The Social Contract to Educate All Children

by Paul Ong and Linda C. Wing*

Education has enormous transformative power. Through education children come to realize they can broaden their lives if they have equitable opportunities to develop their capacities to the fullest. Through education children first make connections with individuals outside of their families and form communities across differences and diversities of neighborhoods, ideas, language, ethnicity, race, and class. Through education human progress is made when one generation transmits knowledge, culture, and skills to the next, enabling children to add to the richness of what we collectively know, value, and are able to do.

Education shapes the future. Children educated in public schools today will one day find the cure for cancer, end hunger and homelessness, and win the Nobel Prize for Peace. Publicly-supported and accessible education is essential to the constant renewal of our sense of shared identity and destiny. This educational system works to maximize our country's productivity and standard of living. It is indispensable to the vitality of our democracy. Put another way, education makes possible the attainment of the American dream. In a nation where the common good is derived from socioeconomic mobility based upon individual merit, and from political participation based upon informed consent, public schools provide the means by which all children can achieve their maximum level of potential.

Although our schools have yet to fulfill these grand ideals, the people of the United States have placed their highest hopes for the future in the provision of a free education open to all children. Education is at the very core of the American social contract.

Some question the commitment to providing public education to every single child. This view was apparent in California when Proposition

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187 passed in 1994. Proposition 187 called for public schools to verify the immigration status of students and their parents, to notify state and federal governmental officials of those "reasonably suspected" to be in the country without documents, and to deny education to undocumented immigrant children. Although all provisions in Proposition 187 relating to elementary and secondary education were ruled unconstitutional by a federal district court judge in November 1995,1 the debate about whose education deserves public support has not subsided. After considering legislation that would have excluded individuals who are legal immigrants from federally subsidized loans to college students, Congress instead decided to require legal immigrants to have U.S. citizens co-sign their loans, a criterion not imposed upon students who are citizens. Meanwhile, the very youngest legal immigrants, preschool children, are barred from Head Start under another Congressional bill.2

Public sentiment toward, and public policy affecting, immigrants has historically been related to the state of the economy. Economic woes between the 1880s and 1920s were often laid on immigrants, who were blamed for taking away jobs from those born in this country. The United States is again in a period of economic unease, and public opinion polls show that the majority of Americans think that immigration is "bad" for the country. Current policy discourse about immigrants, however, has an added dimension: contemporary immigrants, especially their children, are said to be a burden on the social services system. Many residents and politicians in California and Florida contend that immigrants use social services that cost more than they contribute in tax payments.3 The largest cost is said to be associated with education. Estimates of the cost of educating undocumented immigrant children in California run as high as $3.6 billion.

These estimates fuel efforts such as Proposition 187 and Congressional proposals to limit the access of documented immigrant children and youth to federally-supported education. They suggest that the nation can "no longer afford" to be a major receiving country of even legal immigrants. Certainly, debate over immigration policy is legitimate, as is debate over any other public policy affecting the course of the country's future. The aspect of the immigration debate that targets children who are utterly vulnerable and dependent upon adults, is disturbing. The liberating mission of education appears in danger of being corrupted for another end.

This paper seeks both to inform and reframe the conversation. We do so by using three approaches to an examination of the education of children of Asian Pacific immigrants.

First, we seek to strengthen the empirical basis for discussion. Background information on our data is included in Appendix A. Current cost-oriented perspectives rest on "guesstimates" of the number of children who may be involved and expenditures on their education. We provide demographic information on Asian Pacific American children in 1970 and on their 1990 counterparts. The population has doubled every decade, a growth driven directly and indirectly by immigration. We also look closely at the available evidence on the additional cost associated with the children's education. The incremental expenditures where they exist at all, are minor.

Second, we focus on education over a span of years. Current perspectives on the schooling of children of immigrants are extremely short-term. We examine the income of parents in 1970 and 1990 as a proxy for their likely contributions to the education of their children. Their average family income compares favorably to the metropolitan average, but Asian Pacific Americans can be found throughout the income spectrum. Additionally, this study investigates how well the Asian Pacific American children of two decades ago are faring today as a way to examine the society's profit from long-term returns on their education. Their educational and economic accomplishments are considerable.

Third, we discuss the education of children of Asian Pacific immigrants as a policy issue in itself and not as a pretext for influencing immigration policy. We look at what is known about their level of learning. Students who have most recently arrived are often poor and limited English-proficient, but overall, the school performance of Asian Pacific American students is relatively high. Immigrant background may be positively associated with educational achievement.

The Population Growth of Asian Pacific American Children

The Asian Pacific American population has grown tremendously over the last quarter century. As shown in Table 1, the Asian Pacific American population has roughly doubled over the last two or three decades. Immigration has been and will continue to be a major force behind this growth. Over time, however, immigration will become a decreasing factor, as growth from births in the United States becomes more important (Ong and Hee, 1993).

The rapid population growth has also been evident among school-age children. This population increased more than six-fold from 212,900 in

1960 to almost 1.3 million by 1990. According to the Bureau of the Census, by the year 2020, the number of Asian Pacific American children will reach about 4.4 million. By the early part of the next century, Asian Pacific Americans will comprise nearly 8 percent of all children in the United States, compared to their current 3 percent proportion.

Table 1. Population Trends (in 1,000's)
Asian Americans Asian AmericansAll Children

	Total	Ages 5 to 17	Ages 5 to 17
1960	882.6	212.9	43,978
1970	1,356.6	315.9	52,489
1980	3,466.9	733.6	47,406
1990	6,908.6	1,395.4	45,249
2020	22,548.0	4,3825.0	4,915

(Based on 1960, 1970, 1980, 1990 Census and population projection)

When Asian Pacific American children are sorted by generation, their growth rates are quite different. Looking at specific generations is crucial because each group can differ in language, self-defined ethnic identity, and acculturation level. These differences, in turn, influence educational needs and concerns. For the purpose of this study, disaggregating by generations also allows us to have a more refined way of analyzing the children of Asian immigrants. The analysis uses three major classifications:

1) immigrant children of immigrant parents,4 or first generation Asian Pacific Americans;
2) U.S.-born children of immigrant parents, or second generation Asian Pacific Americans;5 and
3) U.S.-born children of U.S.-born parents, or third generation Asian Pacific Americans. (For convenience, the third generation also includes the fourth and subsequent generations of Asian Pacific Americans.)

Table 2 provides estimates of the number of Asian Pacific American school-age children by generation for 1970 and 1990.6 The changes from 1970 to 1990 capture the growth due to the renewal of large-scale immigration after the elimination of racially biased quotas in 1965. (Numbers in the table do not match those in published census reports because the table includes only those children living at home with a parent, parents or a custodial adult). Over the two decades, the population increased four-fold, with a net increase of about 1.1 million. The 1970 figure underestimates

the total because it includes only those of Japanese, Chinese, Filipino and Korean descent — the only four Asian groups identified in Census data at the time. The downward bias created by the limited number of categories is small because in 1970 these four groups comprised the vast majority of Asian Pacific Americans. By 1990, the Census used 19 categories, including an "other Asian" category.

Table 2. Asian Pacific American Children (in 1,000's)

	1970	1990	% Change
Total	341.2	1,466.2	+330%
First Generation	65.2	579.8	+790%
Second Generation	85.9	651