average elevation of 1,900 feet, which is less than that of Kansas. This average hides the fact that four of the fifteen highest mountains in the U.S. are in Alaska.

But these examples are extreme cases. Most of the group data reported in this monograph are fairly normally distributed, with most of the scores piling up at the mean, and only a few at each of the extreme tails. Furthermore, despite differences among such groups as Latinos, Anglos, and blacks, there is always great overlap in distributions of test scores, because humans are more similar than they are different. Every individual is like all other human beings in most characteristics, like others in his or her subculture and racial group in some respects, and like no other in his or her unique traits. This monograph focuses on only ethnic similarities and differences. While it is universally accepted that the ultimate goal of the helping professions, including psychometric examiners, is to understand and assist the unique individual, it can be strongly argued that a knowledge of the group to which that person belongs is a prerequisite. While this contention is the major justification for this report, it needs to be constantly kept in mind that more similarities exist among human beings than differences.

[from Preface & Acknowledgements]

As a result of this fairly extensive review of the literature, here are ten guidelines that represent my best advice for educating Puerto Rican and Mexican-American children on the U.S. mainland who are having trouble at school, especially offspring of first-generation immigrants:

1. Primarily because of their inferior Spanish language skills, beginning at age 3, those for whom Spanish is the main language of the home need to be enrolled in quality nursery and kindergarten programs (not daycare operations) where oral Spanish is emphasized, with a special focus on building vocabulary. In addition to the teacher, good models in the form of older children and better-educated community volunteers must be provided. Spanish translations of the Peabody Early Experiences Kit (PEEK; Dunn, Chun, Crowell, Dunn, Alevy, & Yackel, 1976) and Level P of the Peabody Language Development Kit (PLDK; Dunn, Horton, & Smith, revised in 1981) would appear to be very helpful supplementary tools of instruction. (Teachers are encouraged to make their own Spanish translations of the PEEK and PLDK lessons, as these are currently available only in English.) Tutoring for children in need of extra help should be provided. Progress should be monitored with an array of measures of Spanish oral language skills, including the TVIP-H.* At the preschool stage, English should be completely avoided.

2. Primarily because of their lack of intellectual, scholastic, and language aptitude, but also for many other reasons that have been enumerated in this report, it is clear that these children are not, as a group, able to cope with the confusion

*Some professionals would argue cogently that English be started as early as age 3. The effectiveness of this strategy versus mine needs to be researched.
of two languages in the regular grades. Therefore, at age 6 or shortly thereafter, most of them need to be enrolled in a school program where they are immersed (but not "submerged") in English as the language of communication and instruction, preferably with a mix of older Hispanic and other pupils. One of the best ways to stimulate slow pupils to work up to standard is through heterogeneous, rather than homogeneous, grouping, where there are strong role models and competition. Segregated Hispanic schools and classes, especially by age levels, are invitations to failure. In emergencies, a child must be able to use Spanish to communicate his needs or lack of understanding. This does not require that teachers be bilingual. Instead, older pupils or those more efficient in English would translate for the younger children.

In fact, there is no clear evidence that a bilingual teacher is superior to a teacher who is monolingual in English, or vice versa. What is needed is a master teacher. A strategy which simultaneously stresses oral and written language should be the first emphasis; academic instruction should be added as soon as sufficient competency in English is acquired. In the language of instruction, pupil progress should continue to be monitored and unsuccessful teachers transferred to other positions or jobs. It is extremely important that tutoring be provided for children in need of extra help. In the primary grades, Level 1 (Dunn, Smith, & Dunn, revised in 1981), Level 2 (Dunn, Dunn, & Smith, revised in 1981), and Level 3 (Dunn, Smith, Smith, & Dunn, revised in 1982) of the Peabody Language Development Kits should be very helpful in stimulating both oral English and reasoning skills.

3. For Hispanic parents who insist, because of the Lau vs. Nichols Supreme Court ruling, children must be provided with tutoring in the academic subjects in Spanish, preferably outside of regular school hours, until their English skills are advanced enough to be used as the language of instruction. Here compromises will be needed among home, school, and national goals. Research has rather consistently demonstrated that delaying, for even a few years, formal academic instruction until the child has developed sufficient language and thinking skills does not result in lasting negative effects in school achievement. Tutoring, modeled after traditional home instruction in special education, should meet the legal requirements. (Most of us old-time teachers have volunteered to tutor children with learning problems before and after school, and on Saturdays, to help bring them up to standard; it is hoped that this tradition is retained.)

4. It should be the responsibility of Hispanic parents, church, and community to provide private instruction to maintain and foster the Spanish language and Hispanic culture of the Puerto Rican and Chicano children beyond age 5, if this is wanted.

5. High but realistic expectancies and standards need to be set for the Puerto Rican and Chicano school children, higher than in the past. For those whose grades lag, additional help needs to be provided in the form of motivational counseling, tutoring by teachers and by older and/or more capable pupils, and so forth. But equally important is to use a combination of inducements to succeed, including the withdrawal of privileges. Social promotions through the grades should be kept to a minimum. Summer school and other programs should be used for make-up work.

6. Because of the stereotype that all Puerto Rican and Chicano children are slow learners, it is extremely important that a screening program for identifying those with good potential to succeed be established early, and continued so that late bloomers are not overlooked. Capable youngsters need to be put on a fast track to success.

7. Because of the excessively high dropout (or pushout) rate of Hispanic students at the end of compulsory school attendance, which often reaches 40 to 50 percent, it is essential that ways be found to motivate these youth to continue into high school and beyond. The early identification and fostering of talents is the best preventive measure. "Magnet" high schools also appear to have succeeded. Technical high schools and junior colleges are other examples for the many youth who can profit from them. Duran (1983) and others have identified a number of reasons for why Hispanic students drop out of and/or fail in high school and college, and what can be done to alleviate this situation.

8. Because so many Hispanic parents are poor, uneducated,
and often even illiterate in Spanish and English, more and better adult education offerings need to be made available to them. In itself, availability is not enough. Because of their negative attitudes toward schooling, inventive motivational procedures will need to be devised and implemented to encourage them to go back to school as adults. This is an important element in a total-push program toward higher achievement by Hispanics.

9. The need for improved measuring instruments and additional research cannot be stressed too strongly. One of the sound aspects of Hispanic education is that a sizeable body of scientific literature has accumulated over the years. In the future, more and better research is needed, because this field is especially susceptible to politically motivated interpretation, ethnic advocacy, and emotional appeals.

10. Federal funds should be shifted from basic support for bilingual education to the costs of additional research and professional training, psychological services to identify capable Hispanic children and to monitor pupil progress, and tutorial service for children of parents demanding instruction in Spanish, based on the Lau vs. Nichols Supreme Court decision, as long as it remains a law of the land.

In my opinion, implementation of these ten recommendations, with compromises and adjustments, will go a long way toward improving educational opportunities for the large majority of Mexican-American and Puerto Rican children in the U.S. who come from impoverished backgrounds.

For too long, analyses of the lack of school success of this fastest-growing minority group have emphasized the failure of the educational system to serve them. While there is enough blame to be shared, judging from the overwhelming and consistent data presented in this monograph, it would be more correct to point out that these Hispanic pupils and their parents have also failed the schools and society, because they have not been motivated and dedicated enough to make the system work for them. In spite of some weaknesses, it is widely recognized that the U.S. has one of the finest educational systems in the world, one that has functioned extremely well for most of the children of this nation, including recent Asian-American immigrants. The products of our schools are world leaders in many fields of endeavor, having been awarded more than their share of Nobel and other awards. Over the years, to a considerable degree, it has been the millions of immigrants who have sacrificed so that their offspring could acquire the education they needed to help shape and advance American society, a society unique in its diversity and unlimited in its opportunities.

Surely it is time to stop teacher bashing. Never before has it been so difficult to recruit capable young people, especially women, into the teaching professions. Not only is this due to the lack of support, but also because of the many other, more attractive occupations that have opened up to young women. Let's provide the funds to extend services to Hispanic children along the lines suggested above. At the same time, let's stop blaming each other for the ineffective efforts of the past. For our continued advancement as a nation, it is essential that people of Latin descent, as a group, work far more strenuously than in the past to attain a quality education, commensurate with each individual pupil's abilities. Only in this way will the members of this ethnic segment of society adequately share in the American life and contribute to the advancement of the American people.

[from Concluding Comments]

Since releasing this bulletin for publication, more recent national statistics on the school achievement of Hispanic-American pupils have been found in:


The findings are based largely, but not completely, on National Assessment of Educational Progress (NAEP) studies conducted by the Educational Testing Service. Only a few highlights from the U.S. Department of Education reports can be presented here. They are as follows:

1. With regard to Hispanics, little of major significance ap-
pears to have changed since Coleman and his associates conducted their national survey in the 1960s.

2. The reading proficiency of black and Hispanic pupils in grades 4, 8, and 11 is far below the national average, with blacks achieving at a higher level than Hispanics. The average performance of Hispanics in the nation as a whole slips further and further behind the performance of non-Hispanics as the children advance through the grades. A relationship was found between reading performance and time spent watching television, amount of homework done, and language of the home. Children in Spanish-speaking households did not read as well as other pupils.

3. About one-third of all blacks and Hispanics graduating from high school (remember, these are select groups) obtained “D” and “F” grades in all basic academic areas, namely, English, mathematics, natural sciences, and social sciences.

4. Based on the test performance of high school sophomores in reading, science, and mathematics, substantial racial/ethnic group differences were found. Generally, blacks, Hispanics, and American Indian/Alaskan native groups were at the bottom, and whites, Asians, and Pacific Island groups were at the top, with a huge gap separating these two clusters.

5. The most remarkable change since Coleman and his associates conducted their national survey in the 1960s is that Asian Americans are now outperforming non-Hispanic whites in school achievement by the time they are sophomores in high school. There is strong evidence that Asians are succeeding very well, indeed, in our public schools, while Hispanics are failing in these same public schools.

[Addendum #1]

As a result of the following article, I have deliberated further on this set of recommendations to improve the school performance of Hispanic-American children, and gathered a modest amount of additional information:

Butterfield, F. (August 2, 1986). “Are Asian-American kids really smarter?” New York, NY: The New York Times. (For an abstract, see the January, 1987, issue of The Reader’s Digest.) The more I examined the evidence, the more convinced I became that the major source for overcoming the lack of school success of Hispanics rests squarely with the people themselves, and more specifically, with the parents. In my view, none of my suggested strategies, or any others, for that matter, will succeed unless there are dramatic changes in the child-rearing practices of Hispanic mothers and fathers.

Hispanic parents have much to learn from Asian-American parents. To verify what Butterfield reported, I informally interviewed, here in Honolulu, a number of Asian parents who are recent immigrants, asking about their priorities and their child-rearing practices. (In Hawaii, whites are a minority.) While exceptions are bound to exist, an almost universal pattern emerged which is consistent with that found by Butterfield. The following are examples:

1. About the importance of education, parents of recent Asian descent said:

“Education is the number one priority in our home.”

“A good education for our children is more important than food, shelter, pleasure, religion, or even the acquisition of money and concern for relatives.”

“First a good education; a good job then follows.”

“Knowledge is power.”

This value is taught by example and by family discussion. This is not a new attitude. Apparently it has existed for generations. It is a tradition that Hispanics in general do not appear to have.

2. About home study, Asian parents ask daily: “Do you have any homework?” If the answer is yes, a specific and regular time (usually two hours or so after the evening meal, each school night) is set aside to do it. If the answer is no, the
children are required to study. Everyone in the house is expected to keep quiet while the children do this work. No radio or television is turned on. Parents help with and/or show an interest in what is being studied.

3. There is rather strict discipline in the home, and a commitment to uphold the family honor. For example, watching television on weeknights is generally not permitted. Parent permission is required for play, visiting with friends, and so forth. Generally, Asian children are expected and required to stay close to home, and not to behave in ways that will bring shame to the family. They are monitored closely.

4. The oral language of the home is generally not English for most of the recent Asian immigrants, nor do most have high socioeconomic status in the community or a high level of education. None of those I interviewed belonged to the intellectual and professional elite in their countries of origin. Now they are barbers, maids, yard workers, handymen, cooks, and so forth.

In contrast to Asian Americans, Hispanic Americans do not appear to place as high a value on education, and do not instill in their children as intensive a work ethic. How to get Hispanic parents to change their attitudes and practices toward the value of education and scholarly study is beyond the scope of this review, but its importance cannot be overemphasized. Until Hispanics see the benefits of a good education, and are prepared to sacrifice and work hard to attain it, there is little likelihood they will advance on the ladder of success in this country, and nothing the school does is likely to change that prediction. It is time for the Hispanic people to stop blaming teachers for their own lack of school success and other troubles, and set about working harder to obtain a quality education for their children.

[Addendum #2]

The review of demographic data in Part 1 revealed the following major findings:

1. Hispanic people, including illegal immigrants, are the fastest-growing segment of the population on the U.S. mainland, making up an estimated 12.6 percent of the total population in 1986, with about 75 percent having Mexican ancestry, and another 10 percent having Puerto Rican ancestry.

2. By the year 2,000, one in three American residents of all ages will be black, Asian American, or Hispanic American, with the number of Latinos approaching the number of blacks.

3. In 1985, 25 percent of Hispanics in the U.S. were living in poverty, as contrasted with 31 percent of blacks and 11 percent of whites.

4. Most adults of Latin descent are employed as laborers or blue-collar workers, or are unemployed.

5. Only 57 percent of Latin adults speak English well enough for the workplace. Even their Spanish is largely oral, considerably different from, and less complex than, that spoken on the streets of Madrid.

6. Some 18 percent of documented Hispanic adults in the U.S. are illiterate, compared to 10 percent of blacks and 3 percent of whites, and most of the rest have attended only elementary school.

7. In contrast to Asian Americans, who are seen as the "model minority"—on a fast track to success, largely without public help—Hispanics join the blacks as the minorities at the bottom of the educational, economic, and social ladders, yet all three ethnic groups largely attend the public schools.

8. The proportion of children of Latin descent in the U.S. public schools was only 4 percent in 1970, but had risen to 8 percent by 1980. By the year 2,000, or shortly thereafter, it is projected that 17 percent of pupils enrolled in public elementary school will be Hispanics, at least equal to the number of blacks for the first time. This represents a dramatic and huge enrollment increase.

The review of studies in Part 2, involving psychometric scales other than the Peabody tests, led to the following observations about Hispanic pupils on the U.S. mainland:
1. Upon completing the eighth grade, Puerto Ricans have attained an overall grade level of only 5.5 and Chicanos of only 6.3, while Anglos score at the 8.7 grade level. Pupils of Cuban origin consistently out-perform the other Latin subgroups.

2. On intelligence tests given in English, Hispanic-American pupils very consistently obtain a mean IQ of about 88, on the average, in contrast to blacks, who score about 85, and whites, who score above 100. This statistic has not changed significantly in more than 50 years.

3. When the Spanish-language version of an intelligence test (the WISC-R) is given to monolingual children in Mexico City, these children also obtain a mean IQ score close to 88. This statistic permits a number of controversial interpretations.

4. It has been repeatedly demonstrated that individual intelligence tests administered in English predict school success as accurately for Hispanics as for whites and blacks. There is no evidence of test bias.

5. In contrast to children in Puerto Rico and Mexico, who are largely monolingual in Spanish, the rate of growth in oral Spanish skills of bilingual Latins in the U.S. falls off sharply with age. Even by age 7½, Hispanic-American children are 1½ years behind their monolingual agemates in Latin America. It must be concluded that Puerto Rican and Mexican-American school-aged children on the U.S. mainland, as a group, have only a rudimentary knowledge of even oral Spanish.

6. Hispanic-American children also have inferior skills in English. The English among school-aged children, however, is generally superior to their Spanish.

7. Unfortunately, while bilingualism facilitates cognitive and scholastic development for many ethnic groups around the world, no such positive effects have been demonstrated for Hispanic-American children who are inferior in both Spanish and English.

Reinforcing these conclusions are the studies with the English- and Spanish-language versions of the Peabody Picture Vocabulary Test, discussed in Part 3. The following points about PPVT results for Hispanic-American children on the U.S. mainland were made:

1. As measured by the original PPVT, Hispanic children as a group had inferior hearing vocabularies for English words when compared to children on whom the test was standardized. The gap between Hispanics and Anglos widened with age.

2. The original PPVT was found to be equally and highly reliable for Chicanos, blacks, and whites, and also not to be biased for or against any of these three ethnic groups in terms of order of item difficulty.

3. The revised PPVT has also been found to be as reliable for Latin as for Anglo children, and to correlate equally well with school achievement scores for these two ethnic groups, predicting reading scores slightly better than arithmetic scores.

4. As a group, Hispanic children obtain a mean standard score of 88 on the revised PPVT-R, but score considerably higher when English is spoken at home. The dispersion of standard scores for Hispanics is higher than for subjects on whom the test was standardized. (There is some evidence that the PPVT-R needs renorming because of the recent increase in immigrants and reduction in proportion of Anglos. This could raise the mean standard score of Hispanics from 88 to about 91–93, but the mean difference between Latins and Anglos would remain the same at approximately 13 standard score points.)

5. When hearing vocabulary for Spanish words was measured by two adaptations of the PPVT-R, the Test de Vocabulario en Imágenes Peabody, Spanish version (TVIP-E) and Hispanic version (TVIP-H), it was found that, by a wide margin, monolingual children in and around Madrid, in general, outperformed monolingual children in Mexico and Puerto Rico. The average scores of children in Mexico City and Puerto
Rico were essentially equivalent, about equal to that of lower-class children in Spain who live in slum conditions.

6. Based on the limited data currently available, it would appear that Hispanic-American children on the U.S. mainland begin at age 3 years with a Spanish hearing vocabulary about equal to their agemates in Mexico and Puerto Rico, but even by age 6, children in Spain are far superior to children in Latin America, who in turn are far superior to Hispanic-American, so-called “bilingual” children. This divergence continues through adolescence.

The overall conclusion from available test data is that Latin pupils on the U.S. mainland, in general, are inadequate bilinguals. They simply do not understand either English or Spanish well enough to function adequately in school.

The summary statements above are made for Hispanic-American children, as one omnibus group. But actually they refer mainly to pupils of Mexican and Puerto Rican ancestry who make up about 85 percent of this ethnic group. In general, Cubans and other Hispanic and Spanish subgroups living in the U.S. perform better.

[from Summary of Parts 1, 2, & 3]

THE CONTROVERSY CONTINUES

In response to Dr. Dunn’s rhetorical question in his commentary as to whether his monograph “has been shot down in flames” as a result of the data and analyses contained in the papers that follow, it cannot be emphasized enough that the intent behind the symposium never was to engage in witch hunting but to provide a hard-hitting critique of a document that makes a number of serious allegations and claims to offer scientific evidence to back them up. Judging by the resulting papers and Dunn’s subsequent comments to the highly critical assessments of his monograph, the intent of the organizers was achieved.

However well intended Dr. Dunn’s motives may have been when he put out the monograph in order to provoke discussion and call attention to the dire condition of Hispanic students in US schools, it is clear he misjudged the strong reaction that would be manifested against his analysis and interpretation of data by the professional community, including some of the major educational organizations. More surprising, however, is his apparent political ingenuousness in failing to see the potential for his monograph, in its original form, to be used by certain reactionary groups to justify the status quo of educational inequality for millions of minority children—black, Hispanic, American Indian, and even many Asians—in American public schools. In spite of his repeated disclaimers about good intentions, in the final analysis Dunn remains obtinate in his convictions that Hispanics must assume the blame for their own social and economic condition in America, which in his words includes “entrenched poverty, ghettoized housing, family chaos, lack of family planning, illiteracy, teenaged pregnancy, drug abuse, crime, school failure and dropout, gang warfare, unemployment, perpetual welfare, and so forth.”

A different perspective might have focused not on who is to blame but rather on the structural factors that account for this sad state of affairs. The lack of achievement of Hispanic and other minority children is real, and none of the authors ignores this, as Dunn claims. Moreover, no one would deny that there is a legitimate role to be played by Hispanic parents, their children, and the broader Hispanic community, especially professionals in the field of education, to bring about an improvement in the condition of education for Hispanics in the nation’s schools. However, Dunn’s remarkable solution to these conditions is for Hispanics (primarily Mexican Americans and Puerto Ricans) by some magic to pull themselves up by their bootstraps after undergoing a transformation of values that equips them with an Anglo American work ethic that prizes “hard work” and ultimately leads to social and economic success.

In Dunn’s worldview (at least based on what he chooses to highlight in his monograph) the cause of the low levels of academic skills and consistently poor achievement of Hispanic (and other minority students) on standardized tests cannot be attributed in any way to school-related factors. Prior to revising his monograph, it may be useful for him to read a key passage from William Ryan’s Blaming The Victim (New York: Random House, 2nd edition, 1976) in which the author discusses the perspective of those who see unachieving children as “culturally deprived.”

What is the culturally deprived child doing in school? What is wrong with the victim? In pursuing this logic, no one re-
members to ask questions about the collapsing buildings and
torn textbooks; the frightened, insensitive teachers; the six
additional desks in the room; the blustering, frightened prin-
cipals; the relentless segregation; the callous administrator;
the irrelevant curriculum; the bigoted or cowardly members
of the school board; the insulting history book; the stingy
taxpayers; the fairy-tale readers; or the self-serving faculty of
the local state teachers' college. We are encouraged to con-
fine our attention to the child and to dwell on all his alleged
defects. Cultural deprivation becomes an omnibus explana-
tion for the educational disaster area known as the inner-city
school. This is Blaming the Victim. (pp. 4–5)

The focus of Dunn's righteous indignation falls not on the in-
dividual child but rather on the Hispanic family, and most es-
pecially on parents who fail to instil in their children the appro-
priate ways that, according to Dunn, will insure for them success
in school and later on in their adult life.

What Dunn seems to imply might be the solution out of this
social and educational quagmire smacks of nothing less than a
massive compensatory education effort to transform black, His-
panic, and other poor, minority students into middle-class Anglos
in terms of values and aspirations. Although reminiscent of the
1960s in its emphasis on the deficits that minorities have inherited
or acquired, there is a major difference in what Dunn advocates
now from what was proposed two decades ago. This time His-
panics, not blacks, are the focus of attention and they are sup-
posed to achieve success in schools (and, by extension, in society
at large) on their own, without any assistance from the federal or
state government through special programs in the public schools.
Dunn would have us believe that failure to succeed, therefore,
should be attributed primarily to individual students and their
families and, by extension, to the collective group—the Hispanic
community. In the conservatism of the 1980s, it seems that suc-
cess is within anyone's grasp, if only that person tries hard
enough. Yet it is hard to imagine that even a bay person's super-
ficial analysis of the current status of minorities and poor people
in America today could fail to acknowledge the increased poverty
and diminished social condition of millions of persons who are
much worse off economically today than a decade ago. Yet this is
precisely what Dunn would have us do.

His attack on bilingual education as a pedagogical approach that
segregates students in homogeneous groups and maintains them
in a ghettoized environment reveals gross ignorance on his part
of how bilingual education programs function. It may be that some
bilingual programs engage in such segregation, which for years
has been illegal and therefore is not allowed under federal and
state statutes as well as by precedents established in several major
court decisions. The fact is that the overwhelming majority of
bilingual programs do not operate in this fashion, Dunn's own
bunches notwithstanding. The exception—in this case, a glaring
one—becomes the rule for him, even though this conclusion is
incorrect and unsupported by any evidence.

It is also unfair to suggest (as Dunn does in his comments) that
opposition to his ideas from experts on bilingual education and
scholars in other fields is motivated by a desire to preserve their
own jobs. This is equivalent to suggesting that Dr. Dunn's chief
interest in this entire matter revolves around wanting to expand
sales of the tests he has developed (and others he is working on),
and that he has no real interest beyond personal profit.

The substantial enrollment increases of Hispanics evident in the
nation's urban school districts make it obvious that they must oc-
cupy a substantial place in America's educational agenda as we
approach the end of the 20th century and look to the future. A
thorny question in this agenda will continue to be the testing of
students and, more importantly, the interpretation and use of re-

results in setting policy for minority students. In an era of growing
public concern for accountability in, tests will continue to be uti-

lized to provide indicators of academic achievement for students
in the nation's schools. When properly administered and caution-
tiously interpreted, tests can yield useful data to diagnose student
weakness and to prescribe needed programs and services for stu-
dents. Irrespective of the types of tests involved, and the limita-
tions inherent in all of them, the issue ultimately should be
framed in terms of how can testing become a vehicle to improve
academic achievement and not, as is often the case, as an instru-

ment of stigmatization, especially when the interpreters of test
result read into the results their own ideological orientations and
personal values.

I hope that this exchange of ideas on the testing of Hispanic
students will lead us closer to an understanding of the intricacies
of testing and of the imperative to tread carefully when it comes
to extracting meaning from test results and basing social and ed-

ucational policy on it. The nation can ill afford the continuation
of unacceptably high rates of failure of Hispanic, black, and other
minority students who will constitute a third of the country's pop-
Ethnic Differences in IQ Scores: What Do They Mean? (A Response to Lloyd Dunn)

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This article responds to Dunn's conclusion that Hispanic-Anglo differences in IQ scores are due to genetic differences in intelligence. Several studies that look at between-group variance in IQ scores for blacks, Angles and Hispanics are reviewed. It is concluded that sociocultural factors are important contributors to such variances. Adequate interpretation in educational practice of IQ scores is also discussed. Finally, instruments that use different sociocultural norms for different ethnic groups to make inferences about an individual's intelligence, such as the System of Multicultural Pluralistic Assessment (SOMPA) and the WISC-R are presented.

Dunn (1987) reviews numerous studies which show that Mexican, Puerto Rican, and other Hispanic children score 10 to 12 points below Anglo children on IQ tests. He notes that differences of this magnitude persist even when the tests have been translated into Spanish and questions have been altered to make them more culturally appropriate (Padilla, Roll, & Gomez-Palacio, 1982). Furthermore, he reports that middle and upper-middle class monolingual children in and around Madrid significantly outperform monolingual children in Mexico and Puerto Rico on two Spanish adaptations of the Peabody Picture Vocabulary Test-Revised (Dunn, 1987; pp. 42 & 53).

What is producing these differences in average IQ scores across groups? Are genetic factors contributing to the difference or are they primarily related to sociocultural factors and the cultural loading of the tests? For half a century controversy has swirled around this issue in relation to lower IQ scores of similar mag-

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nitude earned by blacks. Dunn now focuses attention on Hispanic-Anglo differences and concludes that they are the result of genetic differences in intelligence. Citing Jensen (1974, 1980, 1981), he concludes that "about half of the IQ difference between Puerto Rican or Mexican school children and Anglos is due to genes that influence scholastic aptitude, the other half to environment" (page 64). This being the case, he argues that "most Puerto Rican and Mexican American children do not have the scholastic aptitude or linguistic ability to master two languages well" (p. 71) and, therefore, English should be the one and only language of instruction.

His discussion of educational strategies is based on the premise that Latin children, as opposed to Hispanic students in Madrid, are genetically inferior, so far as "intelligence" is concerned, noting that "most Mexican immigrants to the U.S. are brown-skinned people, a mix of American Indian and Spanish blood, while many Puerto Ricans are dark-skinned, a mix of Spanish, black and some Indian. Blacks and American Indians have repeatedly scored about 15 IQ points behind Anglos and Orientals on individual tests of intelligence" (p. 64).

It is clear from his references to "dark-skinned" people and his citations to Jensen that Dunn is generalizing Jensen's conclusions concerning blacks to persons of Mexican, Puerto Rican, and American Indian heritage and is attributing their lower IQ scores to genetic inferiority. He does not bother to explain or to defend Jensen's genetic conclusions. He does not review any of the voluminous literature which has criticized Jensen's methods and his conclusions nor does he discuss findings from numerous investigations which support a sociocultural explanation of a major portion of the black-white differences in test performance. For this reason, it is important to review once again the major elements of the controversy and principal lines of evidence presented by each side. Because the historic controversy has focused almost exclusively on black-Anglo differences and Dunn is extrapolating from that discussion to Hispanic-Anglo differences, the first section of this paper must of necessity discuss the major arguments and lines of evidence concerning the sources of black-Anglo differences in IQ tests. However, the paper also presents data from my own studies which deal directly with Hispanic-Anglo discrepancies.

What Do IQ Tests Measure?

Biological intellectual capacity cannot be measured directly. Such a measure would require assessment of the genetic component of performance, the genotype. Hebb (1949) has called this component Intelligence A, the unknown capacity which is not measurable. The pure genotype exists only at the moment of conception. From that time onward, the genotype is modified by prenatal environmental factors such as the health and nutrition of the mother and after birth by a wide variety of environmental factors. Thus, an individual's genetic potential is always expressed through behavior acquired in a social and cultural setting, the phenotype. A person's performance on an "intelligence" test is phenotypic behavior resulting from some combination of genetic intellectual potential and learning acquired through exposure to specific social and cultural experiences. Hebb (1949) has called the actual performance on cognitive tasks Intelligence B.

There is no difference of opinion on this matter. All human behavior has a genetic substrata and there is no reason to believe that complex behaviors such as those being measured in "intelligence" and "achievement" tests do not have a genetic component. The difficulty is in estimating how much of the phenotypic test performance is genetically determined and how much is influenced by environmental factors, the old nature-nurture question. Differences arise in attempting to assess the relative contributions of genetic endowment and social learning to the phenotypic IQ score of individuals and attempting to extrapolate those findings to explain the average differences in phenotypic IQ scores between groups.

The major fallacy in the Jensen-Dunn genetic argument is that they generalize findings about the sources of IQ variance within groups to explain between group differences. Sources of within group and between group variance in IQ scores may or may not be the same. They cannot simply be assumed to be identical. Several studies, which I will discuss later, have looked directly at the between group variance in average IQ scores and have concluded that those differences can be explained by different levels of exposure to the sociocultural materials and skills being evaluated by the test. We turn now to a brief overview of the genetic argument and counter-arguments.
THE BASIC ELEMENTS OF THE GENETIC ARGUMENT

A fundamental premise of the genetic argument is that IQ test scores are primarily determined by the genotype, the organic substrata for problem solving, reasoning, memory, and other aspects of cognition. Dunn accepts Jensen’s estimate that approximately 80% of the variance in IQ scores within groups is related to heredity. Two lines of evidence are typically presented to support this conclusion: factor analysis and heritability estimates.

Jensen (1980) presents findings from dozens of studies which show that principal components factor analyses of tests measuring different cognitive skills always identify one major factor, g. This factor, first noted by Spearman (1923), accounts for about 80% of the variance in Stanford-Binet items and approximately 50% of the variance in the Wechsler Adult Intelligence Scale (WAIS) (Jensen, 1980, pp. 216–219). He interprets the universal appearance of g as evidence that some type of organic, genetic substrata that is “intelligence” is being tapped and that substrata accounts for a major portion of the differences between individual and group test scores.

Such an interpretation is not warranted. When principal components analysis is used, a single, major factor will be extracted from whatever measures are being analyzed. The appearance of a principal factor is a function of the factor analytic method and is not unique to tests which purport to measure “intelligence.” Furthermore, the nature of a dimension being measured by any factor is not self-evident. The fact that Spearman chose to call the factor g and Jensen and Dunn choose to interpret g as the genetic substrata of “intelligence” i.e. Intelligence A, is quite arbitrary. It is the investigator who, on the basis of item content, decides what to name and how to interpret the meaning of a particular factor. The g factor could just as well be called the a factor for anglicization since the items, especially the verbal items, measure knowledge of the English language (vocabulary, comprehension, similarities) and the test scores are correlated with public school performance in schools that are culture-bearers for the dominant English-speaking Anglo tradition.

A second and more important basis for arguing that IQ test scores primarily represent genetic factors comes from “heritability” studies. Numerous investigators, including Jensen (1980) have estimated the “heritability” of IQ test scores within population groups by correlating the IQ scores of persons who have different degrees of biological relationship: monozygotic twins, dizygotic twins, siblings, parent-child, and so forth. Correlations fall in the expected theoretical pattern—the closer the biological relationship the higher the correlation. For example, in a study of black and white twins under one year of age, the correlations between the IQ scores of monozygotic twins who develop from the same sperm and ovum and, hence, have identical genetic inheritances was .83 for white and .85 for black pairs. Correlations for same-sex dizygotic twins was .51 for whites and .43 for blacks while correlations for same-sex siblings was .17 and .22, respectively (Nichols & Broman, 1974). To my knowledge, there have been no heritability studies of Hispanics.

Based on four studies of monozygotic twins reared apart, Jensen concluded that, “Seventy-five percent of the variance can be said to be due to genetic variations (heritability) and 25% to environmental variations.” He then looked at the correlation of IQ test scores of unrelated children who were reared together and concluded, “The proportion of IQ variance due to environment is .24 and the remainder, 1.00 – .24 = .76 is due to heredity.” When he applied his heritability formula to all the correlations of monozygotic and dizygotic twins reported in the literature, he found, “An average heritability of .80 for intelligence test scores” (Jensen, 1969, pp. 50–51). It is these figures which Dunn is using in his monograph.

Estimates of the heritability of IQ vary greatly from study to study generally ranging between .50 and .60, somewhat lower than Jensen’s estimates (Bock & Moore, 1986), leaving ample room for environmental influences. The major point, however, is that even if heritability of IQ within the white group, within the black group, and within the Hispanic group is .80, as Jensen concludes and Dunn accepts, this finding is not relevant to between-group differences in average IQ score. “Standard models of quantitative genetics deal exclusively with variation within populations; intergroup comparisons of behavioral traits are problematic because, insofar as there is any environmental component in the trait variation, there is no basis for inferring the quantitative effect of environmental influences on the population mean.” Jensen, in particular, violates this principle of genetic analysis when he extrapolates models of genetic variability and transmission derived from analysis of within-group variation of the trait (IQ score) to account for between-group differences in the population means” (Bock & Moore, 1986, p. 82). There is no justification for gen-
eralizing from within-group heritability to between-group differences. Other approaches must be used when looking at average differences between groups.

Studies of Between Group Differences in IQ

Four approaches have been used to look at between-group differences in average IQ directly: studies of the effects of early childhood intervention on IQ, studies of adopted children, studies of children with differing levels of "white" inheritance, and studies of the sociocultural correlates of IQ tests.

Effects of Early Childhood Intervention

Early intervention studies directly examine the malleability of IQ scores to assess the extent to which environmental factors influence performance. In general, investigators have found that enriched early experience can produce a 10 to 20 point increase in IQ, sufficient to account for the 10 to 20 point difference typically found between minority and majority groups. For example, Garber (1975) and his colleagues selected a sample of 40 black newborns whose mothers had a WAIS IQ less than 75 and assigned them to either experimental or control conditions. The experimental infants and their mothers were provided an intensive education program which lasted until the children entered the public schools.

During the first year of the intervention, there was no difference in performance on cognitive tests between the experimental and control groups. However, after that time, IQ scores for the experimental group consistently hovered around 120, more than 20 points above the average for the control group. Following termination of the intervention program and public school entry, scores for the experimental group dropped to 111 at 72 months and to 106 at 84 months but still remained more than 20 points above the control group which had an average of 87 and 85 at the same ages. Environmental factors in the form of early intervention were able to close the between-group gap. Intervention produced IQ scores well above the average for the test in a population of children whose scores, without intervention, would have fallen the typical 10 to 20 points below the test mean. Ramey and Haskins (1981) replicated Garber's study with a sample of black children being reared in North Carolina. Their findings were similar but less dramatic. Clearly, IQ scores are malleable and sensitive to enriched environmental opportunities. Between-group differences cannot be interpreted as primarily genetic in nature.

Effects of Adoption

Another approach to investigating between group differences in average IQ score directly is to study the effect of cross-group adoptions. The most extensive study of this kind was conducted by Scarr and Weinberg in Minnesota (1976). They studied 130 black/interracial children adopted by advantaged white families in which the average full scale IQ of the adoptive parents was 119. They found the adopted children achieved an average IQ score of 106, an increase of 1 standard deviation above the average IQ of 90 usually achieved by black children reared in their own homes in Minnesota. Children adopted during the first year of life scored 111 compared to later adoptees who had a mean score of 97.5. The natural children of the adoptive parents had an average IQ of 116.7, approximately 6 points higher than the adoptees who had entered the family as infants. Moore (1980) replicated these findings on a smaller sample.

Although cross-fostering studies have been criticized because there are many uncontrolled variables, the magnitude of the impact of environmental factors on IQ scores is undeniable. Environmental factors can easily account for between-group differences because such differences appear to be located in that portion of the variance explained by environmental factors.

White Ancestry Within a Black Population

In a study looking specifically at the genetic hypothesis, Scarr, Pakis, Katz, and Barker (1977) examined the extent to which blacks with higher degrees of white ancestry performed better on mental tests than those with lesser degrees of admixture. If no correlation is found between genetic markers for white ancestry and IQ scores then the genetic hypothesis is disconfirmed. Of course, environmental factors may operate even within a hybrid group if individuals are treated differently because of genetic markers such as skin color. Such differential treatment would, however, work against the null hypothesis of no correlation between genetic markers and test performance.

The investigators used an "odds coefficient" to express the probability across several blood group loci that an individual's blood group alleles come from an African population given the frequency of those alleles in African and Caucasian populations. The
formula can be used to express the relative odds that an individual comes from either one of two populations with contrasting phenotype frequencies" (page 165). The authors report a significant correlation between their odds coefficient and skin color, negligible correlations with various measures of socioeconomic status, and no correlation between their measure of racial admixture and any of the five mental tests administered to their sample of same-sex black twins drawn from 181 families living in Philadelphia. The first principal component extracted from four of the tests was significantly related to socioeconomic status (r = -.20) but was not correlated with their measure of ancestry. The authors conclude that, "The test of a relationship between degree of African ancestry, estimated with the odds coefficients, and intellectual skills failed to provide evidence for genetic racial differences in intelligence." (p. 176).

Sociocultural Correlates of IQ Test Scores

Another approach to examining the between-group variance in IQ test scores is to estimate the amount of variance in those scores which can be accounted for by sociocultural factors and to determine whether holding sociocultural factors constant reduces the partial correlation between ethnic group and IQ significantly. The extent to which the partial correlation approaches zero when sociocultural factors are controlled indicates the extent to which sociocultural factors are mediating the relationship between ethnic group and IQ.

A major difficulty with this approach is that sociocultural variables are measuring genetic factors to some unknown extent. One way to examine the extent to which this may be the case is to reverse the analysis and to correlate ethnic group with sociocultural characteristics, controlling for IQ. If the sociocultural characteristics are operating primarily as proxies for genetic factors and the IQ test is measuring genetic factors, then the correlation between ethnic group and sociocultural characteristics should approach zero when IQ is held constant.

We have conducted such an analysis on samples of 180 Hispanic and 180 Anglo elementary school children in Riverside, California using both the Wechsler Intelligence Scale for Children (WISC) (Wechsler, 1949) and the Peabody Picture Vocabulary Test (PPVT) (Dunn, 1965). The mean Full Scale WISC IQ was 107.8 for the Anglo children and 91.3 for the Hispanic children, a 16-point difference. Mean IQ scores on the PPVT were 117.3 for the Anglo children and 82.7 for Hispanic children, a whopping 34-point difference which far exceeds the differences reported by Dunn in his monograph (Mercer & Brown, 1973). Parents of the children were interviewed and 8 sociocultural variables were created: (1) mother’s participation in formal organizations, such as child oriented, church, and political groups; (2) living in a segregated neighborhood; (3) home language level; (4) socioeconomic status based on occupation and education of the head of household; (5) urbanization based on place in which parents were reared—urban vs. rural, south vs. north and west, and Mexico vs. United States; (6) mother’s achievement values; (7) home ownership; and (8) intact biological family. In addition, the student's school anxiety was measured using an adaptation of Sarason’s scale (Sarason et al., 1960).

Multiple correlations between WISC and Peabody IQs and these sociocultural variables, corrected for attenuation due to unreliability of measures, are shown for each ethnic group in Table 1. The highest R is .66 for the PPVT indicating that sociocultural factors can explain 44.1% of the within-group variance of Hispanic children on that test. Performance IQ on the WISC has the least variance explained by sociocultural factors; 12.1% for Hispanic children and 6.0% for Anglos. These findings indicate that the PPVT has the greatest cultural loading and the performance subtests of the WISC have the smallest cultural loading of the tests given. In no case are the cultural loadings insignificant.

Table 2 looks specifically at between-group differences. It first presents the linear correlations between ethnic group and IQ for the combined Hispanic and Anglo samples. Ethnic group explains 59.3% of the variance in Hispanic-Anglo Peabody IQs, 31.4% of
the variance in WISC Full Scale and Verbal IQs, and 19.4% of the variance in WISC Performance IQs. When the mediating effect of the sociocultural factors have been partialed out of the correlation, the partial correlations drop to zero. Once sociocultural factors have been controlled, ethnic group explains virtually none of the variance in PPVT and WISC IQs in the Hispanic-Anglo analysis. We must conclude that sociocultural factors are critical mediating variables in the relationship between ethnic group and IQ. There is no justification for ignoring sociocultural factors when interpreting between-group differences in IQ. They are not inconsequential.

Nevertheless, genetic factors undoubtedly operate to some extent in the behaviors measured by the sociocultural factors. Critics have argued that parents with low genetic potential may be less likely to participate in community organizations, to own their own homes, to have high socioeconomic status or to have high individual achievement values and may be more likely to live in segregated neighborhoods and to use a foreign language or non-standard English in the home. If low inherited intelligence is producing the above effects and sociocultural factors are simply proxies for genetic factors, then reducing the ethnic effect on IQ to virtually zero by controlling for sociocultural factors is meaningless.

To determine the extent to which sociocultural differences between the ethnic groups can be explained by “intelligence” as measured by IQ tests, the analysis was reversed. Ethnic group was correlated with each of the sociocultural factors controlling for IQ. Table 3 presents the results.

### Table 2

<table>
<thead>
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<th>Linear Correlations</th>
<th>% Variance Explained</th>
<th>Partial Correlations</th>
<th>% Variance Explained</th>
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<td>WISC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full Scale IQ</td>
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<td>31.4</td>
<td>.00</td>
<td>0.0</td>
</tr>
<tr>
<td>Verbal IQ</td>
<td>.56</td>
<td>31.4</td>
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<td>Performance IQ</td>
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<td>19.4</td>
<td>.04</td>
<td>0.2</td>
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<td>PPVT IQ</td>
<td>.77</td>
<td>59.3</td>
<td>.00</td>
<td>0.0</td>
</tr>
</tbody>
</table>

There are strong correlations between ethnic group and most of the sociocultural factors. Correlations between ethnic group and socioeconomic status, segregated neighborhood, individualistic achievement values, and language level in the home are .64, .69, .53, and .54 accounting for between 29.2 and 47.6% of the variance. Correlations are somewhat smaller for the other sociocultural characteristics but are still statistically significant. When the effects of IQ are partialed out of the relationships, all of the correlations drop but none approach zero. In general, the amount of variance in sociocultural characteristics explained by ethnic group drops between 9% and 16% when IQ is partialed out of the relationship leaving important amounts of the variance in sociocultural characteristics unexplained by IQ.

Correlational studies cannot provide definitive answers but, together with evidence from early intervention, cross-fostering, and ancestry studies, they provide some insight into the kinds of sociocultural factors which are likely to be associated with parental socialization practices that foster cognitive development and educational achievement.

It is regrettable that Dunn has chosen to resurrect the belief that genetic factors are the primary reason for differences in the average performance of different racial and ethnic groups on IQ tests and to extend that conclusion to Hispanics. Historically, the
controversy has centered on blacks and most of the research has been on black samples. It would be possible to do heritability studies of Hispanic twins and to do early intervention and adoption studies on Hispanic children. I doubt such efforts would be worthwhile because the results would simply replicate what is already known. We know that IQ is highly malleable, especially when intervention begins at an early age. That is the fact which is important to educational and social policy.

**How Should IQ Scores be Interpreted in Educational Practice?**

Another flaw in Dunn's thinking is related to his beliefs about IQ tests. He fails to recognize that so-called tests of "intelligence" and tests of "achievement" are both measuring learned behavior, Intelligence B, and are operationally indistinguishable. The belief that "intelligence" tests measure "capacity to learn" while "achievement" tests measure what has been learned has been abandoned by most respected measurement psychologists. Following are quotations from two sources highly respected by measurement psychologists. The first is Alexander Wesman, formerly president of The Psychological Corporation and a past president of Division A of the American Psychological Association.

All ability tests—intelligence, aptitude, and achievement—measure what the individual has learned—and they often measure with similar content and similar process. . . . Such justification as we have for our labeling system resides entirely in the purpose for which the test is used, not in the test document itself. If our intent is to discover how much the examinee has learned in a particular area . . . we label the test an "achievement" test. . . . If our intent is to predict future acquisition of learning over broad areas of environmental exposure, we seek those previous learnings the possession of which will be relevant to as many future learning situations as we can anticipate. This test we label an "intelligence" test. The selection of test items or sample tasks for the (two) purposes may or may not differ: but in each instance what is measured is what was previously learned. We are not measuring different abilities; we are merely attending to different criteria. (Wesman, 1968, p. 269).

The second quotation comes from the report of a committee appointed by the American Psychological Association’s Board of Scientific Affairs to study educational uses of tests with disadvantaged students. This committee was chaired by T. Anne Cleary and had three additional members, Lloyd G. Humphreys, S. A. Kendrick, and Alexander Wesman.

There are no differences in kind between intelligence and achievement or between aptitude and achievement. . . . There are quantitative differences among different types of tests on these dimensions. 1 . . . An intelligence test is much broader in coverage than individual achievement tests. 2. . . . The achievement test is tied to a particular academic curriculum, while the intelligence test samples learning both in and out of school. 3. . . . The achievement test traditionally measures recent learning while the intelligence test samples older learning. 4. . . . The distinction between achievement and intelligence (or aptitude) tests may be stated in terms of the purpose for which the test is used. Purpose is independent of type of item. A test used for the prediction of future performance is called an aptitude test, while the same test used to evaluate learning is called an achievement test. . . . Jensen categorized the National Merit Scholarship Examination as an intelligence test, but precisely the same items were used in the Iowa Tests of Educational Development for assessing achievement.” (Cleary et al., 1975, p. 15).

These extended quotations from highly respected psychologists have been included to emphasize a very important error in Dunn’s monograph. He fails to recognize that all tests—intelligence, achievement, WISC-R, PPVT—measure acquired behaviors, Intelligence B. Scores on IQ and achievement tests averaged over several years correlate between .80 and .90 (Jensen, 1980, p. 323). They can be regarded as different forms of the same test. Whatever differences there are lie primarily in the eye of the beholder, the psychologist, and the customs and beliefs which have evolved concerning the different uses and purposes of the two types of tests.

In spite of disclaimers by academic psychologists, when clinicians use tests for the purpose of educational or clinical diagnosis they act as if IQ tests measure "intelligence" (read "capacity") and achievement tests measure what a person has learned. Why this tremendous disjunction between what the academic world agrees is true and actual practice in educational and clinical settings? It
has to do with the capricious way in which measurement psychologists use (or misuse) the English language.

In ordinary discourse, according to Webster's New World Dictionary, the word intelligence means capacity to learn and ability to learn. When educators, parents, federal judges, non-psychologists, and most school psychologists use the word "intelligence" they assume the word denotes "capacity to learn" and that a test named an "intelligence" test is measuring that capacity. When special educators talk about mental retardation, they are discussing a disability characterized by limited capacity to learn not simply limited current performance. When a school psychologist diagnoses a child with a low IQ score as mentally retarded, that psychologist is interpreting that low IQ score as an indication that that child has limited capacity to learn. When special educators talk about learning disability, they are discussing a disability characterized by a significant discrepancy between the capacity to learn and actual performance. When school psychologists compare students' IQ scores with their achievement test scores and diagnose them as learning disabled, school psychologists are interpreting the IQ as a measure of student capacity and the achievement test score as a measure of current performance. Psychological assessment and special education categories are based on the assumption that psychologists can distinguish between "ability to learn" and current performance. However, Cleary et al. (1975) state that such a belief is naive.

A distinction is drawn traditionally between intelligence and achievement tests. A naive statement of the difference is that the intelligence test measures capacity to learn and the achievement test measures what has been learned. But items in all psychological and educational tests measure acquired behavior. The measures of even the simplest sensory and motor functions require a background of learning in order for the examinee to understand the directions and to make the responses.

An attempt to recognize the incongruity of a behavioral measure as a measure of capacity is illustrated by the statement that the intelligence tests (sic.) contain items that everyone has had an equal opportunity to learn. The statement can be dismissed as false. The psychosocial substrate is simply not equal for all. . . . There is no merit in maintaining a fiction. (Cleary et al., 1975, p. 21).

Recognizing that so-called "intelligence" tests do not measure what the word "intelligence" means, that is "capacity to learn," it would seem logical that Cleary and her colleagues would suggest that psychologists re-name their tests to reflect what they in fact do measure—achievement, current functioning level, or (in Cleary's words) "the entire repertoire of acquired skills, knowledge, learning sets, and generalization tendencies considered intellectual in nature that are available at any one period in time." (p. 19). Unfortunately they did not make this recommendation. Instead, they suggested re-defining the word "intelligence" to mean current functioning level rather than capacity to learn and recommended the term biological substrate to be used to replace the dictionary meaning of the word intelligence. Needless to say, their attempt to reshape the English language in order to avoid re-naming all their tests as achievement tests has been a dismal failure. Everyone except a few academic psychologists continues to act as if IQ tests can measure capacity to learn. Diagnostic categories and educational structures have been erected on that belief. Obviously, Dunn (1987) believes his picture vocabulary "intelligence" test is primarily a measure of capacity to learn with only minor influences from environmental factors.

What makes this controversy doubly confusing is the fact that all behavior does have a biological substrate and that an individual's current behavior does reflect, to some unknown extent, inherited capacity for learning. Even those of us who believe that no test should be called a test of "intelligence" because that implies the test is a relatively pure measure of learning capacity recognize that there is a genetic substructure underlying any test performance. Further, for historic and cultural reasons, American society is obsessed with the concept of "intelligence" and its measurement. As noted above, almost the entire special education system has been built around this concept. Is there any way to deal with all this conceptual and linguistic confusion short of abolishing the use of the concept of "intelligence" in educational settings? In developing the System of Multicultural Pluralistic Assessment (SOMPA) (Mercer, 1979) I have attempted to deal directly with the conceptual confusion and in so doing to preserve the special education categories now in use.

The System of Multicultural Pluralistic Assessment (SOMPA)

Dunn provides inaccurate information about the SOMPA (Mercer, 1979) and its philosophic basis. Fundamentally, the SOMPA
is an attempt to make explicit the implicit assumptions underlying the different purposes for which psychologists use standardized tests and to provide procedures for better meeting those assumptions in a culturally pluralistic society. SOMPA is a battery of measures including a health inventory, physical dexterity measures, and adaptive behavior measures as well as two scores on the WISC-R. I will deal only with the latter because the use of the WISC-R in the SOMPA is germane to the present discussion.

WISC-R as an Achievement Test

When the standard norms are used for the WISC-R in the SOMPA, that standard score is treated as a measure of achievement and is called school functioning level to remind users that it is not a measure of intelligence or capacity. Like any achievement test, standard scores on the WISC-R can be used to make lower level first order inferences about what a person has learned, that is, how much English vocabulary he has learned, how much arithmetic he knows, etc. One can make relatively accurate predictions about academic performance in American public schools from the scores because the more children know about the language and cultural materials which will be presented in the school the better they will perform in school. However, as Dunn notes (p. 23) “achievement” tests, which contain more items directly related to material taught in the schools, are better predictors of school performance than IQ tests. Although the major argument for the “validity” of IQ tests and for perpetuating their use in public education is their modest ability to predict school performance, schools do not need IQ tests to make such first order inferences and predictions. Tests tied more closely to the school curriculum (i.e., achievement tests) do a better job of predicting.

In practice, psychologists do not use IQ tests to make first order inferences about current achievement levels nor do they use them to predict future school performance. By the time a child is referred for assessment, that child has already failed and the teacher already has information on current achievement levels. What the teacher is requesting and the psychologist purports to provide is an indication of the child’s capacity, Intelligence A. Psychologists use IQ tests to make higher level second order inferences. They go beyond a simple examination of what a person has learned and they try to infer from that learning how much “intelligence,” “ability,” or “capacity” that person has. They are in fact attempting to infer some type of biological potential or capacity when they administer an IQ test. If they were only interested in discovering what a student has learned or in predicting future academic performance, they would be content to use scores yielded by “achievement” tests which are better suited to both purposes because their content is more directly tied to the school curriculum.

What justification, if any, is there for making second order inferences about “intelligence” or “capacity” from a test of learned behaviors? What justification, if any, is there for making inferences about the genetic component of behavior, Intelligence A, from such a test? Cleary et al. (1975) say there is no justification whatsoever for such inferences. They argue that “a given person’s standing with respect to genetic factors cannot be inferred from a test score” and that the construct cannot enter into current practice in any but the most general fashion (p. 19). In short, there should be no inferences about capacity or potential.

If that position were taken seriously by psychologists, it would mean that both mental retardation and learning disability would have to be abandoned as categories because “capacity” and “achievement” cannot be differentiated in a psychological assessment. The SOMPA takes a less extreme position suggesting that inferences can be made about intelligence A/capacity if learning opportunities can be held constant statistically. What a person has learned is dependent upon many factors besides “Intelligence A/capacity”—exposure to the materials in the test, motivation to learn the materials in the test, mediated learning experiences, degree of visual or hearing impairment, to name a few. Only if all the factors other than “capacity” that influence test scores are held constant is a clinician justified in interpreting differences in test scores of individuals or of groups as differences in “capacity.” Although such complete control is not possible in real life, I have attempted to make such second order inferences more accurate across sociocultural groups by developing sociocultural norms for blacks, Hispanics, and Anglos that can be used with the WISC-R. These procedures are available as part of the SOMPA.

Dunn misunderstands the procedures for calculating sociocultural norms. He erroneously states that “For each minority group, a different number of IQ points is added to the obtained IQ score . . . . For example, zero IQ points are added for being white; five are added for being Hispanic. Knowing that the mean IQ difference between Hispanics and Anglos is about 11 points, one can see from this example that Mercer and Lewis consider about half the 11-point differential to be due to genetic-familial factors,
and the other half to be due to sociocultural factors” (page 23). SOMPA does not add 5 points for being Hispanic. No inferences can be made or are made about the percentage of the difference in the average scores of the two groups that is attributable to environment vs. heredity.

Sociocultural norms are conceptually no different than age norms. From the beginning of the testing movement psychologists have accepted the necessity for using different norms for different age groups. It seems self-evident that the raw scores of a 5-year-old on a test of learned behavior cannot be directly compared to the raw scores of a 10-year-old to make second order inferences about their relative “intelligence/capacity.” They have had different levels of exposure to the materials in the test. This differential exposure due to age must be controlled before making inferences. The same is equally true for persons from different sociocultural settings that provide different levels of exposure to the materials in the test.

In the SOMPA, the sociocultural norm is not the same for every member of an ethnic group as Dunn implies. A score is calculated for each student in each ethnic group based on that student’s individual background. Some students in all ethnic groups come from core culture backgrounds. For them the standard norms are used. For other students there can be as much as a 20 point adjustment in scores because their backgrounds are very different from the core culture. The standard norms are not appropriate for making second order inferences about their “intelligence” or “aptitude.” For this reason, we used multiple regressions to develop sociocultural norms for the purpose of making second order inferences. We control for the effects of family size, family structure, urban acculturation, and socioeconomic status on test performance by comparing the individual child’s score with the average performance of persons from the same background. I called the sociocultural IQ estimated learning potential to remind users that it is only an estimate. Although we developed sociocultural norms for the Wechsler Intelligence Scale Children-Revised (WISC-R), we could just as well have used any reliable “intelligence” or “achievement” test for this purpose. “We are not measuring different abilities; we are merely attending to different criteria” (Wesman, 1968, p. 269).

Although Dunn says the SOMPA approach “muddies the waters,” he later contradicts himself by recognizing the need for pluralistic norms! Rather than standardized procedures for estimating the cultural loading in test scores, he would trust to “well-informed interpreters of test scores to arrive at exactly the same conclusion by using tests with single sets of norms.” Psychologists can subjectively make allowance for “mean IQ differences among the various ethnic groups” (p. 24). He prefers clinical judgment to standard replicable statistical procedures!

Dunn’s primary objection to sociocultural norms for standardized tests is his belief in the genetic hypothesis as the best explanation for the lower scores of Puerto Ricans and Mexicans on IQ tests. If one believes that between-group differences represent real biological differences in inherited intellectual ability rather than the effects of differential socialization, then it follows that taking sociocultural background into account when interpreting test scores is simply obscuring reality, i.e. “muddying the waters.” If one believes that between-group differences are primarily the result of differential socialization, then using a single set of norms to infer “intelligence” is muddying the waters and sociocultural norms are one mechanism for settling out the mud and clarifying the nature of the inferences being made.

CONCLUSION

It is distressing to find Dunn reviving the old myths about racial differences in inherited “intelligence” and especially distressing that he is now applying those myths not only to black but to Hispanic populations. He has no new evidence. He does not even bother to make the case for his position using the old arguments. The fact that the mean scores on tests of learned behavior are different for different populations tells us nothing whatsoever about the sources of those differences. His monograph obscures rather than enlightens and is a disservice to school psychologists who are laboring to conduct fair and accurate assessments in a multicultural society, to bilingual education and to special education.

REFERENCES


Received April 7, 1988

This article challenges Dunn's arguments and the logic used to arrive at them. It is argued here that IQ scores for different groups can be influenced by the way they use vocabulary; that the decline in U.S. mainland Hispanic students' vocabulary scores coincides with the onset of classroom instruction; and that SES is not controlled for in the studies presented by Dunn. Further, genetic components of scores on IQ tests for U.S.-born Hispanics cannot be determined from intelligence tests heavily loaded with a language component, since such tests measure language facility rather than intelligence. Also, Dunn's discussion of the role of heredity and parental factors in academic achievement and intelligence test scores is meaningless when children have not been placed in optimal educational environments. It is argued, contrary to Dunn's position, that native language instruction can result in the elimination of problems discussed by Dunn. Finally, comments on the ethical and moral implications of Dunn's monograph are presented.

The American Guidance Service recently published a monograph by Lloyd M. Dunn (1987) as an accompaniment to Dunn's newly developed Spanish adaptation of the Peabody Picture Vocabulary Test—Revised (cited in Dunn, 1987). In addition to justifying the use of the Test de Vocabulario en Imagenes Peabody: Adaptación

The opinions expressed in this article are solely those of the author and should not be construed as a position of the Georgetown University Evaluation Assistance Center-East or of the U.S. Department of Education, which provides funding for the Center.

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Hispanoamericana (TVIP-H; cited in Dunn, 1987) the monograph has the apparent purpose of proposing a solution to the academic problems of Hispanic students in the United States. The solution is to eliminate bilingual education and to instruct Hispanic children wholly in English with supplementary instruction in the English language. As part of the proposed English language development program, Dunn recommends using the Peabody commercial language tests and curricula developed by himself and his colleagues and published by American Guidance Service.

In order to propose his solution, Dunn builds a lengthy argument to prove that Hispanic students in the U.S., primarily those of Mexican and Puerto Rican origin, are intellectually and linguistically inferior to other populations and that this inferiority limits their ability to handle any program in which the development of two languages is stressed. He argues that the inferior aptitude of these students is influenced by a strong genetic component and it is therefore unrealistic to expect Puerto Rican and Mexican American students to benefit from bilingual programs. He further cautions that even with English-only programs, expectations for these students must be kept “realistic” (p. 74).

To support his argument, Dunn provides extensive documentation of the low scores of Hispanic populations in the U.S., Puerto Rico and Mexico on tests of intelligence, academic achievement and various versions of Dunn’s vocabulary tests. He also analyzes the racial components of the blood lines of Puerto Ricans and Mexicans, and cites stereotypes concerning Hispanic personality and motivational factors. These three types of “evidence” lead him to conclude that about one half of the score differential between Hispanics and the general population of the United States is due to environmental factors and about one half is due to genetic and personality influences. This evidence, combined with a discussion of what Dunn believes to be the ineffectiveness of bilingual education programs, provides the basis for Dunn’s conclusions and recommendations:

These (recommended) strategies will be based, realistically, on their (Hispanics’) inadequate language skills in both Spanish and English, and their substandard school achievement, as well as the perceived personality characteristics of the parents and their offspring that have already been cited (pp. 65–66).

There are three major problems with Dunn’s monograph. The first concerns the nature of much of Dunn’s evidence, the second concerns the inconsistent and flawed logic he used to interpret that evidence and the third problem is ethical. Each of these will be discussed below.

**Problems with Evidence and Logic of Interpretations**

**Evidence Concerning Personality Characteristics**

The personality characteristics to which Dunn refers in the previous quote are lazy and unambitious. Although he admits there is no empirical evidence to substantiate these stereotypes, Dunn nevertheless states that personality and motivational factors must be factored into an equation which expresses the explanatory components of Hispanic students’ low academic achievement. Although Dunn never describes or lays out the equation to which he refers, he writes:

These reviewers (Martinez and Mendoza, 1984) claim that Latins in the U.S., as a group, are frequently labeled with such stereotyping terms as lazy and unambitious. But the accuracy or inaccuracy of these extreme generalizations are not established empirically. ... Yet the personality characteristics and attitudes of Hispanics, as a group, must be factored into the equation. ... It would seem safer to say that about half of the 10- to 12-point IQ deficiency of Puerto Ricans and Mexican-Americans is due to inherited or familial factors, within the individual, that influence both intellectual and personality characteristics. ... (Dunn, 1987, pp. 64–65).

Other than citing the above stereotypes, Dunn offers no suggestions as to what might be the personality factors to which he refers. Thus his decision to “factor” personality factors into the “equation,” expressed immediately following the reference to derogatory stereotypes, strongly implies that the stereotypic characteristics are to be taken seriously.

**Evidence Concerning Language Skills**

In order to develop his point that Hispanic students in the U.S. have inferior language skills in Spanish as well as English, Dunn compares Spanish vocabulary test scores of Hispanic students in the U.S. with those of monolingual Spanish speakers in Madrid, Mexico and Puerto Rico. Scores for the groups rank order as follows: highest scores were obtained by the group in Madrid, fol-
owed by Puerto Ricans and Mexicans combined, and lowest scores were those of Puerto Rican and Mexican American children on the U.S. mainland. Based on these results, Dunn argues that Puerto Ricans and Mexicans, who have racially mixed blood, are inferior to pure blooded Spaniards in linguistic ability and that Hispanics on the U.S. mainland are inferior to all of the other groups in the comparison.

Problems with Dunn’s evidence for the linguistic inferiority argument are his attempt to compare vocabulary scores across cultural and national boundaries and the failure to control for SES in the group comparisons.

Comparing vocabulary across cultural and national boundaries. Dunn’s comparison of vocabulary test scores across three different nationalities is an invalid procedure when the purpose of the comparison is to rank order groups according to value judgments. Different cultural groups, even when they speak the same overall language, use vocabulary in different ways—both in terms of specific words and also in the frequency with which particular words are used in the culture. Jensen (cited in Dunn, p. 34) notes that on Dunn’s tests, the difficulty of a word is actually equivalent to the frequency of use of that word in the language. Since the frequency of use of any given word varies across cultural and national groups, Dunn’s comparison of scores of Mexicans, Puerto Ricans and Spaniards is meaningless and differences in scores across the groups provide no valid basis for inferring the superiority or inferiority of the language of any particular group. Saying that the Spanish of Puerto Ricans and Mexicans is inferior because it is not like the Spanish spoken on the streets of Madrid (Dunn, pp. 10–11) is like saying that the English of U.S. Anglos is inferior because it is different from the English spoken on the streets of London. Furthermore, the phonetic, syntactic and semantic roots of the Puerto Rican dialect are from the Spanish spoken in Andalucia, which differs considerably from that of Madrid (Canfield, 1981; Gila-Gaya, n.d.; Navarro-Tomás, 1948). To interpret the language of one group as inferior because it differs from some other national group is strictly a value judgment, not a scientific statement.

The declining scores of mainland Hispanics. One of Dunn’s major points based on comparisons of vocabulary test scores across national groups is that the language of Puerto Ricans and Mexican Americans on the U.S. mainland is inferior to that of their monolingual counterparts in Puerto Rico and Mexico. Using comparisons between these groups at different ages, he demonstrates that Spanish language scores for Hispanic children in the U.S. are comparable to scores of children in Mexico and Puerto Rico only during the early childhood years. After the age of six and a half they fall into a progressive decline.

This evidence, accompanied by evidence of low scores in English as well, leads Dunn to conclude that U.S. Hispanics are “inadequate bilinguals” and that they simply don’t understand enough of either language to function in school (Dunn, 1987, p. 49, 53).

Dunn seems aware of the fact that for Hispanics in the U.S. the interruption in Spanish language development and the decline of Spanish language scores corresponds to the beginning of school where U.S. students are immersed in English-only instruction. However, instead of acknowledging that an educational program which maintains the development of the native language could very well solve this problem, he concludes that the children are incapable of learning any language well:

In any event, the hypothesis must be entertained that many Hispanics on the U.S. mainland lack sufficient general intelligence, or specific linguistic aptitudes, to become proficient in either Spanish or English (p. 29).

That Dunn accepts this proposed hypothesis is illustrated later in his paper when he states that his solution to the academic problems of Hispanics is based on their inferior scholastic aptitude, inadequate language skills and substandard school achievement (Dunn, 1987, p. 66). Throughout the paper there are numerous reiterations of this point such as the following:

This is because most Puerto Rican and Mexican American children do not have the scholastic aptitude or linguistic ability to master two languages well, or to handle switching from one to the other, at school, as the language of instruction (p. 71).

Dunn’s logic in arriving at this conclusion and his failure to acknowledge the obvious solution to the decline of native language skills at school age seems rather appalling. Even more amazing is his acceptance of research which indicates that bilingualism facilitates cognitive development for most ethnic groups while he rejects this possibility for Puerto Ricans and Mexican Americans. In a number of instances, he argues that bilingualism does not benefit these latter groups because of their intellectual inferiority and inferior language skills:
Unfortunately, while bilingualism facilitates cognitive and scholastic development for many ethnic groups around the world, no such positive effects have been demonstrated for Hispanic American children who are inferior in both Spanish and English (p. 52).

Well over half of the people in the world today are bilingual, and there is growing evidence that adequate bilingualism facilitates, rather than hinders, performance on a variety of psychometric tests. But one cannot rule out bilingualism as a contributing factor to scholastic problems in the case of Hispanics. More recent and sophisticated research has demonstrated that the level of proficiency in one or both of the languages is a key factor. For competent bilinguals, two languages facilitate; for incompetent bilinguals, they create confusion. For Hispanic American children, with their inferior language skills, bilingualism is probably a contributing factor that helps to explain their poor test and school performance (p. 63).

Diaz (1983) has written an excellent article examining more recent research that has shown the cognitive advantages of being bilingual. . . . Even so, no positive effects of bilingualism have been demonstrated for Hispanic children in the U.S. Instead, generally, the positive influences of bilingualism have usually been found among subjects from the middle and upper classes in non-Latin American cultures, including groups of Canadian, Welsh, German, Swiss, and Jewish children (p. 29).

Many of us, as adolescents and adults, have observed that learning Latin facilitated our knowledge of English, but this does not seem a very promising hypothesis to apply to young Hispanic children (p. 30). Freed from the tyranny of a one-language system, capable bilinguals have a problem-solving advantage over monolinguals. But no such facilitating effect is postulated for children whose skills in their mother tongue and/or their second language are inferior, as is the case of most Hispanic American children (p. 30).

Dunn’s logic in the above statements is difficult to reconcile with the clear evidence he presents which indicates that the loss of native language development begins with the onset of instruc-

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tion in the public schools of this country. Furthermore, his statements that there has been no evidence of facilitating effects of bilingualism for Hispanic children is simply false, as will be discussed later in this paper.

Failure to control for SES. A final problem with Dunn’s comparison of vocabulary scores across ethnic groups is his failure to control for SES factors. In presenting his scores for the three groups, Dunn differentiated SES levels only for the group in Madrid. He did not report the criteria used to determine those SES levels nor did he report SES levels for Puerto Ricans and Mexicans, whose scores were aggregated to form a single group. The Puerto Rican and Mexican groups scored roughly equal to the lower SES group in Spain. Although cross-national differences in vocabulary and in the frequency of use of specific words invalidate cross national comparisons as discussed above, the failure to report SES data for all groups further invalidates interpretations based on comparisons of aggregated scores since the Puerto Rican and Mexican groups may have been predominantly lower SES.

The Genetic Bases of U.S. Hispanics’ Academic Problems

In order to convince his readers that the problems of Hispanic children in the U.S. are not due to the failure of schools to meet their needs (Dunn, 1987, p. 65), Dunn reinforces his argument concerning the inferiority of U.S. Hispanic children by positing a genetic component that accounts for approximately half of the differential between Hispanics and the general population on scores in intelligence tests. In shaping this argument, Dunn points to race as a contributing factor:

Race, as a contributing factor, cannot be ignored. It is recalled from Part I that most Mexican immigrants to the U.S. are brown-skinned people, a mix of American Indian and Spanish blood, while many Puerto Ricans are dark-skinned, a mix of Spanish, black, and some Indian. Blacks and American Indians have repeatedly scored about 15 points behind Anglos and Orientals on individual tests of intelligence. While generally equal or superior to Anglos and Orientals on the factor of memory, they lag behind in abstract reasoning and vocabulary. Yet vocabulary subtests tend to contribute more to general intelligence test scores than any other subtests (Dunn, p. 64).

Dunn apparently believes that the reference to black and Indian
scores is sufficient to make his point concerning the inferiority of mixed races. With no discussion of the possible reasons for the lower scores of blacks and Indians, Dunn continues his discussion of Hispanics:

For the reasons just cited, it is argued that it would be simplistic and irresponsible to contend that the 10- to 12-point IQ differential is due exclusively, or even primarily to bilingualism, as has often been argued, or even to all environmental influences combined, including cultural incompatibility (Dunn, 1987, p. 64).

Although Dunn discusses environmental factors such as SES that could be a contributing factor to Hispanics’ scores on IQ tests, and he acknowledges that many studies are poorly controlled for socioeconomic level or for levels of proficiency in the languages spoken by the subjects, he suggests that genetic factors may account for the SES levels of groups rather than the reverse.

Two aspects of Dunn’s analysis of the heredity component call for discussion. The first concerns the language component of the various tests upon which Dunn bases his analyses, and the second concerns the nature of the heredity-environment issue.

The language component of tests. Although Dunn acknowledges that vocabulary subtests contribute more to general intelligence test scores than any other subtests, he does not seem to comprehend the implications of this statement. It is meaningless to attempt to estimate a genetic component to scores on IQ tests for populations whose native language development has been cut off at the crucial age of school entrance because of education policies and who have had to start learning in a second language. Given the lesser language facility in each of the languages (as Dunn has documented so well) one would not expect high scores on tests that are heavily loaded with a language component. Yet, it is not only the vocabulary subtests on tests of intelligence that reflect language facility—the entire test is heavily loaded with a language component. Oller and Perkins (1978) have analyzed items and instructions on intelligence and achievement tests and point out that language facility is required to respond to all aspects and types of these tests since language is the means used to convey questions and instructions. Even tests considered to be nonverbal require substantial knowledge of academic language in order to understand the verbal instructions. These authors suggest that the factor which most tests measure is language facility rather than intelligence.

There are other aspects of the intelligence testing literature that Dunn also chooses to ignore, even though he cites for his own purposes some of the evidence crucial to the following points.

Irrelevance of the heredity/environment debate. Discussions of the genetic component of intelligence have no relevance to the issue of modifiability. Any genetic component there is to intelligence is irrelevant to solving the educational problems of children because it is the modifiability of test performance that is in question. A genetic explanation for school failure and low test scores becomes relevant only when it can be proved that the children in question are living and being schooled in optimal environmental conditions and are reaching their maximum level of potential.

Examination of the way in which estimates of genetic contributions to intelligence are determined clarifies the lack of correspondence between heritability and modifiability. All equations to estimate the genetic component in human intelligence are ultimately based on positive correlations between IQ’s of siblings, parents and children. However, correlations, upon which these equations are based, merely express the degree of correspondence between rank orderings and have nothing to do with absolute values. For example, a set of scores that range from 50 to 75 can have a perfect positive correlation with a set of scores that range from 150 to 200. Correlation only reflects the similarity or lack of similarity between the rank orders of numbers. The actual values or levels of the numbers in the two groups is irrelevant.

The importance of this to the current discussion is that groups of children who are provided with enriched environments can score much higher that their own parents on tests, yet there may still be a substantial positive correlation between the scores of the parents and children. This has been illustrated by Skeels and Harms (1948) and Skodak and Skeels (1949). These researchers studied a group of adopted children and found that in the enriched environment of the adoptive homes, the children’s IQs averaged 20 to 30 points higher than their true parents, even though the rank order correlation with the true parents was still positive and significant.

These and similar studies demonstrate that regardless of the magnitude of the correlation of IQ estimates between children and their parents or other family members, estimates of the genetic component to intelligence have no practical value in planning educational environments for groups of children. IQ levels change when environments and opportunities for exposure to the
type of information found on intelligence tests change. The often referred to stable IQ is stable only when opportunities and environment also remain stable.

Changes in IQ that follow changes in the environment have been documented in the literature. For example, longitudinal studies report IQ increases in children who move from the rural South to the urban North (Lee, 1951) or who are exposed to enriched schooling experiences in preschool, elementary school, or adulthood (Anastasi, 1982). Substantial changes in IQ have been documented that are associated more strongly with the amount of formal schooling completed between pretest and post-test than with SES (Harnqvist, cited in Anastasi, 1982, p. 327).

In cross sectional research, differing environments have been found to be associated with group IQ differences within the same ethnic/racial groups. Even Dunn (Dunn, 1987, p. 21) notes that blacks in California score higher on intelligence tests than the general population of blacks in the country. He also cites Anastasi’s (1958) review which reports differences in the IQ of rural vs. urban Anglos. Others have reviewed these issues in more detail (e.g., Bloom, 1964; Hunt, 1961; McCandless, 1964) and document both longitudinal and cross sectional changes in IQ as a result of changes in experience. Where population changes have been documented, it has been noted that the changes are related to the difference in quality of schooling available to the population (McCandless, 1964).

A review of this literature is beyond the scope of the current paper. The point illustrated here is that discussion of the role of heredity and of familial factors in academic achievement and intelligence test scores is meaningless when the children under discussion have not been placed in optimal and ideal education environments. Optimal education programs can facilitate cognitive and intellectual development and can raise scores on tests of intelligence, achievement and language, regardless of the strength of the correlation for scores between family members. Dunn’s frequent reiterations that the academic problems of Puerto Rican and Mexican children in this country are due to their inherent lack of ability are not only meaningless in a scientific sense, but they can serve only to exacerbate the problems that Hispanic children must face. Additional damage to these children is done when he states that bilingualism can facilitate cognitive development for most groups except Hispanics. This statement reflects either an unawareness of the relevant literature or Dunn’s own bias in interpretation.

Evidence from Research on Bilingual Education

Earlier in this paper, I presented Dunn’s argument that bilingualism can facilitate cognitive development and achievement on various kinds of tests for most ethnic groups except Hispanics. Dunn also concluded that “...20 years of experimentation with so-called ‘bilingual education’ has not worked well, and will not, even with further tinkering...” (Dunn, 1987, p. 66). Consideration of Dunn’s argument involves looking at the evidence concerning the effectiveness of bilingual programs with Hispanic students in the U.S. To do so, it is essential to differentiate among several approaches to examining the question since these approaches are based on false assumptions that frequently invalidate the conclusions they generate.

One approach to evaluating the overall effectiveness of bilingual programs has been to note whether there have been any changes during recent years in the condition of the general population of Hispanic students throughout this country, in terms of test scores, drop out rates, etc. In the absence of significant improvement overall, some individuals, including Dunn, have concluded that bilingual education has been ineffective.

The fallacy in this approach is that it entails assuming that all Hispanic students who are in need of bilingual programs have been served in bilingual programs. In actuality, the majority have not. For example, O’Malley (1982) reports 1978 survey data indicating that only 23% of 1.7 million limited English proficient (LEP) students were in bilingual programs.

Perhaps more informative than national survey data are data from specific large districts. Willner (1985) reports data from the New York City schools which are under a consent decree of the U.S. District Court. The decree requires that “all children identified as Limited-English-Proficient (LEP) must receive a full bilingual program”. . . (p. 1–1). Information gathered in 32 New York school districts on students who had been identified as LEP through actual test and assessment procedures indicated that almost 40% of the students were receiving no services whatsoever. Only 30% of the students were in the full bilingual program prescribed by the law, and more than two-thirds of the eligible students who were not in the full program had never been offered the opportunity to participate in such a program. The importance of these data is that if schools in a specific geographical region that are operating under a legal consent decree do not provide the services to comply with that decree, many districts not under
A consent decree would be even less likely to make the effort to provide services to all Limited English Proficient students. Additional data from California illustrate the same point. A study cited in Education Week ("Study Faults California," 1988) found that the “vast majority” of foreign-born students in California were receiving inadequate English-language instruction and little, if any academic support in their native language.

A second approach to estimating the effectiveness of bilingual education is to examine data that concern those students who actually have participated in bilingual programs. Survey data can give estimates of overall success rates of children who participate in bilingual programs. Actual research data provides information concerning comparisons of test data of children who have participated in specific bilingual programs with data from children who have not participated. There are problems with both of these approaches.

A major problem with general survey data is the assumption that all programs with the label bilingual are actually bilingual programs and that the quality of the programs is uniform. In actuality, the label alone carries little meaning since the term bilingual program has been defined in many ways. It has included programs where all instruction is in English but there is a bilingual aide in the classroom, programs that use some oral Spanish in instruction but do not teach native language reading, programs that use some native language for a maximum of one or two years, programs that actually include native language instruction in equal proportions to English language instruction, programs that exit students as soon as their oral English skills meet some minimal criteria, and so on. Zirkel (1972) has described his difficulties in locating a bilingual program that actually differed in any respect from the non-bilingual programs in the schools where he intended to conduct his research.

Failure to include major components of bilingual education in bilingual programs is also exemplified in interview data collected during the conduct of a study in recent years (Willig, Wilkinson & Polyzoi, 1985). During the conduct of teacher interviews, one teacher described a situation where she was to monitor achievement testing for the bilingual students. The tests were administered in the native language but the children couldn’t read them because the district bilingual program did not include instruction in reading in the native language.

Other studies have also found that services to limited English proficient students are conducted primarily in English. Development Associates (1984) surveyed services provided to a nationally representative sample of LEP students in 397 schools and found that instruction was predominantly in English. O’Malley (1982) found little difference in the amount of English language instruction received by students in a bilingual program and students in an English-medium classroom. In short, survey data on the success of students who have participated in bilingual programs is useless unless the characteristics of the programs are documented—and they seldom are.

When one considers specific research programs, the situation does not improve. Reviews of the evidence concerning bilingual education have been hampered by a failure to document program characteristics even in research reports (e.g., Baker, 1987; Willig, 1982, 1985, 1987). Much of the evidence concerning bilingual education may actually be based on programs which, under scrutiny, are inadequate programs that provide minimal opportunities for native language development.

In documenting characteristcics of bilingual programs, it is crucial to report the level of language proficiency in the native language that is produced by the program, including reading, writing, and other subject matter. Research evidence suggests that a certain threshold of proficiency must be attained in the native language in order to facilitate the acquisition or learning of the second language and the transfer of academic skills to the second language (Cummins, 1982; Snipper, 1985). Even Dunn acknowledges this point, although he fails to recognize that the threshold is probably not attained in transitional bilingual programs. The thrust of transitional bilingual programs that have been funded federally is to transfer children out of the programs as quickly as possible, when English skills meet certain minimal criteria. The level of proficiency for native language skills in these programs is irrelevant to the exit criteria. If, indeed, children have not reached certain threshold levels in the native language, the programs may very well fail to promote adequate academic achievement in English. In spite of this, of all the Title VII programs that are currently funded, only two are developmental programs that have goals of promoting native language skills.

General reviews of research on bilingual programs offer little evidence to support contentions that bilingual education is not effective. In general reviews of the literature, results are tallied for studies that show positive or negative results. If the majority of studies find that the comparison groups outperform the bilingual program groups, it is concluded that bilingual education is
ineffective. This approach has proved to be misleading because of the tendency of reviewers to ignore or not recognize fatal flaws in research design that are more certain to account for study results than are the programs under study (Willig, 1982, 1985, 1987). There is evidence that in virtually every major study in which comparison groups outperformed bilingual program groups such fatal design flaws were present (Willig, 1985). Willig has described these flaws although Dunn chooses to discount them. For example, in the American Institutes of Research study mentioned by Dunn, two-thirds or more of the students in the non-bilingual program groups that were compared to the bilingual program groups had previously been in bilingual programs. The fact that they were no longer in bilingual programs indicates that their English was considered adequate for success in the regular classroom. Under these conditions, one would expect differences to favor the comparison groups, as they did.

Given that most research on bilingual education has suffered from the problems just described, it is clear that there must be two major thrusts in research on the effects of bilingual programs. The first is to employ adequate research designs which can eliminate alternative explanations for the results of the studies. The second is to document carefully the nature of the programs under study. The characteristics of these programs must then be examined in conjunction with the types of results they produce. Emphasis on asking and answering the questions that determine characteristics of effective programs, including research that compares different approaches, would certainly be a much more meaningful and ethical approach to addressing the problems surrounding the education of linguistic minorities than the approach taken by Dunn.

A few studies that exhibit research of improved quality are beginning to produce evidence that native language instruction can overcome the kinds of problems that Dunn discusses. For example, one nationwide study currently underway and funded by the U.S. Department of Education has as its purpose a specific comparison of the effects of all-English instruction in structured immersion programs, transitional bilingual programs, and programs in which the native language is maintained in conjunction with English language instruction. This is a four year study which appears to be meeting high technical standards. To date results have been reported only for year one for children in kindergarten and first grade. These results, reported in Education Week, ("Immersion method," 1986) indicate that children in the two bilingual program models outperformed the children in structured immersion programs on English tests in reading, language arts and math. Although data from later years have not been reported, other studies support this evidence.

Snipper (1985) documented the facilitative effects of native language instruction for Hispanics in an examination of the effects of specific exit criteria on students' later achievement in English. Snipper found that those students whose reading level in Spanish exceeded the second grade level upon exit from the bilingual program achieved higher levels in English reading in subsequent years than did students whose reading level in Spanish was below the second grade upon reclassification. Snipper also explored a number of other variables surrounding the reading achievement of exited students and teacher attitudes that influenced the amount of native language reading that was taught.

Curry and Chavez-Silverman (1988) have reported preliminary analyses of English reading and vocabulary scores of 1,757 bilingual students in grades 1 to 8. The authors compared the scores at each grade level of students who received Spanish reading instruction in bilingual programs for at least three years with scores of similar children who received no native language instruction. At every grade level, scores of children who had received three years of native language reading instruction were higher in English vocabulary than those of bilingual children who had not received native language reading instruction. Scores in English reading showed similar differences, except for grade 4, where the bilingual children who had received native language instruction were slightly lower than the comparison children. The largest differences between the groups on both reading and vocabulary were at the upper grade levels, grades 6, 7 and 8.

**Ethical and Moral Implications of Dunn’s Monograph**

Last but not least of the concerns raised by Dunn’s monograph are the ethical and moral implications of his approach to building an argument that supports his “solution” to the problems faced by U.S. Hispanics in our public schools. Although Dunn claims that the purpose of his monograph is to help in the solution of these problems and to offer suggestions that will help Hispanic girls and boys “to become first-rank, productive contributors to American society” (1987, p. 14), almost every page of the monograph contradicts his stated purpose with statements that can have
no other effect than to lower teacher and educator expectations for Hispanic children and to assault the self-esteem of every Puerto Rican or Mexican American reader of Dunn's work. Throughout the monograph there are constant references to the inferior academic ability or aptitude of Hispanic students, to the genetic basis of this inferior ability, and to personality characteristics of a derogatory nature. Even the solution that Dunn proposes is presented in this negative light, as quoted at the beginning of this paper.

There is ample research evidence concerning the damaging effects of lowered teacher expectations for students (e.g., Brophy & Good, 1970; Rist, 1970; Fuchs, 1972). Secretary of Education William Bennett has recently spoken against the dangers of low expectations of educators for children and notes that one of the main obstacles to equal educational opportunity lies in the doubts of educators themselves (Education Week, "Minorities can meet," 1985). In detailing his solution to the education of Hispanics, Dunn also includes a caution that teachers must hold high expectations for their students. However, the numerous contradictions to that caution found throughout the monograph far outweigh the caution.

Lower expectations for Hispanics are also reinforced by the bases for Dunn's total rejection of every aspect of bilingual education. His perceived failure of bilingual education is not based on an examination of evidence concerning the success or failure of specific aspects of programs or even the rejection of the evidence that adequate bilingualism can facilitate certain types of academic learning. Instead, he rejects the programs because he believes in the students' inferiority and inability to handle bilingual education. In short, Dunn's monograph is but one long, prime example of "blaming the victim" (Ryan, 1976). The tragedy is that he seems to be unaware of the poison in his remedy.

REFERENCES


Immersion method is faring poorly in bilingual study. (1986, April 23). Education Week, page 1.
Assessment of Puerto Rican Children in Bilingual Education Programs in the United States: A Critique of Lloyd M. Dunn's Monograph

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This article comments on Dunn's translation of the PPVT-R into Castillian Spanish and the process he used to norm this instrument with Puerto Rican and Mexican American children. Demographic characteristics of Hispanics, specifically Puerto Ricans and Mexican Americans, in the United States are provided. A review of relevant literature included by Dunn in his discussion of the scholastic, intellectual, and linguistic assessment of Puerto Rican and Mexican American children follows. It is concluded that the Spanish version of the PPVT-R is inappropriate to measure receptive language in Puerto Rican and Mexican American children in the United States because it does not follow cross cultural methods for test translation and validation.

When I was growing up near an army base in Puerto Rico, my grandmother said to me, "ten cuidado a la buena joden a cualquiera." A rough translation of this saying is "it is with good intentions that they do you in." Such is the case with a recent monograph published by the American Guidance Service entitled Bilingual Hispanic Children on the U.S. Mainland: A Review of Research on Their Cognitive, Linguistic, and Scholastic Development. The author of this monograph is a very well known and respected scholar, Dr. Lloyd M. Dunn. Dr. Dunn attempts to do two things in this monograph: (1) share with the reader his personal views about the education of Mexican Americans and Puerto Ricans in United States schools, and (2) defend a recent transla-

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tion of the Peabody Picture Vocabulary Test-Revised (PPVT-R) into Castillian Spanish and the process he used to formulate norms for this instrument with Puerto Rican children in Puerto Rico and Mexican children in Mexico.

After a careful review of the technical manual for the Test de Vocabulario en Imágenes Peabody (Adaptación Hispanoamericana) (TVIP) and the monograph which accompanies the Examiner's Manual, it is important to share with the academic community information which is not included and methods that were used which are not scientifically appropriate based on common practice in test construction. This paper will follow the same organization of his monograph.

GENERAL COMMENTS

The monograph has at least four immediate problems that need to be explored further. First, there is information which is inaccurate—on p. 4 the total number of Puerto Ricans in Puerto Rico has been calculated at 3.4 million in the 1980 Census of Population. Second, there is information which has not been included—on p. 6 there are no data relating to pure blooded Caucasian Hispanics; p. 8 "Puerto Rico has representation in the U.S. Congress." Third, in Part 2 of the monograph there is an over-reliance on Clarizio (1982) while other recent studies on test translation to Spanish and the use of translated tests were not mentioned (i.e., Martin, 1976; Oakland & Parmelee, 1985; McShane & Cook, 1985). There are approximately 84 empirical studies on the Wechsler scale and Hispanic children which were overlooked. Fourth, Dunn does not mention that many of these studies were conducted with the WISC-R in English while he chooses to ignore studies conducted with the EIWN (Spanish WISC) or the EIWN-R, (Spanish Experimental Edition). Therefore, to conclude that "poor performance of Hispanics is attributable to results in the studies" is an error. Furthermore, the study by Padilla, Roll and Gomez Palacio (1982) has one basic flaw. It used American norms to determine the scaled scores of children tested in Mexico. This procedure is totally inappropriate.

The PPVT/PPVT-R (TVIP) measures "the extent of hearing vocabulary of a subject in standard Castillian Spanish. More indirectly . . . it claims to be a good screening measure of verbal ability or scholastic aptitude, and therefore a predictor of school success." (p. 76 Examiner's Manual.) This instrument cannot be used in schools in the United States with minority language children whose native language is Spanish for two reasons. First, a large number of children in bilingual education programs in the United States did not grow up hearing or speaking Castillian Spanish in the home, school, and the community. Secondly, most Puerto Rican second generation children in bilingual education programs have been exposed to English since birth via television and other community sources. These children, although they speak Caribbean Spanish, have been influenced by their exposure to English.

The conclusions derived by Dr. Dunn and reported in the latter part of the monograph are not substantiated by the literature nor are the results of instruments discussed in the monograph. Dr. Dunn resorts to analysis of research (Baker & de Kanter, 1981) and popular literature (Michener, 1985; or Rodriguez, 1986) which have been proven, under more serious scrutiny, to be subjective at best (GAO Report, 1987).

DEMOGRAPHIC INFORMATION ABOUT HISPANICS IN THE UNITED STATES

The Bureau of the Census (1987) reports that there are approximately 18.8 million Hispanics in the United States. The majority of the Hispanic population is composed of Mexican Americans and Puerto Ricans. Cubans and a recent influx of Central and South Americans comprise the remaining portion of the Hispanic population. Of the first two populations that Dunn refers to in his monograph, Mexican Americans are located in the Southwestern states: California, Texas, New Mexico, and Arizona. Puerto Ricans are located mostly in the Northeast: New York, New Jersey, Connecticut and Massachusetts. Arias (1986) reports that in 1984 there were approximately 4.2 million Hispanic children enrolled in schools.

There are two myths within the Dunn monograph which must be dispelled. The first one is that most Hispanics do not want to learn English. They do; however, the length of time differs from other immigrant groups. One reason for this found by Prewitt Diaz (1987) is that Spanish is unique among other immigrant languages in that it is continually invigorated by the proximity of the place of emigration (Puerto Rico or Mexico). Therefore, the shift from Spanish to English takes two to three generations rather than one generation characteristic of earlier immigrant groups. The
other myth (believed by many, Dr. Dunn included) that Mexican Americans are predominately illegal aliens, is false. Trotter, Wood, Gutierrez Mayka, Felegy and Reed (1987) studied the migrant population in the United States and reported that most migrants are U.S. citizens although they are culturally different from the locals.

Most of the Hispanic (Puerto Rican and Mexican American) population is highly concentrated in urban areas. In these urban areas the segregation of Hispanics from the mainstream population has increased in the last five years. Hispanics are, therefore, not only segregated from the Spanish language spoken in the country of origin, but also from English, the language of success of the mainstream population in the United States.

The culture of the groups considered Hispanic in the United States is as diverse as the culture of groups considered European. The culture of Mexican Americans has been influenced by the native populations that inhabit Mexico and the Southwest United States. The Puerto Rican population has been influenced by Spanish and African cultures and, most recently, by the transculturation of Puerto Ricans from Puerto Rico to the United States. In 1986, more than 55% of all current residents of Puerto Rico had migrated to the United States and returned to the Island (Junta de Planificación, 1986). A third culture is created by return migrants to the Island. This culture, while not language-bound, is very influential in the cultural-political transformation of Puerto Rico. One thing is clear: neither Puerto Rico nor Mexico has been in contact with Spain for over one hundred years. New bonds, new linguistic idiosyncrasies, and new cultural behaviors are exhibited in these two geographical regions. Mexico has become a free republic. Puerto Rico remains a colony of the United States. Neither is greatly influenced, politically or culturally, by Spain.

The language usage of the Puerto Ricans and Mexican Americans in the United States is different from the Spanish language usage in Puerto Rico and Mexico. The language of Puerto Rico has been Americanized to the point that many words frequently used are anglicisms. Mexico has been influenced by indigenous languages, and the more frequently used words and idioms are part of the mestizo Spanish. The point is that neither of the populations in these two countries speak Castillian Spanish.

The educational attainments of the Puerto Rican population has begun to be noticed. Fitzpatrick (1987) reports that there is a strong middle class among second generation Puerto Ricans in New York. As a matter of fact, the popular press in San Juan, Puerto Rico, has reported that there has been an exodus of well educated Puerto Ricans to the United States. The process of brain drain has taken place in the last five years. Most of these Puerto Ricans have settled in professional jobs in the smaller towns in New York, Pennsylvania and Ohio. This segment of the population speaks Caribbean Spanish and has been exposed to English since its members were in the primary grades. As a matter of fact, Puerto Ricans are exposed to English through cable TV on a daily basis. Most middle class families in Puerto Rico attempt to have their children learn English as soon as possible aprenden inglés mío (learn English as soon as you can my child) is a common saying.

Suggesting that the academic progress of Puerto Rican and Mexican American children is much lower than that of Asian Americans, Dunn cites an article from Psychology Today which suggests that Asian Americans are the model minority on the fast track to success, usually doing well without public help (p. 14). This comparison is not appropriate because the Asian population that has been accepted as immigrants in the United States has been scrutinized by the Immigration and Naturalization Service. This population has been accepted by the United States because it has provided evidence that it will be supported by sponsors. Puerto Ricans, as American citizens, can move as they desire. Frequently, Puerto Ricans will settle in the United States after visiting a family member. They did not start out with specific plans to remain in the United States, nor did they have guarantees of jobs or assistance from church groups or other sponsors.

Mexicans have been accepted in the United States because they provide cheap labor for the growers in the Southwest. The popular press reported that farmers in some states were unable to harvest their crops because they did not have enough Mexican laborers. Finally, in reference to the large number of Asians that have been accepted as refugees from Southeast Asia, the "model minority" is not as model as has been reported because many of the members of this group are not as educated as previous immigration waves.

The fact remains that while Puerto Rican and Mexican American children are afforded compensatory education, they continue to perform below the norms established by the majority society. Dunn suggests that "the educational performance of Hispanics will be molded by an interaction of environment and heredity."
There is no disagreement that if equal access to the mainstream of education and if motivation are provided to Puerto Rican and Mexican American children, they will succeed.

**Scholastic, Intellectual and Linguistic Assessment of Puerto Rican and Mexican American Children**

This section in Dunn's monograph is very selective. Some of the literature is dated and the conclusions are drawn from the administration of eclectic instruments to bilingual children. This paper will attempt to review the literature which was excluded in Dunn's monograph.

The General Findings section of the monograph indicates that "the average intelligence quotient of Hispanic-American children in the U.S. has been found to be 90 or slightly lower... and that of Anglos slightly above 100. This 10-point IQ differential between Hispanics and Anglos in the U.S. appears to be a persistent and accurate generalization" (p. 16).

Martin (1977) was granted permission by the Psychological Corporation to translate and develop local norms for the WISC-R which she did. Once the translation was completed, the process of development of norms was undertaken. The results indicate that in the eleven age groups reported, the Hispanic students scored 100 for the WISC-R (Spanish) Full Scale IQ with a standard deviation of 15.

Prewitt Diaz, Rodriguez and Rivera Ruiz (1986) administered the Escala de Inteligencia Weschler para Ninos-Revisada (EIWN-R) (WISC-R, Spanish Experimental Version) to two groups of children in Puerto Rico and Connecticut. They utilized the norms for the WISC-R to compute Full Scale IQ's. The mean Full Scale IQ for this group was 95 with a standard deviation of 15. When the norms developed by Martin were used, the children in this sample scored a Full Scale IQ of 99.8 with a standard deviation of 15.

The generalization that is most appropriate in this case is that, as Anastasi (1988) suggests: "a low score on a test developed for one group does not have the same causal explanation when administered to a member of an other language/cultural group. What can be ascertained by such an approach is cultural/linguistic distance between groups" (p. 307). McShane and Cook (1985) have studied transcultural intellectual assessment, and they conclude that the factors that affect the performance of Puerto Rican and Mexican American children on intelligence tests is the "language of test administration, the requested language of response, and the language background of the examinee" (p. 778).

Dunn indicates that "Hispanic children in the U.S. have displayed a wide range of linguistic disabilities in both English and Spanish... their written composition skills have been found to be especially poor" (p. 16). This is to be expected since children are not taught their native language in school in the United States and often spend up to three years learning English. I am confident that Anglos would likewise display "a wide range of linguistic disabilities" if they had to respond in Spanish or a similar "foreign" language.

In addition, this generalization does not take into account the fact that very few Puerto Rican or Mexican American children are exposed to English as a Second Language (ESL) as soon as they enter the schools in the United States. Placement in ESL and the denial of cognitive development in the native language force the child into transition through many stages. Often the child acquires good aural/oral skills in English; but since writing is not a skill that is reinforced in ESL, the children have poor writing skills. Although there is continued emphasis in aiding teachers to provide services to the children of Puerto Ricans and Mexican Americans, currently there is not one school system in this country that is reporting successes in English and mathematics skills.

Wong Fillmore, Ammon, McLaughlin and Ammon (1987) have conducted a project which explores the learning of English through bilingual instruction. They found that there were at least four clusters of instructional variables that were critically related to language learning. The four clusters are: (1) the quality of teaching, (2) the learning environment, (3) instructional language as linguistic input and, (4) the availability of opportunities to practice English and to interact with students, teachers, and peers.

The problem of academic achievement with Puerto Rican and Mexican American children is one of benign neglect. That is, the thinking that time will take care of the problem or that given more time, these children will assimilate into society and thereby improve their academic achievement. Valdivieso (1986) indicates that to blame bilingual education for the lack of achievement of Hispanic children is to sidestep the issue. Most of the Hispanic children have never been involved in bilingual education programs. Although there are 4.5 million children who have limited English proficiency in the United States, only 210,000 are served by bilingual education programs (Valdivieso, 1986).
Valdivieso (1986) studied the participation of Hispanic children in private Catholic schools. He found that Hispanics were enrolled in academic programs as much as their Anglo counterparts. He concludes that there is a need to examine, in much greater detail, the interaction of cultural differences with socio-economic status (SES) and other differences in family background as these relate to school achievement.

On page 18, Dunn used the results of a study by Coleman et al. (1966) to study the academic achievement of Hispanics. In 1964 the National Commission on Secondary Schooling for Hispanics concluded that about 54% of the Puerto Ricans living in the United States have completed high school. The results reported by the Commission are far more promising than those reported by Coleman et al. The second generation of Puerto Ricans are continuing to avail themselves of the opportunities afforded them by mainstream schooling. The suggestion made by Dunn that “lack of academic ability rather than lack of language skills, may have been dominant” is a questionable conclusion based on the current data provided by the Commission.

Another issue addressed in this section is intelligence test scores. Dunn relies on an article by Clarizio (1982). This article includes a summary of “six recent studies comparing mean WISC-R score differences of Mexican American with Anglo children” (p. 20). Dunn states that “Clarizio (1982) has reviewed the fairly extensive literature, and concluded that composite norms for individual intelligence tests such as the WISC-R predict just as accurately for Hispanic-American as for Anglo school children” (p. 22).

McShane and Cook (1985) studied transcultural intellectual assessment using the Wechsler scales with Hispanics. They found over 70 empirical studies that directly dealt with this population. The investigators found that the language of the test, the language of the examiner and the primary language of the examinee were the most important variables which affect the Verbal and Full Scale IQ of Puerto Rican children. This conclusion is substantiated by Thomas, Hertzig, Dryman, and Fernandez (1971) who found that when children were examined by a psychologist who was able to communicate with them in their own language, they tended to score higher (VIQ 96.5; PIQ 98.6; FSIQ 97.2) in the WISC.

Padilla, Roll and Gomez Palacio (1982) tested 1,100 children in Mexico City with a Mexican translation of the WISC-R. The researchers did not develop norms for this population but rather used the norms of the WISC-R. The results reported by Padilla et al. have to be looked at with some skepticism because the norms which were used were inappropriate for the population. As a matter of fact, when examined, the translated Mexican WISC-R is a different instrument than the WISC-R. There were some items deleted. The vocabulary and comprehension subtest had items that were added/deleted, and the arithmetic subtest was reorganized. The norms of the test (WISC-R) in one language were used to interpret a different test in a different language (i.e., the Mexican translation of the WISC-R).

The next section in the monograph deals with Language Development Test Scores. In this section Dunn raises the question of whether Puerto Rican and Mexican American children continue to develop Spanish skills while in schools in the United States. This question is sophomoric. Puerto Rican and Mexican American children are discouraged from learning Spanish in the United States. Although there is no national law, several states have passed English language amendments to the constitutions. Since these children are not encouraged to continue to maintain their native language, the dominance of whatever variety of Spanish is lost within several years of schooling.

The TVIP-H is not an appropriate measure of language characteristics of Puerto Rican or Mexican American children in the United States since the Spanish spoken by these children is not Castillian Spanish. In order to substantiate this assertion let us look at the construction, validation, and the formulation of norms for the TVIP-H. The Examiner’s Manual indicates that the pool of items were Castillian words, considered universal. The lists were evaluated by psychologists in Mexico and a special education specialist in Puerto Rico. None of the items from the English version were changed. The procedure used to translate and seek the linguistic applicability of the instrument did not follow the procedure set forth by Brislin (1980) for cross cultural translation of tests.

Irvine and Carroll (1980) set forth the procedures for testing and assessment across cultures. They indicate that “whatever the investigator’s theoretical stance, his methods have usually encompassed the use of relative scales of measurement, in which data are the summations of products of assumed mental acts (item answers)” (p. 185). This involves seeking conceptual and linguistic equivalence. The fact that the 175 words existed in the vocabulary of Mexicans, Puerto Ricans or Spaniards, there is no evidence that the words are used with equal frequency in each of these countries.
Furthermore, accepted sampling procedures were not followed. Both samples were from predominantly metropolitan areas and there was an overrepresentation of persons in the upper classes. The construct validity of the TVIP-H is not clearly stated because it was not administered concurrently with any of the translations available of the EIWN-R or the Bateria Psicopedagogica Woodcock-Johnson. The Manual discusses the construct validity of the English sample from the WISC-R and the Stanford Binet. According to Dunn (p. 81), since the Spanish translations of the stems is a direct translation of the English stems, then it follows that the instrument in Spanish has construct validity. This procedure is not the most appropriate. Dunn admits in the monograph that the data on the use of the PPVT-R with Hispanics are limited.

In this paper I will not discuss the remainder of Part 2 since the issues of bilingual education and cognitive development are discussed by other researchers. However, I must say that the comparison between "bilingualism and middle and upper classes of non-Hispanic American cultures and the hypothesis that many U.S. Hispanics lack sufficient general intelligence, or specific linguistic aptitudes, to become proficient in either Spanish or English (p. 29) have not been supported by the research. The question arises: Why is Dunn interested in highlighting the low scores obtained on tests of intelligence by Puerto Ricans and Mexican Americans in the United States?

The third part of the monograph discusses research done with Spanish-speaking children involving the Peabody tests. Dunn admits that the research with the PPVT-R with Puerto Rican or Mexican American children is rather limited. Dunn (p. 45) discusses the result of the Spanish-language PPVT-R. Dunn et al. report that the "Hispanic American" version was standardized in Mexico and Puerto Rico. In this paper I have questioned the procedure for standardizing of the instrument. Both versions of the Peabody are not standardized outside of the United States; therefore, the norms of this instrument are not applicable to Puerto Rican and Mexican American populations in the United States.

In 1985, the APA, AERA, and NCME set forth Standards for educational and psychological testing. This document provides guidelines for testing cultural and linguistic minorities in the United States. There is a special chapter which deals with the special problems in the testing of linguistic minorities. The chapter covers some specific procedures to follow in administering the test. Anastasi (1987) indicates that language differences represent test-related factors when a particular degree or kind of linguistic difference influences performance on a test in ways that are unrelated to criterion performance (p. 65). The PPVT-R, as translated and standardized, does not comply with the standards.

To substantiate the conclusions of his findings, Dunn compared the results of the validation studies performed in Puerto Rico and Mexico with a sample from Madrid, Spain. He concludes (p. 46) "that the children in Mexico and Puerto Rico had a Spanish hearing vocabulary similar to that of children of similar age in the worst slum in Madrid." This is not surprising since Puerto Rican and Mexican children are not speakers of Castillian Spanish.

The misinformation continues as Dunn states "that by the age of six Spanish children outperform the children from Mexico and Puerto Rico by the same amount as the Puerto Rican and Mexican children outperform Puerto Rican and Mexican American children in the United States" (p. 49). He fails to point out that while Hispanic children in Puerto Rico and Mexico are taught in their vernacular Spanish, Hispanic children in the United States are taught in English and are encouraged actively to give up any use of Spanish. The populations are not comparable. They are not similar.

Dunn reaches the wrong conclusion that "Latin pupils in the U.S., as a group, are inadequate bilinguals. They simply don't understand either English or Spanish well enough to function adequately in school" (p. 49). Bilingual education as a compensatory program, such as Title VII, focuses on the development of English as soon as possible since the official language of the schools is English. Furthermore, bilingual education as it is presently endorsed is not designed to produce bilingual students. Foreign language education or additive bilingualism on the other hand is a euphemism used to provide the middle and upper classes of the United States the opportunity to become bilingual. These two entitlement programs serve two distinct populations.

Part four of the monograph provides a discussion section. Some of the conclusions are misleading. For example, on page 51 there is a discussion on intelligence tests administered in English and "results that place consistently children within an average IQ of 88." Dunn continues by indicating that in the Spanish version of the WISC-R administered in Mexico, the children obtained a mean IQ of 88 without considering that the researcher used the English norms for the WISC-R which were from the United States.

The discussion on bilingualism in the United States on page 52
misses the point. The purpose of bilingual education in the U.S.
is to mainstream the child as soon as possible. The fact that
Hispanic children in the U.S. come from an educationally and eco-
nomically deprived background may affect their skills in English,
but once access is provided, many children tend to excel in school
(See Valdivieso 1986).

The fact that children in Puerto Rico and Mexico scored lower
than children from Madrid is merely indicative that the dialect of
Spanish spoken by the children in Puerto Rico and Mexico is
different from that of Spain. Furthermore, the conclusion that the
Puerto Rican and Mexican American children are inferior has not
been proven by the arguments of the Dunn monograph nor the
empirical data that were presented. Based on the data presented
in the Dunn monograph and the Examiner’s Manual, it can be
concluded that the TVIP-H is not a valid and reliable instrument
to measure the extent of hearing vocabulary of a subject in stan-
dard Castillian (p. 76, Examiner’s Manual) with Puerto Rican and
Mexican American children in the United States.

After much discussion of the inferiority of Puerto Rican and
Mexican American children, Dunn states one of the motives of
the monograph: to declare that one of the “limitations of the TVIP-
H is the lack of norms for the children in the United States” (p.
56). On page 57, Dunn explains why he has violated the guide-
lines set forth by the APA, AERA and the NCME: lack of time
and money. Dunn indicates that “in retrospect, it might have been
wise to include two sets of norms: the major set based on mon-
olingual subjects, and a supplementary set based on bilingual sub-
jects.” (p. 57).

In regard to the formulation of composite norms based on the
data from Mexico and Puerto Rico, it is preposterous to think that
these norms would be best to apply to Hispanic children in the
United States. A better suggestion might be the preparation of
regional norms for each one of the Hispanic groups and a com-
posite set of norms. However, it is important for the reader to
understand that the Spanish spoken by Hispanics in the United
States is different from the Castillian Spanish spoken in Spain.
The fact that a large pool of words referred to as “universal Span-
ish” were used in developing the TVIP-H does not guarantee that
this instrument is applicable to all Spanish-speaking children—
especially when the majority of the children from the sample in
Mexico and Puerto Rico are from the urban areas and from the
middle and upper classes. The reader is not provided with the
frequency of words used by each sample nor with the level of
difficulty of these words in each sample.

On pages 60–62, Dunn admits that he did not comply with the
current standards in the following ways: (a) “100 subjects per age
level is the rule of thumb,” this was not met; (b) proportional
representation by geographic region was not adequately attained;
and (c) proportional representation of different SES groups was
not reached. Dunn concludes that the effect of these three weak-
nesses—too few children from rural areas, from the lower class,
and from outside school, distort the norms and skew the norms
in one direction.

Summary

The results of the analysis of the monograph prepared by Dunn
(1986) and the review of the literature lead to the following con-
clusions:

(a) Dr. Dunn is not well-informed about bilingual education
in the United States;

(b) The assumption that Puerto Rican and Mexican American
children are inferior to the language majority population
is not documented in the literature;

(c) In presenting his own viewpoints, Dunn used popular
courses (Reader’s Digest and a novel by Michener) to accuse
the Mexican Americans as separatists;

(d) There was a negligent misuse of current literature to con-
tinue to point to the inferiority of Puerto Rican and Mex-
ican children;

(e) The Spanish version of the PPVT-R was a poor transla-
tion, and is not appropriate to measure receptive lan-
guage in Puerto Rican and Mexican children in the
United States;

(f) Accepted cross-cultural methods for test translation and
validation were not followed;

(g) The conclusions in the Dunn monograph are based on
incorrect interpretation of data or personal bias;
(h) The American Guidance Service, by publishing this type of literature, shows its lack of sensitivity toward a growing segment of the population: Mexican Americans and Puerto Ricans;

(i) Issues of comparability of the sample in terms of urban/rural, SES, and geographic distribution were not met;

(j) The assumptions that Hispanic children and their parents are not availing themselves of the benefit of an education is not correct.

CONCLUSION

Dunn has attempted in the monograph to present his personal point of view about the linguistic needs of the changing population in the United States. There is no explanation for the reason he chose Puerto Ricans and Mexican Americans to share his bias with the professionals who will read the monograph.

The studies discussed in the monograph were selective and ignored research that developed norms for Hispanic children in the United States with instruments such as the Escala de Inteligencia Weschler para Niños-Revisada (WISC-R, Spanish Edition, Martin, 1977). It seems that rather than recognizing the need to modify psychometric practices, as suggested by the APA, AERA and NCME (1985), it is more convenient to continue to use "old" methods to resolve new problems.

This monograph presents a mechanism to justify the use of an inappropriate methodology to produce an instrument to measure receptive Castillian Spanish with Puerto Rican and Mexican American children in the United States. Current research (Martin, 1977: APA, AERA, and NCME, 1985) does not justify the procedures utilized by Dunn to create norms for the TVIP-H. The fact of the matter is that the TVIP-H is not an appropriate instrument to use with Puerto Rican and Mexican American children in the United States.

The proposal made by Dunn (p. 57) that norms be formulated with regional samples that are representative of the population of Puerto Rican and Mexican Americans is reasonable. Puerto Ricans live predominantly in the Northeast, while Mexican Americans live predominantly in four states in the Southwest. It seems appropriate to attempt to take a closer look at the performance of this population with instruments such as the TVIP-H.

REFERENCES


Received April 17, 1988

Comments on L. M. Dunn's Bilingual Hispanic Children on the U.S. Mainland: A Review of Research on Their Cognitive, Linguistic, and Scholastic Development

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Dunn's arguments are flawed and his conclusions inadequate. The genetic position, which attempts to explain academic differences among students of different ethnolinguistic backgrounds, is scientifically unfounded. The implications of IQ test results must be re-examined in light of socioeconomic and cultural differences in a broader historical perspective; such tests have already been determined biased and inaccurate as measures of ability, even among Anglo students. Dunn appears unaware that many minority group members have done well despite prejudicial educational practices. Historically, xenophobia has strong roots in this country, and Dunn has contributed to increase it. He has taken an arrogant position attempting to give credence to genetic arguments without really understanding genetics or anthropology.

These brief comments are organized into four parts: (1) a presentation of key points made by Dunn in defense of his genetic explanation for low Hispanic achievement, (2) an analysis of the flaws in the genetic position, (3) implications of the genetic position for educational practice in a democratic society, and (4) alternative explanations for low achievement.

DUNN'S KEY POINTS AND GENERAL POSITION

TEXT 1

While it is a very delicate and controversial topic, race, as a

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contributing factor, cannot be ignored. It is recalled from Part 1 that most Mexican immigrants to the U.S. are brown-skinned people, a mix of American Indian and Spanish blood, while Puerto Ricans are dark-skinned, a mix of Spanish, black, and some Indian. Black and American Indians have repeatedly scored about 15 IQ points behind Anglos and Orientals on individual tests of intelligence... (p. 64)

TEXT 2

For the reasons just cited, it is argued that it would be simplistic and irresponsible to contend that the 10- to 12-point IQ differential is due exclusively, or even primarily, to bilingualism, as has often been argued, or even to all environmental influences combined, including cultural incompatibility. Such naive contentions continue to abound, showing a complete lack of knowledge of the scholarly works of Vernon (1979) and Jensen (1980), among others, who have presented strong cases for the important role of heredity... Jensen concluded that, for Anglos, about 75 percent of intelligence is due to genetic factors and 25 percent to all environmental influences combined. To derive such a ratio for Hispanics it is necessary also to consider the influence of social class on IQ scores. The average correlation between SES and IQ scores, in most studies on Anglos, has been found to be only about .35. Therefore, based on these factors my best tentative estimate is that about half of the IQ difference between Puerto Rican or Mexican school children and Anglos is due to genes that influence scholastic aptitude, the other half to environment. But this conclusion will be modified slightly when an additional factor is considered. (p. 64)

TEXT 4

... the personality characteristics and attitudes of Hispanics, as a group, must be factored into the equation. So the conclusion proposed at the end of the fourth explanation needs to be modified slightly. It would seem safer to say that about half of the 10- to 12-point IQ deficiency of Puerto Ricans and Mexican-Americans is due to inherited or familial factors, within the individual, that influence both intellectual and personality characteristics, and the other half to the environmental factors that have been cited. (pp. 64–65)

TEXT 5

The discussion has been included in this monograph mainly to counter the prevalent extreme environmental approach, where essentially all blame is placed on social ills and school failures. If this is true, how can school teachers in the U.S. be doing such an outstanding job with Asian immigrants and such a dismal job with Hispanic immigrants? Deliberation on this question should caution the reader against extreme postures and simplistic blame-placing. Although it is recognized that the schools have failed many Hispanic children, it should also be acknowledged that teachers are not miracle workers. Moreover, in planning school programs for Hispanics, educators and others should avoid grandiose plans that do not take into account both the strengths and weaknesses of such pupils, as a group. Some environmental extremists will complain that a pessimistic picture has been painted here. This is untrue. There is room for great improvement in how Hispanics are educated, but realistic approaches must be adopted (p. 65).

The fundamental assumption in Dunn's argument is that standardized tests accurately measure mental ability (at least collectively when applied to ethnolinguistic groups), and consequently that consistent differences in test performance must indicate fairly stable levels of mental ability in such groups. Furthermore, Dunn strongly believes that other current explanations of achievement differences across groups in terms of social, economic or environmental factors do not account for the entire gap in performance. In the case of Anglos, these factors may account for one third of the difference, but if we compare Puerto Ricans or Mexicans with whites, the difference is of such magnitude that only genetic constitution can fully explain it. To the genetic factor he adds the "familial factors," where both inheritance and family should account, in Dunn's opinion, for about half of the 10- to 12-point IQ "deficiency" in Hispanics. Those who cite environmental differences, he says, unnecessarily blame society or schools for the low performance of certain minority groups. He feels this is untenable in the face of the high performance of Asians.

ANALYSIS OF THE GENETIC POSITION

One of the fundamental flaws of the belief in genetic superiority/inferiority is that genetic constitution alone cannot explain
differential performance on standardized tests. In association with other factors, genetics may be a meaningless factor, as there is no way to know how genetic constitution can be separated from environmental factors. The genetic position has been discredited time and time again, because those who use it (even with some qualifications, like Dunn) have never clearly established their definitions of race, genetic factors, and the interaction between genetic and other factors. The unscientific explanation defended by Dunn and Jensen has been repudiated by geneticists, physical anthropologists and paleoanthropologists, and psychologists during national and international meetings. There are good reasons for this rejection, among them the following:

(1) Intelligence is defined by many cultures as the ability to enhance survival of the individual and the group through activities that reflect cultural values and traditions. Intelligence as "measured" by standardized tests is only a fragment of the individual's overall ability, especially in literacy-based activities, such as handling text and problem-solving situations, within the parameters of academically-defined concepts and expected responses. Consequently, there is an internalization of cultural values presupposed by scholastically "correct" answers. Such values are not universal. Linguistic or cultural differences, even within the same ethnolinguistic group, can result in wide preformance differences.

(2) The concept of race is obsolete and incongruent with anthropological evidence of racial heterogeneity, even within a single ethnolinguistic group and when physical characteristics other than skin color (the central focus of Dunn's concerns) are taken into consideration. The traditional racial group taxonomies are gross labels, not instruments that withstand the rigor of scientific research.

(3) Paleoanthropology has emerged a strong interdisciplinary science, emphatically proving the long evolutionary history of a single human species that has gone through many adaptations resulting in varied skin pigmentation. There is no trace of a doubt among paleoanthropologists about the origin of mankind from a single human species.

(4) Archaeologists and physical anthropologists suggest that the early inhabitants of the American hemisphere, as well as those of many areas in the Pacific, have been populated by racially heterogenous groups, even as far back as the earliest waves of human migration. There is also evidence of very close cultural (and genetic) linking between North, Central and South American Indian groups and Asian peoples.

(5) Cultural anthropologists have documented differential performance among members of the same ethnic group in different countries and social settings. Koreans, for example, have been at the bottom of the academic performance ladder in Japan (where they are racially segregated and considered genetically inferior), while Koreans in this country, including in Hawaii, perform well. Such differential performance among members of the same ethnolinguistic group in different countries of Europe, China, and Russia, is discussed by anthropologists such as J. Ogbu and G. DeVos (U.C. Berkeley), G. Spindler (Stanford), M. Cole (U.C. San Diego), and many others. There is also evidence that many siblings and other close relatives of Asian Americans do poorly in their home country schools.

(6) The most serious misconception in Dunn's paper is that the "mixture of races" is somehow responsible for poor academic performance. There are numerous overtones of racism in his statements about Hispanics (for example, see Text 1). In evolutionary terms, skin color is irrelevant, and intermarriage between people with different skin colors is not only a fact of human life, but a healthy one.

**Implications of the Genetic Position**

The destructiveness of the position defended by Dunn is illustrated precisely by his concluding remarks (see Text 5): "There is room for great improvement in how Hispanics are educated, but realistic approaches must be adopted." This statement clearly implies that teachers should not expect much from Hispanics because they are genetically inferior. Acceptance of the idea of genetic inferiority of an entire minority group may justify social abuses by power elites. If indeed a group is genetically inferior, then schools must primarily help those who can achieve, those who will play the important roles in society, and those who will excel. Consequently, why bother with the others? This position turns the school into a brutal mechanism for the exploitation of certain human beings by others; that is, schools will perpetuate social injustice and human inequality.

Human inequality, as it applies to entire social, cultural, ethnic
or other groups, entails exploitation of the defenseless. Regardless of ethnic or linguistic identity, socioeconomic level seems to explain school achievement best. This is even recognized by Dunn. Why would Dunn resort to genetic arguments without being a geneticist, arguing that the evidence presented by Jensen is convincing. Yet, Jensen is not a geneticist either, but both he and Dunn have a number of things in common: besides being white and Protestant, both have underlying racist beliefs, are blinded by xenophobia, and have a tunnel vision regimented by anachronistically simple empiricism; both are seriously ignorant regarding the nature of language, culture and cognition, and their relationships.

Never mind that both Jensen and Dunn live in a democratic society which has publicly and consistently demonstrated its commitment to the equality of all human beings with regard to social, political and economic participation in our society. How can this participation become a reality if schools become a principle instrument of segregation and human exploitation?

**Alternative Explanations of Academic Achievement Differences**

Some of the most highly respected scholars and researchers have written abundantly about the nature of learning problems faced by minorities in schools. Minority students' problems in developing critical thinking skills, in grasping, analyzing, comparing and contrasting concepts, in communicating, and in achieving high levels of literacy have been described in detail. New-Yorkers, among other members of the sociohistorical school of psychology, view language and culture as extremely important in the interpretation of meaning, and they feel that academic failure is the result of social and cultural factors which ultimately deprive certain groups of the opportunity to acquire skills needed to achieve in school. Not schools alone, nor society alone, but the cultural response of groups of individuals as they attempt to adapt to new social and cultural environments is what affects performance. Minority students must internalize the values associated with successful schooling; this takes time.

Dunn is fooled by the fallacy of a static conception of Hispanics' academic failure. The sociological reality is not difficult to see, in that for many years there have been always Hispanics failing in our schools. The fallacy is that today's Hispanics are different from those that arrived in the past. There is mobility and progress; in fact, there is a very rapid progress. We have evidence that within one or two generations many Hispanics (unless segregated and exploited in extreme ways) move up socioeconomically, assimilate, and indeed do very well in school. But there are hundreds of thousands of new immigrants whose presence is more readily apparent, as they are "new" and "different."

In addition, there are some fundamental flaws in Dunn's conception of intelligence, IQ tests, minority performance on IQ tests, and most of all in his conception of American democracy. He does not understand that the quintessence of American democracy lies in allowing him to express his biases and prejudices, while at the same time permitting a return to the facts and research findings to re-interpret, in a broader historical context, the very evidence Dunn abuses regarding performance of Hispanics.

From the mid-19th century to the end of the second decade of the 20th, immigrants and minorities were viewed as undesirable and pressed to abandon their use of mother tongues, even if they were competent English speakers also. The annexation of Western territories with high concentrations of Indians and Spanish-speaking Mexicans, who became U.S. citizens overnight became a "problem" which was compounded by the arrival of Asian workers to build the railroads. During this period, political pressure resulted in state legislation intended to curtail the voting rights and participation of minorities in social, political and economic functions of American society.

In 1890, the states of Connecticut, Massachusetts, Rhode Island, New York, Wisconsin and other states made English their mandatory school language. California, Texas, Pennsylvania and Georgia prohibited the use of languages other than English to conduct public affairs. Nebraska even went so far as to forbid the teaching of any foreign language in public schools. In 1922, Oregon enacted laws of compulsory attendance for all children 8 to 15 in public schools where only English was used. In 1923, 31 states passed legislation requiring English to be the only language of instruction, while Vermont, Connecticut, New Hampshire and Massachusetts adopted laws restricting the use of French, and Ohio the use of German. In Hawaii, attempts to prevent Japanese, Chinese, Korean and Hawaiian children from using their mother tongues were repealed by the Supreme Court in 1927.

We know that in the period of 1919 to 1925, those states which had passed laws against the use of languages other than English had sentenced over 1,000 individuals to jail for *subversive speech,*
meaning that the use of other languages was considered subversive, dangerous and despicable. Thousands of trials continued to go to court until the mid-1950s, in spite of the fact that by mid-20th century the public was more aware of the importance of fundamental civil rights. The history of xenophobia in the country has been fed by racism, intensive economic competition and misguided semi-scientists who think they alone have the monopoly on truth. The arrogance of white supremacists is in itself a more serious threat to our democratic system that all the presumed academic failures of Hispanics and blacks.

Prejudice against Chinese and Japanese, for example, which fed the segregationist policies in this country, has now subsided to a point; apparently many majority members are not around to see the academic success of those two minority groups. Now they are penalized for being “too good;” some universities are creating quotas in order to permit Anglo students, whose qualifications do not compete well with those of Asian students, to enroll in certain programs. I suspect that many Hispanics will live to see a similar development in the next thirty years. Quota systems are historically well-documented, especially in countries which segregated the Jews (Russia in the 1920s, for example), where Jewish students performed better than mainstream ones.

The U.S. Supreme Court has consistently maintained a liberal position regarding minorities, their use of mother tongues, and their place in American democracy. In 1923, for example, the Meyer v. Nebraska precedent invalidated suppressive legislation which prohibited the teaching of foreign languages in the ninth grade, and the Pierce v. Society of Sister case in 1925 upheld the right of a private school to function independently from public schools. California has been an arena for racial struggles since the 1920s. The historically significant accounts of the Roberto Alvarez v. the Board of Trustees of the Lemon Grove School District case, which helped defeat the infamous Bliss Bill of 1931, is particularly relevant here. The Bliss Bill had requested the power to establish separate schools for “Indian” children of Japanese and Chinese (including “Mongolian”), and Mexican ancestry on the grounds that all were Indians, and Indians were already segregated because they were not smart enough. Judge Chambers ruled against the Bliss Bill and stated: “I believe this separation denies the Mexican children the presence of the American children, which is so necessary to learn the English language.”

The famous Brown v. Board of Education case in 1954 was the first Supreme Court decision that clearly stated, in the context of black segregation, that equal educational opportunity meant integration and that “separate but equal” was not acceptable. The impact of this court case was felt in the 1974 Lau v. Nichols case, where the Supreme Court upheld the right of non-English speaking students to educational programs designed to meet their particular needs and language skills. As Justice Douglas stated:

“Teaching English to the students of Chinese ancestry who do not speak the language is one choice. Giving instructions to this group in Chinese is another. They may be others. Petitioners ask only that the Board of Education be directed to apply its expertise to the problem and rectify the situation.”

This is precisely my point of argument. Bilingual education is one of the possible solutions. If, for whatever reason, it may not work, the schools are obligated to search for other solutions. In this context, the court cases that have followed, such as Aspria of New York, Inc. v. Board of Education of the City of New York in 1972 (settled out of court), Diana v. California in 1972, and Larry P. v. Riles (1979) decisions deal with overrepresentation of minority pupils in special education classes; their court rulings have continued to uphold the inherent biases of an educational system that misuses standardized instruments to justify further segregation and stereotyping of minority children.

Dunn’s paper appears precisely during intensive campaigns by other white supremacists on all fronts. Many are campaigns to further curtail the use of languages other than English based on the faulty assumption that such usage interferes with the acquisition of English and represents a danger to political unity. The English-Only initiative organized in California, which is extending to many other states, is also based on an irrational interpretation of events. In California one of the most ethnically diverse states of the union, there were 22 million people five years and older in 1980. From the approximately five million people who claim to speak other languages than English, about three million are also fluent speakers of English. Less than two million people are monolinguals in other languages, and most are recent arrivals eager to learn English, who find themselves isolated and deprived of opportunity. English classes in Los Angeles, San Francisco, San Jose and other cities, are full to capacity, and waiting lists count many thousands.

In sum, I must conclude, based on recent educational and anthropological research, that Dunn’s arguments are flawed and his
conclusions inadequate. The genetic position, which attempts to explain academic differences among students of different ethnolinguistic backgrounds, is scientifically unfounded. The implications of IQ test results must be re-examined in light of socioeconomic and cultural differences in a broader historical perspective; such tests have already been determined biased and inaccurate as measures of ability, even among Anglo students. Dunn appears unaware that many minority group members have done well despite prejudicial educational practices. Historically, xenophobia has strong roots in this country, and Dunn has contributed to increase it. He has taken an arrogant position attempting to give credence to genetic arguments without really understanding genetics or anthropology.

Received April 17, 1988

This article refutes Dunn’s claims by discussing the existent cultural/linguistic bias in IQ tests for minority groups. It is argued that IQ tests standardized on a “representative” sample assess only knowledge and skills deemed intelligent within the dominant group, and exclude culturally specific ways in which minority children have learned to demonstrate intelligent behavior. The inevitability of bias against minority cultural/linguistic groups in IQ tests as a result of the way tests are developed and standardized is discussed. Dunn’s proposal for English Immersion programs is also criticized because he fails to assess research which shows that such programs do not produce high English proficiency and further fails to consider the actual data on bilingual education.

My first reaction to reading Lloyd Dunn’s monograph entitled *Bilingual Hispanic Children on the U.S. Mainland* was one of disbelief that crude genetic explanations were again being marshalled to account for the educational failure of Hispanic students and that phenomena as patently obvious as bias in IQ tests (such as the Weschler Intelligence Test for Children - Revised) were being dismissed as either non-existent or inconsequential. I was also surprised that any reputable publisher would publish such provocative material without extensive external review. Requests for reprints should be sent to Jim Cummins, Modern Language Center, Ontario Institute for Studies in Education, 252 Bloor Street West, Toronto, Canada M5S 1V6.

1 My assumption is that the manuscript was not reviewed by external assessors knowledgeable of the field since there is no evidence of either caution or qualification in many of the author’s claims, as there undoubtedly would have been had the manuscript been adequately reviewed.
gested the possibility of a boycott of the Peabody Picture Vocabulary Test (PPVT) and other American Guidance Service products by a justifiably outraged Hispanic educational population.

On re-reading the monograph, I modified my views somewhat. It was clear that however misguided Dunn might be, he was not ill-intentioned and was genuinely concerned to improve the low achievement of Hispanic students. Also, his call for Hispanic parents to become advocates for their children in a more active way than they have in the past and to make the educational system work for them is certainly consistent with the views of what he pejoratively terms activists Hispanic educators. For a fleeting moment I entertained the fantasy that Dunn's goal was to provoke Hispanic parents and educators into more aggressively exercising their increasingly significant demographic muscle by berating them with taunts of genetic inferiority, parental incompetence and political apathy.

Whatever Dunn's intent, it is clear that his views on bilingual education and on the presumed cultural and ethnic inferiority of Hispanics represent what many American "intelligent laypersons" regard as "common sense". As such, his claims require a response. I will limit my response to two issues: first, cultural/linguistic bias in IQ tests, and second, bilingual education. Dunn's views on these issues will be outlined followed by a brief review of research data that refute his claims.

TEST BIAS AND HISPANIC UNDERACHIEVEMENT

In expressing his concerns that bilingual education could result in "at least the partial disintegration of the United States of America" (pp. 66-67), Dunn argues that Latino children and adults "speak inferior Spanish" and that "Latin pupils on the U.S. mainland, as a group, are inadequate bilinguals. They simply don't understand either English or Spanish well enough to function adequately in school" (p. 49). He goes on to argue that this is due to the fact that these children "do not have the scholastic aptitude or linguistic ability to master two languages well, or to handle switching from one to the other, at school, as the language of instruction" (p. 71). He attributes the causes of this lower scholastic ability of Latino students about equally to environmental factors and "to genes that influence scholastic aptitude" (p. 64). Dunn's "evidence" for genetic inferiority is based on the fact that "most Mexican immigrants to the U.S. are brown-skinned people, a mix of American Indian and Spanish blood, while many Puerto Ricans are dark-skinned, a mix of Spanish, black, and some Indian. Blacks and American Indians have repeatedly scored about 15 IQ points behind Anglo and Orientals on individual tests of intelligence" (p. 64). He concludes on the basis of arguments presented by Jensen (1980) and Clarizio (1982) that psychometric tests are not biased against minority children and therefore that those who attribute the IQ test differential to test bias are manifesting "largely an emotional and irrational defense reaction" (p. 69). Although the role of schools in contributing to children's academic development is acknowledged, it is largely dismissed on the grounds that "teachers are not miracle workers" (p. 65) and "Hispanic pupils and their parents have also failed the schools and society, because they have not been motivated and dedicated enough to make the system work for them" (p. 78).

The issue of test bias has been discussed extensively in the literature (e.g., Mercer, 1973) and in other papers in this volume. Here, I am concerned only to point out the logical inevitability of bias against minority cultural/linguistic groups in IQ tests as a result of the way in which they are developed and standardized. The basic assumption of the IQ test is that previous learning of academically-relevant knowledge and skills is a good index of future rate of learning in school (i.e., "academic potential"). Thus, the test attempts to sample from the range of academically-relevant knowledge and skills to which children of different ages in the population have generally been exposed (i.e., have had the opportunity to learn). These assumptions are generally admitted by proponents of IQ testing. Kaufman (1979), for example, points out that

The WISC-R subtests measure what the individual has learned... From this vantage point, the intelligence test is really a kind of achievement test... a measure of past accomplishments that is predictive of success in traditional school subjects. When intelligence tests are regarded as measures of prior learning, the issue of heredity versus environment becomes irrelevant. Since learning occurs within a culture, intelligence tests obviously must be considered to be

"Academically-relevant" refers to the processes and content of schooling as determined by the dominant group which controls and operates the schools and whose language, values, and preferred modes of interaction (both between teachers and students and among students themselves) are reflected in the schools.
culture loaded—a concept that is different from culture biased (1979, pp. 12–13).

With reference to Kaufman's last assertion, the obvious question is “With which culture is the test loaded?” The answer will certainly not be the culture of blacks, Navajos, Latinos or any other minority group. In practice, the test construction procedures mandate that the culture of the society is indistinguishable from the culture of the dominant group, and thus, for minorities, “culture loaded” equals “culture biased.” The extent of bias will vary both according to how different the socialization/learning experiences of particular minority groups are from those of the majority and also according to the emphasis on acculturation within different minority groups.

It is not difficult to see how test construction procedures inevitably bias IQ tests (especially verbal tests) against minority groups. The standardization of an IQ test on a representative sample means, by definition, that the bulk of the sample will come from the dominant group and individual minority groups will be represented only to a minor extent. For example, among the 2,200 children who formed the representative sample for the standardization of the WISC-R, there were only 330 non-white children, 305 of whom were black (Oakland & Matuszek, 1977). Thus, in the pilot stage of item development, the majority of items selected for try-out will reflect the prior learning experiences of the majority Anglo group.

Even if items that reflected the unique learning experiences of particular minority groups were included in the try-out phase, they would be quickly screened out in the item analysis. In general, items are retained in the test only if they correlate well with the total test (or sub-test) and are neither too easy nor too difficult. Items that are "fair" or specific to a particular minority group (e.g., inner-city "Black English" vocabulary items) will clearly tend to be difficult for the majority of the test norming sample and will also not correlate well with the total test. In other words, from a psychometric perspective, they are not "good" items and must therefore be eliminated from the test.

The biasing process is completed by ensuring that the IQ tests have predictive validity for academic success. Schools reflect the language and values of the dominant culture and, in the past, have discriminated in both overt and covert ways against minority students. Because school programs incorporate the same Anglo-conformity orientation as IQ tests, it is not at all surprising that the tests tend to have almost as good predictive validity for minorities as for Anglo students (e.g. Clarizio, 1982). A test item that was "fair" to a minority group but did not reflect acculturation to the institutions of the broader society would clearly tend not to predict academic success in school programs that are based explicitly on such acculturation. In other words, such items would be regarded as reducing the "validity" of the test.

In conclusion, any IQ test standardized on a "representative" sample will necessarily assess only those skills and knowledge deemed "intelligent" within the dominant group and will exclude any culturally-specific ways in which minority children have learned to be "intelligent". Thus, to the extent that their culturally-conditioned learning experiences differ from those of the majority group, minority children have less opportunity to learn the test content than majority children. In other words, for these children, the construct validity of the IQ test as a measure of previous learning automatically disappears since their previous learning experiences have not been adequately sampled.

**ENGLISH IMMERSION AND THE SUBVERSIVE POWER OF BILINGUAL EDUCATION**

Dunn proposes English immersion programs "with supplemental services" as the most appropriate policy option for Puerto Rican and Mexican American students. Since these students suffer from a "lack of intellectual, scholastic, and language aptitude...it is clear that these children are not, as a group, able to cope with the confusion of two languages in the regular grades" (p. 76). Dunn does acknowledge the research data "on the need to develop proficiency in one's native language before undertaking English as a second language" (p. 73) and thus suggests that some minority children might not be ready for English immersion until they are beyond 6 years of age. However, his main thrust is to argue against L1 promotion of the grounds that "20 years of experimentation with so-called 'bilingual education' has not worked well, and will not, even with further tinkering, and therefore...it is time to abandon this movement in favor of alternate procedures that are likely to be more effective" (p. 66).

What evidence does Dunn cite to dismiss bilingual education in favor of English immersion? He refers to the American Institutes for Research [AIR] (Danoff, Coles, McLaughlin, & Reynolds, 1977–1978) and Baker and de Kanter (1981) reports as in-
indicating lack of impact of bilingual education. Dunn notes Willig’s (1981–1982) documentation of “serious problems” with these two reports but argues that “it seems safe to conclude that their conclusion is sound” (p. 70). He suggests that the conclusion of these reports should come as no surprise since “the scholastic ability of most Puerto Rican and Mexican American children is too limited to succeed well in two languages and to handle switching from one to the other efficiently” (p. 70). The only “evidence” presented for English immersion as an alternative is his own experience in teaching immigrant students in Western Canada in the 1930s.

Dunn does acknowledge the existence of what he terms the Spanish Bilingual-Bicultural Maintenance Approach. This is the type of enrichment bilingual program virtually unanimously endorsed for minority students by researchers who have evaluated French immersion programs in Canada and by serious scholars of bilingualism in the United States (e.g., Fishman, 1976; Hakuta, 1986; McLaughlin, 1986; Paulston, 1980). Sometimes termed “reverse immersion” or “two-way bilingual programs,” it involves “immersing” minority students in their L1 in the early grades in order to develop a strong conceptual foundation that will provide a basis for acquiring academic skills in English. The amount of English instruction gradually increases to around 50%–60% by the end of elementary school, much as is the case with French immersion programs in Canada. It is desirable for English-background students also to be participants in these immersion programs as a means of developing additive bilingual skills. The available research suggests that these reverse immersion or two-way bilingual programs are highly successful for both minority and majority students (see Cummins, 1984; Genesee, 1987a, 1987b).

Dunn, however, is either unaware of, or chooses to ignore this research. He dismisses these programs as follows:

Under the “maintenance theory” (or excuse), in extreme cases, some Mexican-American pupils are taught almost exclusively in Spanish by Mexican-American activist teachers, who repeatedly point out to the pupils that they are an oppressed group, and therefore obligated to assist in social change. With this focus, it is not surprising that these children are not prepared to switch over to English at the end of elementary school, and have not adequately mastered the regular elementary school subject matter (p. 67).

All the evidence that I am familiar with regarding this type of program in the United States and in Canada among minority francophone students (see Cummins, 1983, 1984) indicates exactly the opposite to what Dunn claims (without reference to any empirical evidence). In fact, Dunn’s claims regarding bilingual education are almost tragi-comic. For one who dismisses dissenters from his favored views on test bias (“it does not exist”) as manifesting largely an “emotional and irrational defense reaction” (p. 62) and those who oppose English immersion as showing “irrational extremism” (p. 71), Dunn’s total failure to consider the research data on bilingual education is staggering.

It is sufficient to cite just one example of the current research on “English immersion” to illustrate just how irresponsible Dunn’s claims are. The example comes from the preliminary results of a large-scale comparative evaluation of immersion and bilingual education programs (see Crawford, 1986). The study in question involves about 4,000 students and is being carried out for the U.S. Department of Education by SRA Technologies Inc. The early results were reported in Education Week (1986, 5, no. 30, April 23) as follows:

English immersion, an instructional alternative that is popular among critics of bilingual education, has fared poorly in the U.S. Education Department’s first large-scale evaluation of the method, according to early results... limited-English-proficient students in bilingual programs consistently outperformed “immersion strategy” students in reading, language-arts, and mathematics tests conducted in both English and Spanish... Especially perplexing to the S.R.A. researchers was the poor English-language performance of the immersion students, who had received the most English-language instruction. Moreover, the larger the native-language component of their schooling, the better the students performed in English... researchers determined that the immersion classes used English 90 percent of the time, compared with 67 percent in the early-exit bilingual programs and 33 percent in the late-exit bilingual programs. Overall test scores from five school districts showed an inverse relation between English-language exposure and English-language proficiency among kindergartners and 1st graders (Crawford, 1986, pp. 1 and 10).

This pattern of results is entirely predictable from current theory regarding bilingual education (see Cummins, 1984, 1986; Hakuta, 1986).
The question arises as to why the actual data on bilingual education have been screened from any kind of rational consideration. Dunn obviously has access to the research and theory, since my book (Cummins, 1984) and other works on bilingual education are cited (e.g., McLaughlin, 1984). Yet the arguments appear not to have penetrated. What appears to be happening is that for those who feel a strong sociopolitical commitment against bilingual education (or cultural pluralism and other associated constructs), common sense arguments regarding the obvious superiority of intensive exposure to English in school tend to become immune from critical scrutiny and incompatible evidence is either ignored or dismissed.

CONCLUSION

The reaction to Dunn's monograph among those who advocate for minority children and for historically brutalized communities (e.g., blacks and Latinos in the United States and aboriginal peoples in western countries such as Canada, Australia and the United States) has been one of shock at the emergence of yet another apologist for discriminatory tests and school programs. The present volume (and my own paper) illustrates the predictable academic response, namely, to dispute and attempt to refute the arguments invoked by Dunn to legitimize continued discrimination. At one level this type of reasoned academic response is appropriate and necessary; however, at another level it entirely misses the point since the very act of responding validates the academic credibility of Dunn's case. To confer any degree of credibility on the monograph is regrettable in view of the absurdity of many of the claims (e.g. Hispanics may be genetically inferior as a result of the historical mixing of 'lower' races with the European) and the almost total absence of reference to the research and theory on bilingual education.

A more appropriate response, I believe, would be for the communities that are targeted in Dunn's monograph to respond to the sociopolitical sub-text of the monograph. This subtext embodies the author's and publisher's confidence that the undocumented claims and attributions in the monograph can be asserted with impunity and that there will be no significant reaction from Hispanic educators apart from an emotional and irrational defense reaction. If this does turn out to be the extent of the reaction then publication of the monograph will have served the function of defending and helping to preserve the educational status quo. Hispanic parents and educators will know that they only have themselves to blame for their children's school failure. The dominated group will have reacted in the historically-conditioned way, namely, by further internalization of blame and shame.

However, there is a considerably greater awareness on the part of minorities today than there was twenty years ago of the ways in which their children have been disabled by the institutionalized racism that has been part of the fabric of North American schools. Also, as a result of the significant steps that many U.S. educators have taken to combat this institutionalized racism during the past twenty years, there are now many more minority educators in decision-making positions within educational systems. One of the decisions that these minority educators and their co-advocates from Anglo communities will be taking during the next few years is whether it is consistent with their goals of empowering minority students to continue to use a test developed by an individual (however well-intentioned) who believes that the majority of Hispanic groups are genetically inferior and that Hispanic parents are to blame for their children's school failure. They may also question the appropriateness of contributing to the profits of a publisher which has implicitly endorsed these views by publishing and disseminating them. If Dunn's monograph does succeed in evoking this sociopolitical response, it will have achieved at least one of its stated goals of contributing to the awareness among Hispanic parents (and educators) that they need to make the education system work (rather than against) their children and furthermore that they do have the opportunity to exercise at least some choices that empower both themselves and their children.

Thusfar, all of us in this volume have played the game of responding to the flimsy academic facade that provides a front for the real message of Dunn's monograph. An authentic response to the monograph can come only from the actions of speech and hearing specialists, psychologists, and other educators who face choices about appropriate ways of assessing and empowering minority children.

REFERENCES


³ Once again, I would like to emphasize that I believe that Dunn is well-intentioned in his analysis. However, he has not questioned the sociopolitical assumptions that guide his choice of questions, data, and interpretations.


Received April 7, 1988

The misinterpretation of within and between group differences in intelligence is addressed first, followed by evidence for the malleability of IQ. An argument for both high heritability and high modifiability of intelligence is then presented. The reciprocal relationship between achievement and intelligence is discussed and evidence for the cultural influence on tests of achievement and intelligence is presented. It is argued that cultural differences (including linguistic differences) are the major determinant of between group differences in measures of academic IQ. Evidence of the negative effects of schooling for some race-like minorities is presented, as is evidence for superior cognitive skills among bilingual students. The implications of these refutations of Dunn's thesis for teacher education are discussed.

When a writer's work is in an area of little concern to society and has no discernable policy implications associated with it, we can choose to ignore it or, perhaps, gently criticize the author if we do not agree with what is said. For example, the author of a poorly conducted and inadequately analyzed case study of a teacher's thinking as she progresses in a teacher education program can either be ignored, because the work is not worth taking seriously, or gently corrected, in the hope that future study in the area might be of higher quality. And in such a case, even if the markedly flawed work were to be widely disseminated and the views of the author were to gain credibility, it is not likely that our every day

Requests for reprints should be sent to David C. Berliner, Center for Advanced Studies, Stanford University, 202 Juniper Serra Blvd., Stanford, CA 94305.
world would be noticeably affected. But when a topic is one of
great interest to society, with critical policy issues easily derived
from the findings, the inadequacies of a writer’s work cannot be
ignored. And gentle correction of the errors in the work may not
be as appropriate as sharp criticism.

Because of its potential effect on policy, Dunn’s monograph,
though patently flawed, must be taken seriously and criticized
sharply. So I will discuss this work of Dunn’s as if it deserved my
serious attention, though the reader should keep in mind that no
scholarly journal of repute would publish his monograph and
every geneticist, anthropologist and linguist that I know finds the
scholarship both flawed and biased.

My task is to discuss the discussions of Dunn’s work. This is,
therefore, in contemporary parlance, a meta-commentary. Al-
though my comments are derived from the papers presented by
the other discussants, they are not limited to them.

Within and Between Group Differences

In my opinion Jane Mercer (this volume) makes the funda-
mental point. It is a point that confuses non-professional people
all the time, and seems to confuse professor Dunn as well. This
is the point about generalizing from notions about the heritability
of academic-like intelligence within groups to explain differences
in academic-like intelligence between groups. Mercer is in the
mainstream of opinion when estimating that 50 or 60 percent of
the variability in the construct called “measured academic intel-
ligence,” among white, western populations, is attributable to
heritability. Contemporary estimates, therefore, inform us that at least
40 percent of the variance in measured academic intelligence from
the Peabody or Wechsler or Stanford-Binet intelligence tests is
not attributable directly to heredity (c. f. Snyderman & Rothman,
1987). The estimates of heritability are likely to be the same in
non-white, non-western populations, but we do not know that for
sure. More important, however, is to recognize that issues regard-
ing within group estimates of heritability have absolutely

4It is interesting to note that of 1000 experts in psychology and education who
were surveyed to determine contemporary thinking about intelligence, about
600 did not believe that they had enough information to make any estimate
about the heritability of intelligence. Thus, the estimate of heritability given in
this paper represents a mean derived from about 400 experts, with the majority
of experts choosing to abstain from voting on this issue.

nothing to do with the argument that between group differences
in measures of academic intelligence have a heritable basis. The
heritability index of measured academic intelligence is an estimate
of the role of genetic factors at work within a group of people. It
says nothing—absolutely nothing, zero, zip, naught—about what
might be causing between group differences.

In academic-like tasks (including the tasks that make up intel-
ligence tests), the differences between social classes and the ur-
ban/rural differences, racial differences, gender differences in
mathematical abilities and the Hispanic/non-Hispanic differences,
are clear cut and relatively stable across sites and over decades
in the United States. Our contemporary knowledge reveals two
things about these kinds of group differences in measures of ac-
ademic kinds of intelligence: (1) they do exist, and (2) that ap-
proximately 40% (or more) of the variation that we see in meas-
ured intelligence of the academic type, within the groups, is due
to environmental factors. The complex question that arises from
these findings is whether there is enough variation between the
environments of urban and rural people, or black and white peo-
ples, or middle and lower social class people, or males and females,
or Hispanic and non-Hispanic people, to account for the variation
that we see in measures of academic intelligence. One cannot,
however, determine the answer to this question solely by scientific
methods. We have ample prose to describe these differences,
sometimes quite poignantly, but we have no rulers with which to
measure these differences.

But the estimate that 40% or more of the within group variation
in measures of academic intelligence is attributable to environ-
mental factors is a very strong clue that the construct of intelli-
genese is extremely plastic, remarkably modifiable, inherently
malleable and, therefore, easily subject to environmental influ-
ce. That is, I think, precisely what one would predict for a
construct like intelligence. If it exists at all it must enable the
organism to survive in changing and sometimes hostile environ-
ments. This element of plasticity in the construct of intelligence
makes it different from other human characteristics affected by
heredity, where the genetic determiners are more powerful, as
in eye color, height, and the ability to taste salt. With intelligence
we are apparently dealing with a characteristic that is necessarily
modifiable through interactions with the environment. Thus, if
the environments between groups of people differ in any system-
atic way, then we should expect systematic variation in measured
academic intelligence. No scientist I know doubts the environ-
Heritability and Modifiability

An example of the importance for educators of this marvelous property of intelligence that I am calling plasticity may be found by thinking of the implications of studies of height within a particular population. Although estimates vary, it is likely that the heritability of height in a particular culture is around 90%. That is, 90% of the variability we observe in the height of individuals can be attributed to genetic factors. Thus, in the decade 1950-1940, 90% of the variation in observed height of Japanese males could be accounted for by genetic factors; in the decade 1970-1980 the same was true—90% of the variation in the height of Japanese males could be attributed to genetic factors. Everyone agrees that there is clear evidence of a powerful genetic influence on height. Although we may all agree that the evidence for genetic determinism in the characteristic of height is overwhelming, we must note, as well, that the height of Japanese males increased about 4 full inches in one or two generations! Thus we see how it is possible to have high heritability and high modifiability. If height, with a very high heritability index, is found to be so modifiable that in a generation or two it can change so dramatically, what might we expect about the characteristic called intelligence, with a heritability index that is no where near as large? To illustrate this issue even more forcefully, let us move to the extreme, where heritability of 100% is found, as in the birth defect called phenylketonuria. In the past everyone who had that genetic characteristic died quite young. The heritability for this disease has not changed at all, but now everyone with access to modern medicine can live. The modifiability is dramatic—the ability to live a normal life—yet the heritability still remains 100%! The point, of course, is that heritability has little to do with modifiability. This is a point that Dunn misses.

If there is any doubt about the inherent and great modifiability of IQ by environment, Mercer cites some natural experiments reported in the Journal of Human Genetics, the American Psychologist, and Developmental Psychology—all very rigorous and highly respected journals. These articles show that racial differences virtually disappear when trans-racial adoption of children occurs. For example, minority black children score like children in the culture of the family they are raised in. They score the same as whites, the majority culture from which these tests emanate. In addition, the relatively new study by Flynn (1987) in the Psychological Bulletin shows incredible modifiability over a single generation in the most culture fair of the IQ tests. Flynn has accumulated data from fourteen countries showing that the present generation is often scoring 20 IQ points above the previous generation on the same tests. These data lead to the interesting conclusion that today's minorities in the industrialized countries, who are often scoring 1 standard deviation below the majority culture on IQ tests, are actually scoring at precisely the point that the older generation scored 20-30 years ago.

Flynn's data lead inexorably to two propositions for a hereditarian, namely: (1) the youth of today are unequivocally of greater intelligence than their parents, and (2) the minority youth of today are as intelligent as the parents of the youth from the majority culture. But these are not admissions I hear from hereditarians. On the other hand, with a bit more open-minded view about the nature of the tests we use to measure intelligence and the power of the environment to influence those test scores, we can come to another set of conclusions. Because the between generation differences are equal to the typical between group differences, and the between generation differences seem only to be explained by the fact that cultural distance separates the generations, we have strong evidence of the fact that it is some aspect of culture that is affecting performance on intelligence tests. As I noted earlier, the construct of IQ is extremely modifiable. As health, schooling, and many other aspects of society change, so do IQ scores. That is the point made by Mercer, and that is the point to emphasize in discussions of IQ and its heritability.

A Lesson for Educators

As educators it is imperative to train the next generation of our students—the future teachers of our country—to be clear on these matters. Were I a dean of a school of education, a chief state school officer, or the secretary of education, I would require our future teachers to chant out loud three crucial points, before I would let them graduate and enter the profession:
(1) “Within group heritability estimates say nothing at all about between group differences in intelligence.”

(2) “High heritability does not mean low modifiability”

(3) “Culture affects IQ test performance”

Unless we insure that the professional education community is absolutely knowledgeable about these facts, it is unlikely that the general public will ever learn these things. Thus, we have an obligation to teach the educators of America in these facts, both to protect their pupils from the potential bias in behavior that can flow from invalid knowledge, and to educate the parents of their students. Dunn’s paper would have little audience if we teach these contemporary facts to a large part of the population.

**Tests That Share a Lot in Common**

Mercer (this volume) makes a second fundamental point that I want to comment about, to emphasize its importance. She notes that when two tests are supposed to be measuring different constructs, but are found to co-vary closely, they may really be measuring slightly different versions of the same construct. In general, we have learned that school achievement tests and IQ tests are highly inter-correlated, and that they also correlate similarly with dozens of other tests and the constructs presumed to underlie those tests. At least one very reasonable conclusion from this well established generalization is that school achievement tests and tests of academic intelligence are both probably versions of the same underlying construct and may not be very different at all—despite the different names we give them. Perhaps we might better name the latent trait or underlying construct that these tests measure “exposure to and opportunity to learn the culture that produced the test instrument, the test setting, the testing behaviors required for success and the test items themselves.” This cumbersome phrase is surely not likely to replace the simpler and traditional terms of “IQ” or “achievement,” but the whole phrase may be far more accurate for describing the underlying construct involved in both kinds of tests.

Dunn, although he should know better, maintains the distinction between the two kinds of tests and ignores the implications that can be derived from the more cumbersome interpretation of the construct being measured. That is, it is as likely that school and other forms of academic achievement cause academic IQ as it is that academic IQ causes academic achievement! At the least, the relationship is inherently reciprocal and confounded, entwined beyond our present comprehension, whereby a circle or a process describes the relationship between the two, such that there is no place to start and no place to end when examining the relationship between achievement and intelligence. The two terms have a quality about them like teaching and learning, or like buying and selling. That is, there exists what philosophers call an ontological dependence between the terms. There really cannot, in the common person’s view, be any selling without any buying, or any buying without any selling. The common person also sees no teaching without learning. We can tease these terms apart for analytical purposes, but the common person understands that some concepts really exist only in relationship to another concept. Thus we must ask if, in humans, there can be an intelligence measure without achievement and whether an achievement measure exists independent of intelligence?

When two groups of people differ on access to school, and the measured IQ is lower in the group that has less schooling, it is then a simple thing for a simple person to conclude that low IQ causes the lower achievement. People that are rural, black, Hispanic, and of the working class obtain less education because they are less intelligent. Although that is a simple conclusion, the evidence of the opposite is really more persuasive to me, namely, that low academic achievement and reduced years of schooling cause lower IQ. A good contemporary case is that of female mathematical insufficiency. Females regularly score lower in mathematical and spatial measures, tests frequently used to measure IQ. Females also engage in a school curriculum that includes less mathematics and are products of a socialization process and informal curriculum that includes fewer mathematical and construction activities, likely precursors to the development of spatial abilities. Such explanations of differences in mathematical and spatial intelligence are really models of a causal flow from the construct of achievement to the construct of IQ. Why does such a causal relationship appear reasonable to so many people when gender differences in IQ are examined, and not appear nearly as reasonable to some of those same people when racial or ethnic differences are discussed?

Some recent work examined this issue about the direction of the causal flow in a novel way (Cohen & Colen, 1988). The effects of schooling on IQ were separated out from the effects of age on
IQ. This is no easy problem, since in industrialized countries school achievement and age are closely linked. For 80 or more years we have assumed that IQ test performance increases with age, implicitly adhering to some kind of a biological model of IQ development, and so we renumber IQ tests for different age groups. But the alternative view, from a strong environmental position, is that it is schooling and other kinds of achievement (e.g., learning in the family) that give rise to growth in IQ. Cohen and Cohen studied 4000 students in each grade, from 4th through 6th grade, in Israeli public schools. Twelve subtests from widely used IQ tests were given, including some from the so called culture-fair tests. Raw score growth on these tests, over the two years from the end of 4th grade until the end of 6th grade, are the result of an additional two years of age and an additional two years of schooling. The effects of two years of schooling (fifth and sixth grade) were estimated as a proportion of the total growth that was found on the IQ tests. On nine of the twelve intelligence subtests the effects of schooling exceeded 50%, and for six of the subtests the effects of schooling exceeded 66%. The authors conclude that "The results are clear and unambiguous: They point to schooling—rather than to age and age-related factors—as the major factor underlying the increase in intelligence test scores . . ."(p.9).

In terms of the point I am trying to make these authors find the causal flow going from school achievement to IQ not from IQ to school achievement! What is measured on IQ tests are developed abilities, and few institutions develop abilities better than family and school—both environmental sources of influence on the child's measured IQ.

At the very least the evidence about the co-variation of achievement and intelligence tests informs us that the two major competing hypotheses about the direction of influence (I.e., whether IQ causes achievement or whether achievement "causes" IQ) cannot now be answered with any surety. Whatever argument one can make to defend the belief that there is a unidirectional flow from IQ to achievement, can be rebutted by showing how certain kinds of achievements (school achievements, for example) influence IQ. Although it is certainly more complex to teach and learn, our students in schools of education must also be able to state, as Dunn apparently cannot, that:

"The influence of academic kinds of achievement on measures of IQ and of IQ on measures of academic achievement is, to a large extent, reciprocal."
specification of the kind of intelligence we are looking at, which is academic intelligence, one of many kinds of intelligence that is needed to live successfully in our contemporary world. The second missing factor is the failure to note anything odd about the use of a vocabulary test as an indicator of IQ for predicting academic achievement in the schools of the mainstream culture, for a group of students who are not of the mainstream culture. Vocabulary, while a strong correlate of the g factor of intelligence, and present as a sub-test in most familiar intelligence tests, is also the best example of a test that easily shifts from a central indicator of intelligence to an almost pure measure of academic achievement. For example, a test of French vocabulary, given in France, is ordinarily considered a measure of intelligence. A test of French vocabulary, given in the United States, is almost surely a test of school achievement. The cultural group one belongs to clearly determines whether this test is one of intelligence or one of achievement. The cultural group one belongs to is the basis of the classification of the test. That is, the classification of the test as one of intelligence or achievement cannot be made independent of the cultural group of the examinee. According to every classification I know of, Hispanics in the United States are considered a minority culture. And a linguistic minority to boot! With this in mind we must now question the test upon which Dunn's argument rests. Is Dunn's vocabulary test, given in either Spanish or English language versions, with norming groups from the Anglo United States population or from Spain, a test of school achievement or a test of intelligence when it is given to Chicanos and Puerto Ricans? It seems unthinkable to me to call this an intelligence test, with all that connotes, when the evidence for it being an achievement test is so obvious, given the group being tested.

It is difficult for me to worry about the overall intelligence of a cultural group that is linguistically different from the majority, because we find evidence that their vocabulary test scores are low. I am convinced that the construct people think they had measured, shifted right out from under them. The construct moved from a measure of intelligence (among the majority group in the United States or in Spain) to a measure of achievement (among a cultural and linguistic minority group). I think I would only be amazed if the scores of a linguistic minority who had been given such a test turned out to be high!

The point here, for pedagogical purposes is to have every one

of our students in educational programs recite out loud, as a criterion for graduation, that:

“What a test actually measures cannot simply be determined from characteristics inherent in the test, but is determined, as well, by characteristics of the group being measured.”

RACE, CULTURE AND ANTHROPOLOGY

Trueba (this volume) reminds us that anthropologists agree among themselves, though not with Dunn, that the popular racial categories that are used by common people have no real validity in the world of science. They are gross categories that have no useful scientific meaning. Trueba also reminds us that when we choose to examine a racial or ethnic group's performance on almost any measure, in an alien culture, it shows unusual characteristics. For example, Owu (1987) reports that ethnic Koreans, in Japan, seem to be low in IQ and low in achievement. The same ethnic group in the United States seems to be quite adequate in IQ and quite above average in achievement. Owu (1987) also notes that the Japanese Burakumin—people from the lowest caste—score low in IQ and achievement in Japan. But in the United States, without the weight of their cultural history as an influence on their behavior, they seem to perform like the other Japanese do, higher than the average Anglo. And among Jews in Israel, the Sephardic (Arabic/Oriental) and Ashkenazi (European) Jews show marked differences in IQ and school achievement. In the United States these two groups are said to perform in much the same way. What we see from these replicable cross-national phenomena is that intelligence and achievement are not characteristic of a people but of a people in a place. That is a crucial thing for the next generation to remember as well. Every professional educator ought to be made aware of the evidence for this conclusion. And then they should be required to demonstrate their understanding of this phenomenon by shouting out loud, before they can graduate with degrees in education, that:

“Intelligence and achievement are not characteristics of a people, but of a people in a place.”

Reactions to Immigrants

The anthropological perspective that Trueba (this volume) brings, reminds us that Dunn's arguments, like so many racist
arguments, are really arguments about the new wave of immigrants. When Irish, Italian, Jewish, Ukrainian and Polish immigrants were coming in by the boatload, when they were the new immigrants, they were thought to be of inferior stock and were demonstrably low in measured IQ. Stephen J. Gould, in his award winning book *The Mismeasure of Man* (1981), documents the foolishness of the early days of our century, as psychometricians and other academics rushed to prove with objective measures the inferiority of the new immigrants. This unfortunate characteristic of nations is apparently a universal form of xenophobia and economic selfishness, engaged in by all the haves when the have-nots come to their door. Remarkably, however, the mean group IQs of Irish, Italian, Jewish, Ukrainian and Polish ethnic groups are now more satisfactory. From one perspective, the hereditary, there appear reasons to believe, that in a mere generation or two, the genetic material of these peoples must have changed. From another perspective, an environmental one, we might simply note that changes in the linguistic, social and economic lives of these peoples have influenced their IQ and achievement. What is so ironic is that the grandchildren of people whose IQs were patently low, now constitute the norm group from which someone like Dunn derives his conception of what intelligence scores should be!

While new immigrants are often seen as intellectually inferior by the natives of the culture to which they move, their children or grandchildren seem to gain in "intelligence." Thus, we should expect that the second and the third generations of Puerto Ricans and Chicanos ought to show fewer deficits in their intellectual and achievement test scores than their parents. In fact, that is exactly what is happening. The research reported by Prewitt Diaz (this volume), that I discuss below, informs us that the children and grandchildren of the first wave of immigrants are acculturating rapidly, speaking English regularly, and performing better in school. Just like the children of the other "inferior" peoples who came to the United States. As the new immigrants get to live a less marginalized life, they will perform less marginally. Evidence for this argument is persuasive and clearly inconsistent with a genetic interpretation of IQ differences.

**Taking Marginality into Account**

A recent study by Chambers (1988) took the marginality of some groups into account when looking at one of the major in-

dicators of American school success. Chambers, like all other researchers, noted that the overall differences between Chicanos and Mexican Americans on the one hand, and Caucasians, on the other hand, were quite large on both the composite test and the sub-tests of the ACT. But he knew, as well, that the typical members of these groups differ dramatically in terms of the economic, social, and intellectual lives that they lead. Suppose, he asked, we could look at the performance of just those Chicanos and Mexican Americans of approximately the same economic and social circumstances as Caucasians. From a very large sample, Chambers matched students on 13 variables such as family income, courses taken, type (public/private) and size of school, gender, number of siblings, and so forth. The researchers found 638 pairs of matched children—a very tough feat when 13 variables are involved, even when the sample of test takers is about 800,000 per year. Differences, as anticipated, remained. These are, after all, distinct cultural groups. But the matching on situational variables shows that the large differences, so crucial to the argument of a racist or a hereditary, are dramatically reduced simply by attempting to control for environmental factors. When matched, the differences between the two groups on the composite ACT test score was reduced 14 percentile rankings (the mean score of the Chicano/Mexican American group rose 8 percentile ranks and the mean score for the Caucasian students dropped 6 percentile ranks). For this matched group the reductions in differences on the subtests of the ACT were as follows: fifty-five percent reduction in the difference between the two groups in English, 69% for mathematics, 49% for social studies, and 49% for the natural sciences. From data like these it is hard for me to understand how anyone can discount culture, and the economic and social correlates of cultural differences, as a major factor in producing between group differences. But if one chooses to keep to a hereditary position, then consistency should be required, an issue to which we now turn.

**Consistency in Looking at Culture and IQ**

If racial, cultural and ethnic group differences on achievement and intelligence tests are to be considered genetic, then the poor performance of blacks and Hispanics, vis a vis white/Anglo students is only one part of the story. Another part of the story is the remarkable achievement and IQ test scores of Asians vis a vis those same white/Anglo students. For a consistent position the 10
or more point IQ advantage that many Asian groups show over whites, and their clear superiority over whites in school achievement, must be attributed to hereditary factors. Consistency is called for when urban/suburban and rural differences are looked at. In these comparisons rural school children appear genetically inferior to those in the metropolitan regions. And we should not overlook the Jewish and the Christian group differences, which for many years have indicated that Jewish children have genetic advantages. Once you begin to infer genotypic differences from phenotypic differences you end up holding some odd beliefs, because the evidential base is the same for all kinds of group differences. To be consistent, therefore, Dunn should not just worry about the school’s role in teaching Hispanics, he must also warn the schools about the problems they are going to have due to genetic insufficiencies when they try to teach rural, Christian Anglos. Society’s money would better be spent, given the logic of professor Dunn, on Asians and Jews in metropolitan areas! I do not know Dunn’s position on this issue of consistency, but those people I know who find it easy to believe in black or Hispanic inferiority often seem to find it difficult to talk of Asian and Jewish superiority. Let us ask for consistency from the believers in genetics as a causal factor in between group differences. Let us take seriously the possibility of genetic causes for these differences only when the Anglo/white person who makes such a claim argues both for black and Hispanic intellectual inferiority, compared to the Anglo/white group, and for their own intellectual inferiority, compared to Asians. The consistency of such an argument allows us to discount, to some degree, racism, ethnocentrism, and other personality defects as factors in this argument.

**LANGUAGE AND INTELLECTUAL PERFORMANCE**

Prewitt Diaz (this volume) makes an important point in refutation of Dunn’s charge that, unlike other immigrants, Hispanics want to maintain their language and their separateness. Prewitt Diaz notes that Puerto Ricans and Mexican Americans, unlike the European immigrants at the turn of the century, do not sever relations with the motherland. They do not have to. They can drive across the border or fly home very inexpensively. And they do. Their heritage language and their family relations remain much more intact than was true of the European immigrant of earlier times. If immigrant families of those times could have trav-
services in school. (Willig, this volume, reports different figures, but even her data informs us that under 25% of those who are required by law to receive bilingual instruction actually receive any kind of bilingual instruction. Perhaps Dunn can ignore such data. But it is clear that another interpretation of these data is possible. That is, since many speakers of other languages appear not to be doing well in school subjects, perhaps it is because they are not receiving any bilingual education at all.)

Recently, Secretary of Education Bennett has expressed the same views about bilingual education as Professor Dunn. In response to those views the Government Accounting Office (GAO), a congressional agency, felt compelled to issue a document refuting the words of the Secretary, a representative of the executive branch. The document informs us about the distortions and inadequacies of the Secretary's interpretation of the data collected by the government in order to help the government inquire whether their sponsorship of bilingual education programs was having some pay-off. The GAO report (1987) leads us to believe that the Secretary of Education and professor Dunn have the same unfounded concerns about speakers of foreign languages, because the consensus of the scientific community is that both Bennett and Dunn are distorting the data.

A point made by the GAO, Cummins (1987) and by Willig (this volume), is one that every educator knows quite well, though it has been overlooked by Dunn and Bennett. The point is about implementation of large scale social programs. Distinctions between the bilingual program, nationally, and the nature of bilingual instruction in some local project, have to be made. The basic maxim is that in education there are no uniformly well-implemented cross-site programs of instruction. Open education as a large scale innovation was said by many people to be a failure, but reports persist that some open education classrooms were terrific. The implementation of the "new" mathematics curriculum across the nation seemed to reveal serious flaws, but apparently in the hands of some districts and schools it was implemented carefully and it worked superbly. Head-start and Follow-through

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It is a rare event for one branch of government to attack another in so public a fashion, as did the GAO when it took on the Secretary of Education. The GAO took the Secretary's pronouncements and interpretations of data regarding bilingual issues and refuted them point by point. Apparently the Secretary was letting his ideology influence his reporting to Congress and the American people, since it appears that he did not have his facts straight.

programs for low income students are still considered by many to be a failure, but we have evidence from a number of sites that many of the projects within the overall program were both successful and cost effective.

People who do not understand either education or program evaluation constantly assume that when school people say they have a bilingual, or an open education, or an individualized program of instruction, or some other innovative program, they are discussing a well-implemented version of that program. There is overwhelming evidence that the maintenance of fidelity in the implementation of educational programs is extremely difficult to achieve. One of the major findings from studies of Follow-through programs, where competing theories and programs of early childhood education were purposefully funded, was that the variation across sites within the same program (whether it was behavioral, cognitive, requiring parent involvement, technology oriented, or whatever) was equal to the variation across the sites between the different programs. There was always a problem of insuring fidelity of treatment to carry out the program that was supposed to be carried out. Local conditions required so many adjustments that programs could not be faithfully implemented. Thus, the educational community has come to learn that one can never say a program has failed unless one knows that the program was taught by people who were committed to the program and not assigned to it, that they were competent teachers before undertaking the new program and not mediocre or brand new, that appropriate in-service preparation of the teachers was undertaken, that the program was supported by the school district and the community, that sufficient funds were allocated such that success was actually possible, that evaluation was delayed until after pilot testing of the program was accomplished, and so forth. To condemn an educational program is easy. To try to find out why projects in that program work in some places and not in others is much more difficult. The Secretary of Education and professor Dunn apparently avoid the complexity involved in understanding the successful projects, of which there are many, preferring instead simple blanket statements of sweeping generality about programs that don't work. The GAO and others (e.g., Willig, 1985) easily find data supporting the conclusion that well implemented, long-term, transitional bilingual instruction helps children acquire competency in two languages. The data are so persuasive that we should begin thinking about bilingual instruction as the instructional
method of choice for all children, not merely the lucky ones who are speakers of other languages and who have a chance to become proficient in two languages, if we let them.

Language and Genes

Prewitt Diaz (this volume) also reports on the achievement of second generation Puerto Ricans in the United States. His analysis finds that in comparison to first generation Puerto Rican immigrants, the second generation does quite a bit better in school subjects and on tests of achievement and IQ. This fact was mentioned earlier in this essay. It is hard to believe, I know, but from an hereditarian perspective, one must begin thinking of the possibility that Puerto Ricans are picking up good genes by hanging around the urban Northeast. A remarkable finding!

Testing Language Skills and Intelligence

There is a special issue for professional educators that arises from Prewitt Diaz's analysis (this volume) of Dunn's Peabody Picture Vocabulary Test (PPVT), the Spanish version. Dunn uses the research associated with this test instrument as the source for many of his opinions. What Prewitt Diaz found, however, is that the test violates the Standards for Educational and Psychological Testing (1985), worked out jointly by the American Educational Research Association, the American Psychological Association and the National Council for Measurement in Education. These standards were the result of five intensive years of work and represent the best guidelines we have for the intelligent use of tests in our society. Dunn admits to violating these standards. He says, as if it were an excuse, that he ran out of time and money.

If a building in my community were not up to code, because the builder ran out of time and money, the State would either condemn the building outright or not allow it to be used until the building was in conformity with the State code. Dunn's test is a commercial venture. It is not up to code. Can anyone tell me why a trained teacher, educational researcher, psychologist, psychometrician, counseling psychologist, child development specialist or other specialists with an educational or psychological background uses such a test? Who allows the building to be used when it is not up to code? Such complicity in the violation of our codes, by all of us in education, is deplorable. Perhaps, before graduation from our instructional programs in the fields of education and psychology we need to have students take an oath.

"I solemnly swear that I will not administer or accept information obtained from tests that are in substantial violation of the guidelines for testing developed by the test standards committee of the American Educational Research Association, American Psychological Association, and the National Council for Measurement in Education."

The next generation of school psychologists, psychometricians, teachers and administrators must learn that tests that are not up to code must not be given. Prewitt Diaz is perfectly correct when he says that the publisher of the test is irresponsible to let the test be used in the ways that it has been, when it violates the professional code of fair test use. What sanctions exist for publishers that violate the codes we have created? As important as it may be for the Hispanic community to boycott grapes or other products, where Hispanic workers are being exploited, their long term interests will be better served, I think, by boycotting publishers who sponsor tests that are in violation of the codes.

Language and Thought

Cummins (1987) made a telling point about language in use and its relation to thought. He reminds us that there continues to be an inability by many people to accept the work of such respected linguists as Labov (1972) and Chomsky (1968), about the surface and deep structure of language. Dunn is one of those with this learning disability. He confuses language use in conversations among young Hispanics, with language use in thought. Because the conversational language of low-income immigrants is neither standard English nor standard Spanish, Dunn concludes that their thought processes are somehow inadequate. Modern linguistic theory and research inform us that the surface characteristics of languages are relatively unimportant, though there may be social and economic advantages to speaking the standard language. It is really the underlying deep structure of the communication that is crucial. And in that regard, there are no languages, dialects or pidgins, no languages of the ghettoes and the barrios, nor from the most isolated of primitive peoples, that differ from the languages of the most industrialized nations in their potential for conveying thought. This is the prevailing scientific principle in sociolinguistics and related fields such as anthropology and psychology. Unfortunately, our teachers and most of society do not believe this, though there is considerable unanimity among the experts in this field. Professor Dunn also does not believe this. When he equates
language in use with estimated potential for thought, he is simply, and perversely, wrong.

How can we train the next generation of teachers to learn this lesson? Along with some other requirements for graduation I would at least have school of education majors stand up and recite that:

"Differences in language and dialect among people are surface characteristics in communication that have economic and social significance. These differences, however, do not affect in any way a person's ability to communicate any kinds of complex information or to engage in any forms of complex thought."

Language and Schooling

Cummins (1987) made a theoretical point that is easily overlooked in discussions of the immigrant child's success and failure in a new culture. He posits that it may take the immigrant child only 2 years to gain proficiency in conversational English, but that it may take 5-7 years for academic work skills and academic language to develop. School is also a culture to be learned, with its own peculiar norms and folkways, and a language of its own (Morine-Dershimer & Tennenberg, 1981). In comparison to the general American culture, school may be the more difficult of the two cultures to learn! We err so often by attributing academic work deficits to mental deficits instead of to slow acculturation because we think that all you need to do when you move to another land is learn the language. There is a particularly insidious problem here because once someone believes in mental deficits as the cause of a people's school problems, they often, perhaps even inadvertently, communicate those beliefs to others. Eventually, we find the objects of these negative beliefs behaving in conformity to those beliefs, even when it is not in their own best interest. We should note how different it might be if someone believed, instead, that school difficulties were related to slow acculturation, rather than mental deficiency. From the standpoint of the school, time is alterable, it is controllable, it is not fixed. Mental deficiency, on the other hand, appears to be fixed. It seems to be unalterable, regarded as a permanent trait, perhaps as a result of heredity. The two views lead to very different behaviors.

For Cummins, Hispanic children have two cultures and two languages to learn when they enter our country: They must learn the Anglo culture and the school culture, and they must learn the English language and the language of schooling. The provocative thesis here is that learning the Anglo culture and English language takes much less time than learning the school culture and the academic language used in schooling.

Bilingualism and Cognitive Superiority

Many of the remarks made by the Secretary of Education, and professor Dunn, are concerned with the deficits of Hispanic youth, particularly those in bilingual programs. Dunn's interpretation of the data, citing advantages for bilingualism for all but the Hispanics are simply false, as Willig (this volume) points out. Cummins and Willig both note that there is ample evidence of cognitive benefits for Hispanic bilingual children, as well. Hakuta (in press), for example, working with Hispanic and other bilinguals, cites 30 replications of the finding that when social class is held constant, bilinguals have a cognitive advantage over monolinguals. The empirical evidence, for all those without pathology, is clear and growing. As a most amazing case of this general finding we can cite Kessler and Quinn (1987). They compared low-income bilingual Hispanic children of the barrio, in the 6th grade of the public schools of a southwestern city, with advantaged Anglo children of the same grade who were enrolled in a prestigious private school in the Northeast, but who were all monolingual. The reading level of the Hispanic children was measured at a grade equivalent of 3.8. The private school children of the same grade had a reading equivalency score of 7.0. The tasks the children had to solve, after equivalent science instruction had been given to each group, were highly cognitive scientific tasks. Measures included the syntactic complexity of the students' responses, their usage of metaphor, and ratings of the quality of the students' responses. In this comparison the low-income Hispanic children significantly outperformed the higher income Anglo children! It is extremely rare for a lower social class group, of minority background, to outperform an upperclass group of majority children on a set of academic tasks. But that is precisely what happened. What is more, these findings confirmed a previous study in which the same surprising data had been uncovered. The variable that best accounted for the superior performance of the low-income students was their bilingualism. Balanced bilinguals have distinct cognitive advantages.

If I could, as our education students graduate, I would require
them to recite for us the simple conclusion Hakuta reached after a number of years of scholarship in this area:

"Balanced bilingualism is associated with higher levels of functioning in a broad range of cognitive tasks."

And then I would require one more item from our graduating education students. I would ask them to write an essay on what they personally intend to do about promoting bilingual education in their schools for the deprived students of the majority culture—students who will not gain cognitive advantages unless they become speakers of other languages early in their school careers.

**Fostering Balanced Bilingualism Among Hispanics**

If balanced bilinguals have advantages in cognitive functioning, then it seems obvious that we should foster balanced bilingualism among the Hispanic speakers who now reside in the United States. One way to do that would be particularly troubling to professor Dunn (and to the Secretary of Education, as well). It would trouble them because it is both counter-intuitive and counter to their ideological beliefs. Nevertheless, Cummins (1987), Hakuta (in press), and other scholars of language instruction have empirical data to make this unusual point, namely, that the better the school children’s mastery of their heritage language, the easier it is for them to learn a new language. This is counter-intuitive because it is more logical to expect that mastery of the second language would depend on faster and more intensive instruction in that language. The apparently logical policy to adopt is one that fosters the use of English as much as possible, even exclusively. This seems so sensible and logical to most people, particularly monolingual speakers, that it is easy to understand why immigrant parents are often warned not to speak their native language to their child, and why, until recently, an Hispanic child in the Southwest that was overheard using Spanish at school was punished. This kind of thinking is what leads some to recommend immersion programs for speakers of other languages. But such thinking about policy, though sensible, though logical, though occasionally successful for an individual child, is flat out wrong!

It is precisely the opposite approach that should be taken. Children’s heritage language needs to be well developed so they can master academic tasks in their new language. The new theories of language acquisition and much of the contemporary evidence lead to the conclusion that lengthier programs of bilingual instruction are more beneficial than truncated ones. Late exiting of a child from a good transitional bilingual project, rather than early exiting, ought to be our educational goal. We need to help parents to extend their child’s use of their heritage language, not ask them to curtail it. How do we get the next generation of educators to recognize that in order to foster the cognitive superiority that goes with balanced bilingualism we need to foster the development of the child’s heritage language, not stifle it? Perhaps the graduates of our educational programs need to take an oath:

“I solemnly swear that as I help my students who are speakers of other languages make a transition into English I will do my best to preserve their heritage language so they can gain the cognitive advantages that bilingualism provides them, and so that America remains a strong economic competitor in the world marketplace.”

**The Development of Linguistic and Intellectual Deficits Through Schooling**

Willig (this volume) makes a number of cogent points for Dunn to deal with, but one seems to need special attention. It appears that Mexican American and Puerto Rican children score the same as do Anglos on intelligence tests until they begin schooling. The gap in intellectual performance upon which Dunn focuses appears at that point. Two conclusions are suggested by these findings. One conclusion is that when using vocabulary as a measure of intellectual functioning, some aspects of schooling apparently reduce the measured intelligence for some groups of children. Schooling, apparently, can be dangerous to your intellect, especially if you are Mexican American and Puerto Rican, rather than Anglo. The other conclusion is that Mexican American and Puerto Rican school children (unlike any other Hispanic children in any other country, or, more broadly put, unlike any other children anywhere else in the world) go into an intellectual regression at about age six. It is this latter conclusion that Dunn reaches, despite the peculiarity of such a conclusion. The former conclu-

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*The "English Only" movement believes in immersion programs and in the shortest possible bilingual programs for children. They condemn bilingual education as a program, though their director, Linda Chavez, admits that individual projects in bilingual education have been successful. They have not recognized that projects in bilingual education are not all well implemented, and they ignore the evidence that long-term transitional bilingual instruction has a better record of success than projects that provide instruction to children for only a short period of time.*
sion—that school is dangerous to the intellectual health of some groups of students—is certainly simpler to defend, and parsimony in scientific thought is to be valued. Ogbu (1987), for example, has written extensively on the subject of caste-like subcultures in the United States. Among the groups that he sees as having lower caste-like status are Chicanos, Puerto Ricans, American Indians, Native Hawaiians, and blacks. The common thread here is that those who came to America involuntarily, or were subjugated by conquest and force, are treated by the majority society and its schools as inferior people. Recent immigrants of the same ethnic groups, who come to the United States voluntarily to escape economic and social upheavals in their home country (Cubans, for example), are predicted to do better in the schools than the Hispanics that were already here and living in a caste-like status. That seems to be precisely what happens. I find Ogbu much more persuasive than Dunn in accounting for the difference in school performance and IQ test performance when we look at Anglos or Spanish children on the one hand and Hispanics of Puerto Rican and Mexican American background on the other.

What our graduating students need to be able to say, along with medical doctors, is that their first order of business is to do no harm. Schools, as presently constituted, can be injurious to the intellectual functioning of some of our students. That is a possibility most new graduates never think about, but they should.

CONCLUSION

The theme throughout my discussion of the papers that have examined professor Dunn and his thesis, finding both of them wanting, is that we have an obligation to the next generation of educators. The professionals of the future should be so well educated in the contemporary views of intelligence, testing, language, and culture that a paper like Dunn's should not have to be taken as seriously as we have had to take it in our decade. We need to insure that the teachers we turn out over the next few years can state, and really believe, that:

- Within-group heritability estimates say nothing at all about the determiners of between-group differences in intelligence.
- High heritability does not mean low modifiability.
- Culture affects IQ test performance.

- The influence of academic kinds of achievement on measures of IQ and of IQ on measures of academic achievement is, to a large extent, reciprocal.
- What a test actually measures cannot simply be determined solely from characteristics inherent in the test, but is determined, as well, by characteristics of the group being measured.
- Intelligence and achievement are not characteristics of a people, but of a people in a place.
- Differences in languages and dialect among people are surface characteristics in communication that have economic and social significance. These differences, however, do not affect in any way a person's ability to communicate any kinds of complex information or to engage in any forms of complex thought.
- Balanced bilingualism is associated with higher levels of functioning in a broad range of cognitive tasks.

And I think that professional educators, involved as they are with a moral calling, for teaching is not merely another job, should have to take certain oaths in order to be granted their license to teach. I would propose at least two such oaths:

- I solemnly swear that I will not administer or accept information obtained from tests that are in substantial violation of the guidelines for testing developed by the test standards committee of the American Educational Research Association, the American Psychological Association, and the National Council for Measurement in Education.
- I solemnly swear that as I help students who are speakers of other languages make a transition into English I will do my best to preserve their heritage language so that they can gain the cognitive advantages that bilingualism provides them, and so that America remains a strong economic competitor in the world marketplace.

Professional educators of the future need to be reminded of what Trueba (this volume) has noted: The arrogance, ignorance, and economic selfishness of those who hold hereditarian beliefs about the inferiority of some racial and ethnic groups is a more serious threat to our democratic system than is the academic failure of the people about whom they are commenting. It is difficult enough for a heterogeneous society to deal with its racial and ethnic inequalities in schooling and in the distribution of re-
sources. But the very fabric of that society would be quickly destroyed if such inequalities were to be institutionalized through explicit policy. Dunn would have us do that and have us believe that "science" leads inexorably to such policy decisions. He is wrong in his interpretation of the data, and he is wrong about what policies are best for society.

REFERENCES


Has Dunn's Monograph Been Shot Down in Flames—Author Reactions to the Preceding Critiques of it

Lloyd M. Dunn

Reactions to the articles on Dunn's monograph are presented, and four major counter arguments are stressed: (a) Hispanic professionals are doing a disservice to Hispanic students by explaining away their poor test performance and not spreading the blame among the Hispanic community; (b) Bilingual education hinders Hispanic students because it removes them from mainstream students from whom they could learn; (c) Retention and improvement of psychological tests is encouraged, with standardization and single norming of tests rather than multiple norms; and (d) If Hispanics are to become well-educated productive members of our society, blame for low IQ scores should be shared by the Hispanic community and problem solving strategies developed. Suggestions for policy makers and educators to increase the equality of education for Hispanic children are highlighted.

My responses to the commentaries on my monograph take the form of a series of points. The first four are general reactions; the last six are specific to the contents of the individual articles.

GENERAL REACTIONS

First, let me say that that I am grateful to the scholars who have taken the time and effort to critique my monograph. In my view, we are all engaged in a healthy debate aimed at improving educational opportunities for impoverished Hispanic children who reside on the U.S. mainland. I'm especially indebted to the members of the American Educational Research Association (AERA), and the editors of the Hispanic Journal of Behavioral Sciences.

Requests for reprints should be sent to Lloyd M. Dunn, Ph.D., 1525 Wilder Avenue #706, Honolulu, HI 96822-4614.
(HJBS), for taking the high road in dealing with differences of professional opinion, namely creating forums for open discourse. In doing so, they exemplify the philosophy of Voltaire who said: "I may disapprove of what you say, but I will defend to the death your right to say it."

The AERA/HJBS strategy is in sharp contrast to the tactics of some members of another national organization, of which I happen to be a past President. They adopted the devious strategy of attempting to blacklist the American Guidance Service for distributing my paper, which it did, initially, free of charge, as an unwise favor to me, its senior author. That attack on the messenger rather than the message was very successful. AGS, in concern for its commitment to neutrality and the bottom line, no longer is prepared to distribute it. It should be made clear that AGS did not publish my monograph and did not sell it. They only reproduced and mailed it, upon request, as a free service, in the belief that data, even disturbing data and one person's conclusions drawn from them, should not be swept under the carpet, ignored and forgotten. In no way did AGS support or endorse my views. So as a first point, I wish to congratulate AERA, and the editors of the HJBS for their fairer and more scholarly approach, including allowing me this rejoinder. I must believe that most people would realize that I would never have released my monograph had I been concerned about my pocket book. For me to risk a loss on royalty on my commercial publications, surely it is clear that my motives had to be altruistic. Also, as I said in introducing my monograph (see page 112), it is in the best interests of every American, not just Hispanic professionals and their associates, to become involved in removing existing barriers to progress in school and society for all minority children, but especially impoverished girls and boys of Hispanic descent. The purpose of my monograph was to help, not hinder, in the endeavor.

My second point is to enunciate a shift in my thinking. Thanks to such critiques as have been presented in this journal, and further study and additional research on my part, I now view my monograph only as a "working paper," that is badly in need of extensive revision. It is now clear that many people were offended by certain of my comments, especially those suggesting that the poor performance of impoverished Hispanic children may be due, in part, to genetic factors. Now I see that the insertion of this element into my discussion was a tactical error and a distraction. From my point-of-view, it is not a central issue. Since it has aroused such strong reactions, I will downplay this point of discussion or eliminate it from any rewrite, so that the main body of my report may get more attention. Therefore, I wish to retract my statements in this area. Both AGS and I now recognize that we showed lack of sensitivity toward Mexican Americans and Puerto Ricans in introducing this point of contention. We apologize. I cannot resist saying, however, that none of us is consistently correct, and that all of us end up with egg on our faces from time to time. Since their presentations at the AERA convention in April, I was pleased to find that most of the reactors to my draft monograph, but not all, had toned down their rhetoric and extreme defensiveness.

My third point is this. Most of the feedback I have received to my monograph to date, and including that presented in this journal, has focused on my discussion and conclusions, rather than the heart of the report, which are the discouraging data presented in Parts 2 and 3. If my suggestions for fostering school and community advancement for Hispanic children who live in poverty are generally unacceptable, then other alternatives are needed that are likely to be an improvement over past and current practices. In our attempt to reach rapprochement, I would suggest that we all concentrate on correcting the distressful evidence that I presented in the heart of my monograph, not engage in explaining them away. Finding solutions begins with recognizing problems. They are advanced when we stop placing all the blame on social ills and school failures, and begin sharing and spreading responsibility.

Here is my fourth and last general point. It will remain for readers to decide whether or not the people who have critiqued my monograph in this issue of the journal represent a highly selective or cross-sectional sample of points-of-view. I worked for months to draft my monograph, striving for an honest, fair and scholarly presentation. Is it not rather amazing that the reviewers found essentially nothing with which they could agree? Did I put them all on the defensive? If so, why? If the attitudes and opinions of these reviewers represent society at large, then perhaps this monograph was released too soon. Instead of stimulating open debate and healthy controversy, it may only have created another barrier to progress. I hope this is not so. Instead, I would like to believe the majority of professionals in the area are open-minded and willing to entertain options incompatible with their own preconceived ideas. One can ask if a more informative volume to this one would have been developed if a more balanced panel had been assembled. A good model is provided by the MacNeil-Leh-
errer Newshour on public television when controversial issues are discussed. The strategy used is to assemble a balanced panel, being sure that divergent views are represented. I would ask the readers of this journal whether or not the panel was selected so as to shoot Dunn’s monograph down in flames. In any event, what needs to be recognized by the reader is that I, as the monograph author, and the six reviewers have mixed philosophy, politics and behavior science in our writings. We tend to select and present data—all of us—that support our convictions. The reader should not be duped by the aura of scholarly pursuit. On the one hand, the panel appears to want to promote the status quo and drift. On the other hand, I recognize that I am an advocate of rather radical social change since I believe that the human condition of underclass Hispanics in America has not improved much in recent years, and probably has gotten worse.

Specific Reactions to Individual Articles

I will now react specifically to the series of six critiques printed herein. Unfortunately, the focus of most of the comments forces me to deal with my discussion and conclusions, to the exclusion of the main body of my monograph. One unit of this paper will be reserved for each paper. Each will be brief. This is unfortunate because each review deserves a response of about equal length. Overall, I am put in the position of either being a milquetoast and acquiescing to every criticism, or being defensive and attempting to justify my position. So do bear with me. I am sure my biases will continue to show, but it would be helpful if everyone reading this journal, as well as each of the reviewers of my monograph, would also recognize that they too react from their own set of biases. By the way, I am well aware that my writing style is hard-hitting and tends to be confrontational. So I should not have been surprised when it generated critical rebuttals. But one of my goals was to shake up the entrenched special interest group and bring it around to seeing that compromise and rapprochement are usually more effective than doctrinaire positions and postures, a charge they repeatedly have thrown at me.

Reactions to Cummins

My first specific set of reactions deals with the Cummins article. As for his discussion of test bias, he has taken the classic position of those who explain away the poor performance of impoverished Hispanic recent immigrants on the mainland U.S.A. on most tests of intelligence by pointing out that the items are culturally-loaded in favor of Anglos and therefore unfair for Hispanics. Most scholars in psychometrics do not define test bias in this way. My responses to him are threefold. First, surely he realizes that so-called traditional intelligence tests that are used in the schools, are only tests of scholastic potential. For this purpose, the test items must correlate positively with school achievement. They are designed and selected to do that. Using Jensen’s definition of bias (1980), if the test correlates as highly with achievement for the minority group, as it does with the majority group, then there is no test bias. As I pointed out in my monograph, this appears to hold for the WISC-R and most other such tests. It is time the field stopped labeling tests of scholastic aptitude as intelligence tests. It is also time to discard the statistical term, I.Q., and call it what it is, namely a type of standard score. Second, poor Hispanic youth have a mean standard score of about 90 on both verbal and performance items. For example, see page 24 of my monograph for some supporting data, and the material in Mercer’s paper. If Cummins were right, Hispanics would score much higher on the verbal scales than the performance scales. Instead they are low on both. And is the Raven’s Progressive Matrices also unfair because Hispanics score about the same on that test, yet some other ethnic groups score high on it? And I found that black children, far back in the bush in Nigeria, scored better than Anglos on performance tests that measure immediate memory, such as the Knox Blocks. Cummins’ contention holds somewhat better for verbal tests, such as general information and vocabulary, than for more pure tests of abstract reasoning and for non-verbal tests. It would be calling the kettle black for me to point out to Cummins that he is as ill informed about test bias as he contends I am about bilingual education. So I would argue that Cummins’ test bias posture is an insufficient explanation for the poor performance of Hispanic youth. Furthermore, it does them a disservice in attempting to explain away their poor test performance, and thereby imply that all is well.

My second issue that Cummins addresses is the merits of bilingual education. He chides me for not making a thorough review of the literature on “bilingual education.” This was not a goal of mine, and I made no such claim to having done so. Instead, I was confronted with data that were a puzzle to me, on the difference in levels of hearing vocabulary of monolingual Spanish vs Latin children, on the poor school performance of Hispanic chil-
dren on the U.S. mainland, etc. Therefore, I turned to the professional literature for explanations. Instead of being an authority on "bilingual education," I am more of an outsider looking in, a Myrdal, if you will. Judging from his writing on the topic, I would defer to his far more thorough knowledge of the literature, but not to his biases. I'll return to the subject of bilingual education later. For now, four points would seem to be in order. First, overall, it would seem that both Cummins and I are graduates of the same Western Canadian College of Purple Prose. Probably we would both make stronger cases if we would reduce our use of torrid, personal descriptors. Surely these is a place for honest differences in interpreting data and reaching conclusions. I doubt if either Cummins or I have a direct and exclusive line to Wisdom and Truth. Second, we all need to keep in mind Willig's admonishment that the studies in the area of bilingual education are generally very inadequate, and therefore that the results must be viewed with extreme caution (Willig, 1985). It is probable that the preliminary results of the Crawford study (1986) that Cummins quotes so supportively are equally suspect. Third, it seems trite to have to point out that it is very doubtful that bilingual education is good or bad for all Hispanic children. What we need is to find out what works and what doesn't work for which children. I found no such research on Hispanics. However, the edited volume by Paradis and Lebrun (1984) examines that issue for French-English bilinguals in Canada. But the degree to which one can generalize from Canadian immersion programs to bilingual programs for impoverished Hispanics on the U.S. mainland has yet to be established. Fourth, it needs to be pointed out to such strong advocates of bilingual education as Cummins that such school programs are a form of segregation, in that the children are usually isolated in rather homogeneous groups. Thus they are removed from mainstream students from whom they need to learn. (See Trueba's paper on assimilation of a common core of needed cultural values and a common language for communication, thought and economic advancement.) It seems hardly necessary to point out that I am known as "the father of mainstreaming" (Dunn, 1968), a person who has long advocated school integration for impoverished Hispanics and blacks. My extensive study, over the years, of the professional literature on the effects on pupil progress of homogeneous vs heterogeneous grouping in the schools leads me to believe that it is in the best interest, generally, of Hispanic children for them to be integrated with a cross-section of pupils of all colors, creeds and ability levels, but

this is not a characteristic of bilingual education programs. Now don't you see that most such programs are forms of homogeneous grouping? Would you, who believe so strongly in bilingual education, at least, concede me that point, and re-evaluate some of your current beliefs and practices in that light?

Reactions to Mercer

My second specific unit of discussion deals with Mercer's paper which is scholarly and persuasive. Let me begin by congratulating her on the excellent defense of environmental factors as the primary and best explanations for the poor test performance of Hispanic youth. It deserves the widest circulation. While it needs to be pointed out that an equally compelling case could be made for the importance of hereditary factors, it was not a central purpose of my monograph to write a treatise on the nature/nurture controversy. As I've already said, I should have never introduced the topic into my discussion, and would never had done so had I known how upset it would make Mercer and others. However, the extremely negative and defensive stance of the panel about my genetic hypothesis sent me back to the library for more study. Recently, I've studied the articles that Mercer cited by Moore (1986), and by Scarr and others (1977). I've also examined other references authored by Eckberg (1979), Kevles (1985), Schockley (1972), Haller (1963), Ludmerer (1972) Sturtevant (1965), and Jensen (1973), among others. As a result, I now completely agree with the statement by Scarr, Pakstis, Katz and Barker (1977) that:

While most behavioral scientists would choose to ignore the genetic hypothesis as distasteful, there is little direct evidence against it. Those who prefer the environment hypothesis to account for the average differences between (ethnic) groups on intelligence tests have not succeeded in accounting for the magnitude of the effect, nor have those who hold a genetic hypothesis been able to refute an environmental stance.

Permit me one more quote, a recent one by Crow (1988):

Should the word eugenics be consigned to the wastebasket of wrong-headed and pernicious ideas? Perhaps it is so tarred that it should be. But the judicious use of genetic knowledge for the alleviation of human suffering and increase in the well-being of future generations is a noble idea, whatever it is called.
As for myself, I do not hold to either of the extreme genetic or environmental postures, but rather to the interactive hypothesis. Until fairly recently, when it became abhorrent to many behavioral scientists in the field of retardation, the term "cultural-familial" was used to label poor people who were borderline socially incompetent because they were dull. It was hypothesized that their condition resulted from an interaction between their impoverished living conditions and lack of intelligence due to inherited weaknesses. Since this form of retardation was not common to the whole community but ran in families, it was called "cultural familial." By logical inference, one can ask whether the same interaction may be at work among some poor, impoverished, underclass Hispanic families on the U.S. mainland. It seems to me that, as fair, logical, and unbiased behavioral scientists, we must admit the probability that the "genetic factor" exists, and Mercer does that. However, as educators, we can ignore this genetic component for two reasons, and I wish I had done that: one, we educators can do nothing about the genetic makeup of the child we are committed to serve in our schools; and two, there are very broad limits within which the most impoverished Hispanic girl or boy can advance, given adequate, quality, non-segregated educational opportunities. Earlier in this volume, Willig said it best: "Discussions of the genetic component of intelligence have no relevance to the issue of modifiability." How true, as far as the schools are concerned! And Berliner said: "The construct of intelligence is extremely plastic, remarkably modifiable, inherently malleable and therefore, easily subject to environmental influences." There is no doubt that we educators should concentrate on these positive statements, rather than my negative ones. This error in judgement in my monograph needs to be corrected. But as a school person with years of experience in teaching slower children, I must issue a word of caution. Without including the cultural-familial factor, there could be a tendency to be unrealistic in setting school programs and standards for these pupils, that would result in too many failures. All I ask professionals in the field of Hispanic education to do is control their emotional reactions and think rationally about the dilemmas and challenges that these girls and boys create for those of us whose responsibility it is to serve them educationally, in their best interests, not ours.

If I revise my monograph, I shall also rewrite the section on Mercer's SOMPA and make clear that I was discussing only that part of her system that deals with WISC-R. However, I've reread her Student Assessment Manual (Mercer & Lewis, 1978), and insist that SOMPA does indeed add five constant I.Q. points for being Hispanic. Each ethnic group starts off with a different set of constants. As I read Table 1 about constants for computing ELP scaled scores which appear on page 111 of this manual, a white subject is awarded only 80 I.Q. basic points, before the add-ons, while a Hispanic subject is given 85 for the Full Scale score. This means that all Hispanics start off with five more I.Q. points than whites. There is even space on page 4 of the SOMPA Student Assessment Record to enter the appropriate constant. From a study of Table 43, on page 129 of the SOMPA Technical Manual (Mercer, 1979), which is a different manual, one determines that the WISC Full-Scale I.Q. for Hispanics is 91.9, and for whites is 103.1, a difference of 11.2 I.Q. points. Her four sociocultural add-on factors account for only 6.2 of this 11.2 I.Q. points, leaving 5 points (or 45%) of the difference unexplained. Granted there may be a revised scoring system that I have not seen, but until one is produced, I'll have to believe that Mercer does not know how to score her own test. Be that as it may, there is a consensus that her system of add-ons enables the mean WISC I.Q. score to come out to 100 for both Hispanics and Anglos. By the way, she could just as easily have weighted her constant and add-ons to have the mean Hispanic standard score under her system come out at 100, 115, or whatever. She wouldn't even need a constant to accomplish this. It is all statistical manipulation, as I feel sure she would agree. In a sense, what SOMPA does is provide separate norms for each ethnic group. The result is that the ability of the test to discriminate is reduced greatly. So validity is lost, since the test no longer predicts the level of school achievement potential, its main function. Thus the purpose and utility of the WISC is undermined. A popular strategy for opponents of standardized tests for minority students is to develop separate norms for each ethnic group, as Mercer does, thus rendering testing for such students almost meaningless. Establishing by statistical manipulation a mean I.Q. of 100 for blacks and Hispanics, which is what special norms for the minorities does, results in setting lower standards for such groups. To accept lower standards is to stigmatize minority students as having less potential to compete and achieve in mainstreamed school settings (Lam, 1988). As pointed out in this NCTE report, according to Clark (1969), advocating the development of separate norms for minority pupils is equivalent to saying "that these children are doomed, expendable in terms of not being capable of assimilating into the economic, educational and cultural norms of the larger society." In light of her negative
attitude toward psychological tests and her advocacy style, it is amazing that Mercer would publish SOMPA. Finally, it needs to be said that it is a close call as to whether psychological tests do more good than harm. But on balance, in spite of their many weaknesses and misuses, I favor the retention and improvement of such tests, largely because of what Lord Kelvin (1824–1907) said long ago:

When you can measure what you are speaking about, and can express it in numbers, you know something about it, and when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind. It may be the beginning of knowledge, but you have scarcely, in your thought, advanced to the state of science.*

In any event, no matter what one's stance, it needs to be recognized that, politically, there is a world-wide pendulum swing back to school testing which is even spreading across Europe. This has to do with "accountability." But the movement is focusing on traditional achievement testing, not so-called intelligence testing. Finally, Mercer would be well advised to study my PPVT manual. It clearly states that it should be seen as only a narrow achievement test for hearing vocabulary in Standard English for minority group children, not as a measure of intelligence/scholastic aptitude.

Reactions to Prewitt Diaz

My third specific unit of response deals with the Prewitt Diaz critique. What I especially appreciate about this paper is that it contains reactions to my total monograph. In addition, he brings to the discussion a Puerto Rican perspective. Furthermore, he is not preoccupied with one or two aspects of my conclusions which are particularly offensive to him, to the exclusion of everything else. Because his paper is so thorough, I've very sorry that my space allocation does not permit me the freedom to respond to the many legitimate issues he raises. Instead, although fearful of being castigated for nitpicking, let me attempt to clarify and react to two of his criticisms about the TVIP-R (Test de Vocabulario en Imágenes Peabody) (Dunn, Padilla, Lugo, & Dunn, 1986).

Prewitt Diaz claims the TVIP-H is unfair to Hispanic children because the stimulus words are Castillian Spanish. He has a right to arrive at this conclusion, because we authors of the TVIP-H should never have used the words Castillian Spanish in our manual. Every effort was made to use Universal Spanish, and this is the only term that should have been used in the TVIP-H manual. The initial translation was done by two experts in Hispanic Spanish. The Puerto Rican and Mexican American TVIP-H coauthors worked long and hard, with consulting specialists, to retain only stimulus words that were equally fair to both cultures. We also field tested extensively, especially in Mexico, to find biased words and to remove them. The words are ordered for difficulty on Hispanic data. Prewitt Diaz is right in stating that the order of difficulty of the stimulus words would be quite different in Spain (see TVIP-E by Dunn, 1986). It needs to be pointed out, once again, to Fernandez, Prewitt Diaz, Willing and others that the PPVT/TVIP only tests for single words spoken in isolation. Legitimate arguments that the syntax and semantics of sentences are different in Madrid, San Juan, and Mexico City are therefore not relevant. Even though they may differ in frequency of use and therefore difficulty level, there are many words used across all these settings, and others, and we selected from this pool. In my monograph, my error was in over-generalizing from a test of simple words to language in general. In this, I acknowledge that a verbal bullet hit the target.

Prewitt Diaz argues that the TVIP-H should have been standardized on bilingual Hispanic children living on the U.S. mainland. This is a very justifiable position, as I have acknowledged in my monograph. There are strong arguments for standardizing a psychometric test for use on the U.S. mainland, either on bilingual or monolingual subjects. After much soul-searching, discussion and consultation with others, we elected to standardize on subjects who are more monolingual in Puerto Rico and Mexico—for the reasons spelled out in my monograph, and in the TVIP-H manual. To do otherwise would have been to hide the weakness in Hispanic/English hearing vocabulary of Hispanic children on the U.S. mainland, especially as they grow older. However, we are still interested in developing both types of norms, if there is sufficient need and cooperation. I'll return to a discussion about the TVIP-H not meeting APA/NCE standards when I discuss Berliner's paper. By the way, the field of psychometrics would profit greatly from a scholarly and balanced AERA section meeting on this topic. I believe most of us test authors have an open mind on the subject, and are very willing to take advice—and I suspect need it. However, we will need to

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*Quoted by Ronald King (1936). Physics, metaphysics and common sense. Scientific Monthly. 42, 311.
be convinced of the value of norming a test so the mean standard score for mainland Hispanics, by statistical manipulation, is made to come out at 100. What utility has it, especially if you are committed to integrating Hispanic girls and boys into the mainstream of the schools and society? Please help us! As an aside, surely Prewitt Diaz, and readers of this journal, are aware that the reason Marten, as reported by Prewitt Diaz, obtained a mean I.Q. of 100 and a standard deviation of 15 on the Spanish WISC-R was because the test was normed by statistical manipulation to yield those values. As I said earlier, the mean I.Q. could just as well have been arbitrarily set at 80, 90, 110, 120 or whatever. It's all statistical slight-of-hand.

Reactions to Trueba

I'll now turn to the fourth paper by Trueba which I found to be a scholarly treatise. He goes beyond defensiveness to acknowledge the poor school and test records of most impoverished Hispanic youngsters, and then develops a philosophical explanation for their academic failure, attributing it largely to cultural conflict, and prejudice by the broader society—including school personnel. He states: 'Racial prejudice, in schools, whether conscious or unconscious, is deeply rooted in the misperception by mainstreamed persons that minorities are academically incompetent.' In contrast to most of the other papers, he offers an alternate rationale to mine, though I suspect that our specific courses of action might be very similar. Furthermore, he recognizes that language is a major tool for most human thought, and must be honed. What is inferred, though I doubt that he intended it, is that racial prejudice is a one-way street, and that only Anglos have negative opinions toward other ethnic groups. He talks about my "simplistic and arrogant racist arguments," apparently not realizing that the same label may be applied to his paper—in the hot spots. Is this a classic case of the pot calling the kettle black? Further, it could be debated as to whether the academic incompetence of most underclassed Hispanics is a misperception or a correct perception. But this is nitpicking at its worst. What is exciting is that Trueba provides an important avenue for improving opportunities for Hispanic youth that deserves to be researched.

From his philosophical perspective, Trueba offers a broad alternate definition of intelligence in which he adopts a cultural perspective. Conversely, most if not all psychometricians define intelligence far more narrowly as scholastic aptitude measured by items that test for abstract reasoning, memory, vocabulary, etc. They are reasonably careful to use operational and measurable terms, exemplified by items that can be scored. Until Trueba reduces his definition down to terms that can be tested and quantified, it is unlikely that he will advance the already beclouded field of so-called intelligence testing.

Reactions to Willig

While all the papers were edifying, I found the one by Willig most helpful to me. A number of her verbal bullets hit the bull's eye. However, I do want to take issue with the title of her critique, "A case of blaming the victims." This is an unfair charge, reflecting her own pride and prejudice. As I pointed repeatedly, there is more than enough blame to be shared; yes, by society, by the schools, by the attitudes of the majority, etc. But a main thrust of my paper was to emphasize that this blame must be shared by the Hispanic community, by Hispanic parents, by Hispanic youth, etc. I stand firmly by my statement that "teachers are not miracle workers." The job of improving the quality of life for underclass Hispanic girls and boys must be shared, and very heavily by the Hispanic community, especially its leadership. I was very sorry that the reviewers of my monograph were not even able, generally, to grant me this observation. We are a long way from solving our joint problem, unless there is a sharp shift in the Hispanic community from "blame placing," to "blame sharing." Black leaders are already making this shift in emphasis. How long will it take the Hispanic leadership to realize it needs to make a similar shift, not only in words but by actions. I'll return to this theme at the end of my paper.

In her critique, Willig discusses the "ethic and moral" implications of my approach. Even in the twilight of my career, I am known to be hard-hitting and controversial, especially when a solid, denial barrier confronts me. As I see it, this is the case with a majority of the Hispanic leadership, as exemplified by the papers in this issue. One appears to have to call a spade a spade to get them to modify their attitudes and strategies. I quite agree with Willig that the low expectancy for Hispanic pupils by many teachers is a self-fulfilling and harmful prophecy for failure. And I must admit that my paper probably contributed to this mindset. But it was not intended to be read by Hispanic children and their teachers. It was addressed to the school psychologists and
others in leadership positions to get them to see and admit that, as a group, impoverished Hispanic children are inferior in school aptitude and achievement to Anglos and Asians, and so to encourage them to work collaboratively with the community-at-large to close this gap. Judging from the papers in this issue, perhaps I was not blunt enough. I’ll return to this ethical and moral issue in my conclusion.

Aside from this major criticism, I have only high praise for the Willig paper, especially where it introduces new research evidence that runs counter to my selections.

Reactions to Berliner

While the AERA program listed Berliner as a “discussant,” which is reiterated in the title to his paper, it is remarkable that he found not one point with which to take issue in all the critiques that were presented. Perhaps he was very carefully selected because of the views he holds. He makes a good prosecuting attorney in his ability to gun down so much of my monograph. By the way, it is interesting to note that it is two of the Anglo discussants of my paper—Cummins and Berliner—who are the most temperate. While his paper is most lucid and convincing—and I might say very helpful, it does seem to me that he misdirected some of his shots. Allow me to cite a few examples:

(a) Contrary to the label that Berliner hangs on me, I neither said nor am I a hereditarian. If anything, as an educator, I lean toward being an environmentalist, though this may not have been evident from my monograph. As I said on page 65 of it, I hold to the interactive posture, where inherited and inherited factors interact and influence one another.

(b) Contrary to Berliner’s charge, I did not say that preservation of a foreign language is a deficit, even for impoverished, underclassed, lower-caste Hispanic boys and girls. Quite the contrary, as Berliner will see, if he studies point 1 on page 75 of my monograph where I advocate quality nursery and kindergarten programs, often reaching up into the primary grades, that emphasize oral Spanish. I share Berliner’s view that the heritage language of immigrant Hispanics “needs to be well developed so they can master academic tasks in their new language.” But I recognize that this is only a philosophical posture, as yet not well established by research findings.

(c) Contrary to Berliner’s charge, I did not say that the PPVT/TVIP should be used as a measure of verbal intelligence/scholastic aptitude for immigrant Hispanic youth. As I’ve already said, I would consider it a blatant misuse and abuse of the PPVT/TVIP if they were used for this purpose. This was pointed out in the test manuals and in my monograph. I reiterate, for such children, the PPVT/TVIP, are only achievement tests of vocabulary for single words spoken in isolation.

(d) Contrary to Berliner’s charge, I did not say that Hispanic children “go into intellectual regression at about age six.” The data presented in the monograph show quite the contrary. All but the most severely retarded increase in intellectual prowess beyond their teens, though the rate of growth may vary.

(e) Contrary to Berliner’s charge, I did not say that all Hispanics (or all Puerto Ricans and Mexican Americans) are “inferior people.” He is encouraged to re-read my Preface. The focus of my paper was on poor, immigrant children from Mexico and Puerto Rico who, as a group, do have linguistic and intellectual deficits. And that does not make them inferior to Anglos in other aspects. Berliner, you and I both have a tendency to overgeneralize and this weakens our cases!

These are but five blatant misstatements by Berliner. There are more. He would seem to take perverse joy in shooting at clay pigeons he himself hurls into the air. There were enough legitimate points in which to take me to task, without resorting to unfair and unfounded accusations.

Perhaps now is the time to strive for a bit of rapprochement: Both Mercer and Berliner go on and on about not being able to generalize from “within-group differences” in intelligence test scores to “between-group differences.” In my view, this argument is largely an intellectual exercise and has little merit. Let me attempt to explain my stand. My key point is this: “Do we not all belong to one human race?” And aren’t Anglos, Hispanics, blacks, Asians, etc. part of this same human race? There is one continuum of intellectual functioning, with different subgroups distributed differently along this one continuum. In terms of intellectual prowess, as defined in Western culture, as groups, Asians, Jews, and upper class people, appear to be superior to Anglos and middle class people, who tend to measure out superior to such underclasses as blacks, Hispanics and American Indians. But then there are different aspects of intellectual function. For example, Anglos appear to be inferior to blacks in tasks involving memory, while blacks appear to be inferior to Anglos in abstract reasoning. Berliner and Mercer appear to be inconsistent in their logic. They acknowledge there are socioeconomic class differ-
ences, even gender differences, but they seem to have a hang-up about racial ethnic differences and so they label anyone who discusses the topic as racist. As for myself, as a result of this dialogue and the new evidence that has been provided herein, I have shifted to believing that most of the poor performance of impoverished Hispanics can be explained by such environmental factors as low SES, uneducated parents, poor health and nutrition, bad living conditions, lack of cultural opportunities, etc. Perhaps those on both sides need to rethink their biases, and attempt to see the other person's point-of-view. Perhaps both Berliner and I need to show more plasticity, modifiability and maleability in our particular set of beliefs. Both of us appear to show sophistication at times, but remarkable naivety at others.

Now let's look at another Berliner posture. He recommends that school people not administer or use information obtained from tests that are in substantial violation of the APA/NCME guidelines. I hope he realizes what he is recommending. Since essentially no psychometric tests, especially individually-administered tests, meet the high APA/NCME standards, this would mean that almost every such test, including the PPVT/TVIP would be banned. Maybe that is Berliner's goal. I don't know. Now one can weasel out by defining "substantial." What I tried to do was be more open than most test developers in pointing out the weaknesses of the TVIP. Certainly Berliner has a right to his views. But whether he has the right to force all teachers to take his oath so as to be granted a teaching certificate is open to serious question, which brings me to my concluding comments on his paper.

To conclude my discussion of Berliner's paper, I'd like to comment on his list of oaths that he would require all teachers to make so as to be licensed to teach. In my view, to force every educator to hold to his beliefs smacks of "arrogance and ignorance," and an insensitivity to the views of others—to use his words in another context. While I, personally, agree with a number of statements he would force all educators to accept, my guess is that the cause of education would be better served by more open-mindedness and less dogma. Allow me to give only three examples:

(a) Berliner wants all educators to take an oath that they recognize that: "Within group hereditability estimates say nothing at all about between group differences in intelligence."

Absolutes such as "nothing at all," Berliner should know, usually get one in trouble. He should have qualified his statement, as I've tried to suggest above. Should I not be allowed to define my "within group" as the whole of the human race? Even so, if I know the mean and standard deviation scores for complete series of separate within groups, and their proportions in the total population, then I will be able to describe the total group. Furthermore, I will be able to discuss between group differences.

(b) Berliner wants all educators to take an oath that they recognize that "Intelligence and achievement are not characteristics of a people, but of a people in place."

This may be a statement/oath that will pass muster. I can accept it, but some would make the point that the rare severely retarded and extremely gifted would stand out in any culture.

(c) Here is just one more example of Berliner's dogmatic statements that needs examination: "Differences in languages and dialect among people are surface characteristics in communication that have economic and social significance. These differences, however, do not affect in any way a person's ability to communicate any kind of complex information or to engage in any form of complex thought."

Instead of forcing all educators to take an oath that they completely agree with his statement, I would use it for an exercise in critical thought. Usually dichotomies such as "surface language" vs "deep-structure language" are slippery constructs that do not hold up well, but of course, one can define one's terms to make them pretty independent. But few scholars would be convinced they were completely separate. Most behaviorists would ask how the construct of deep-structure language could be operationalized and quantified, without going to surface language. And if it can't be measured, what utility does it have? It is beyond credibility that a person with a very limited vocabulary, poor syntax, and lacking in education can speak in a surface language that is erudite. Of course, a person with a rich language can assume the persona of a near illiterate and talk in pidgin, but not vice versa. Really, Berliner, are you trying to tell us that poor Hispanics are quite capable of speaking high-quality Standard English, but that they just don't choose to do so? Or are you saying that the quality of their language is quite adequate for complex thought? Incredible arguments in light of the data presented in my monograph! And no one is to get a teaching credential until they agree with your postulate? Even more incredible!

CONCLUSIONS

Let's return to the question in the title to my paper "Has Dunn's monograph been shot down in flames?" It is up to the
individual reader to decide. From my perspective, I'd say it has suffered extremely heavy damage, much of it well deserved. I've learned a great deal from the critiques to my paper. I now see that I took far too broad a brush to a topic more complex than I initially thought it to be. While I'll take the position that my monograph hasn't been completely shot down, it has been critically riddled by some very accurate verbal bullets. In fact, I view it as so crippled that a crash landing is necessary. A comprehensive salvage job will be needed before it is ready for another test flight. Therefore, I am withdrawing it from circulation until such time as it is thoroughly revised, mainly because it stirred up emotions instead of fostering change and progress. Therefore, in its present form, I believe it does more harm than good.

As for the critiques, I was terribly disappointed that the majority of the Hispanic panel members and their allies were unable to admit even that underclassified Puerto Rican and Mexican American youth, as a group, are in very serious difficulties in school and society. As a result, I think the time has come for some blunt, straight talk. The evidence is overwhelmingly in support of this contention. For example, as recently as May, 1988, a panel of leading political, business and education leaders issued a bleak assessment of minorities in this country, including Hispanics. They concluded that America is moving backward in its efforts to achieve equality for such ethnic groups (American Council on Education, 1988). Research, general observation and common sense are all in agreement that these pupils don't have an adequate vocabulary in Spanish or Standard English. Furthermore, their speech does not meet middle-class standards, as modeled by national radio and TV. In addition, their cognitive skills are not well honed. Our debate would have taken a giant step forward if the panel had been willing to agree that part of the accountability for these sad conditions must be borne by the ethnic group itself. Be assured that finger pointing, where all the responsibility is placed on the dominant culture, will no longer fly. No matter what research does or doesn't say, the broader society is tired of being blamed exclusively for all the social ills of Hispanics who live in entrenched poverty, ghettoized housing, family chaos, lack of family planning, illiteracy, teenaged pregnancy, drug abuse, crime, school failure and dropout, gang warfare, unemployment, perpetual welfare, and so forth.

It is very unfortunate that a non-Hispanic, such as I, has to point this out. However, I feel quite qualified to do so, having spent my long professional career advocating and fostering im-

proved educational opportunities for disadvantaged children. In my view, it would add considerable credibility to the cause of Hispanic activists if they would help the poor members of this ethnic group to accept their fair share of responsibility and do something about it. Shooting verbal bullets at me, on target as many of them were, is not going to get the job even started, let alone done. I want to make crystal clear, in any rewrite of my monograph, that my main thesis will not change. I would just hope to do a better job of avoiding the controversial issue of inheritability which aroused such strong emotionality, and in presenting my case more acceptably and forcefully.

In my view, it should have been relatively easy for the panel to agree with me on the first order of business, namely, that the lagging proficiency of poor Hispanic youth is likely to divide and cripple the nation, and that a substantial part of the blame must be borne by the Hispanics themselves. I expected much more disagreement on my second contention, namely that past and present practices have not worked well, and that taxpayers have not gotten their money's worth. Enraged special interest groups do not like to see their funds, programs, influence and status attacked. Back in the 1960s, when I advocated fewer disability labels and so-called special classes for the disadvantaged, I received a large number of complaints from educators of the retarded contending that what I was advocating would deprive them of their livelihood (Dunn, 1968). So I expected controversy over, and alternate suggestions to my ten guidelines for improving educational opportunities for poor Puerto-Rican and Mexican American children on the U.S. mainland. Very little was forthcoming from the panel in the way of needed educational change. After more deliberation, I continue to contend that bilingual education for such youth will generally do more harm than good, not only because most such children will have great difficulty even learning to speak Standard English well, but more persuasively, because bilingual education is a form of segregated education, and these children need to be in the educational mainstream where they can learn middle-class values. Now I realize that I am threatening the job security and status of many Hispanic educators, but do we not need to act in the best interest of the children rather than in our own self-interest? My honest and sincere advice to Hispanic professionals and their allies is that they recognize the prevailing mood of America, and support integrated school programs for impoverished Puerto Rican and Mexican American children where the emphasis is on learning Standard English and
middle-class values, including the work ethic, or they will wake up some day wondering where and when they stepped off the gravy train. Concerned citizens and taxpayers are about to lose their patience. We need to all pull together for the common good. Didn’t someone say “Divided we fail; united we succeed?” In my view, education for poor Hispanic girls and boys will continue to be largely a sham of dreams unless people of all colors, creeds and beliefs immerse themselves vigorously in fostering a total comprehensive thrust upward for these youngsters. The inability of minorities, especially Hispanics, in this country to achieve equality with the majority population, demands a new vision with a broad national consensus. We have a long way to go before we can rest assured that the educational needs of Hispanic children, the desires of their parents, and the demands of society are being fulfilled. In my view, the number one problem facing American education and society for at least the remainder of this century is to find strategies to help Hispanic persons living in poverty become well-educated productive members of society. The survival of our way of life requires it. By the year 2000, a great deal of progress must be made or we will all be at risk. Defensiveness and protection of one’s turf by school people specializing in the education of Hispanics are likely to be self-defeating. A first step is to see a new and refreshing openness to change from this group.

AN EPILOGUE

The winds of change may be building up at a faster pace than I anticipated. For example, after completing my rejoinder, I came across a recent newspaper article by Rasberry (1988) who makes one of the same major points that I do. It is my best guess that it is a harbinger of many more articles to follow. The weather vane is beginning to turn away from pointing exclusively at the faults of society and the schools to indicate that the fate of the underclassed Hispanics rests largely in their own hands. Below is a condensed version of what he said:

Why have past efforts to teach such middle-class values as the importance of education and hard work to low-income black and Hispanic groups failed? This is largely because of the curse of low expectations. In a thousand ways, we remind them that we do not expect them to amount to much. We doubt that most children who speak a certain way, and who come from certain kinds of homes, certain parts of towns, and certain economic circumstances will ever perform well in any setting that requires above-average intelligence. And we tell them that their limited circumstances are not their fault. They don’t work hard because they assume the goals that middle-class youngsters take for granted are beyond their abilities, and that they cannot beat the system.

In contrast, there is one minority group—the recently arrived Asian Americans—that is walking off with the highest SAT scores, academic prizes and admission to the most competitive colleges. This group views America, with its free education, free enterprise and manifest rewards for serious exertion, as a land of unsurpassed opportunity. They take advantages of these opportunities, and often succeed at a pace that eclipses that of privileged whites. They believe the key to their success is high expectations, a quality education and hard work. They seem to take as a given that anybody who works hard enough can achieve success.

Why has this work ethic escaped our underclassed black and Hispanic groups? A major part of the answer is the civil rights assumption which holds that the absence of the good things of life is because of discrimination. Granted that this has often been a dominant cause or lack of success in the past. Today, however, lower class status is due far less to discrimination than to inadequate exertion. What we now need to do is to find ways to make these youngsters understand the critical importance of hard work. For example, they must come in contact with persons of their own ethnic group and background who have succeeded because of individual exertion. We must also make sure that their efforts are rewarded, beginning in the very early years. In short, the underclassed must be taught what Asian Americans and the middle class take for granted: that their fate is mostly in their own hands.

REFERENCES


Dunn, L. M. (1987). Bilingual Hispanic children on the U.S. mainland: A review of research on their cognitive, linguistic and scholastic development (a first draft). Honolulu, HI: Dunn Education Services, 1525 Wilder Avenue, Box 706, Honolulu, HI 96822.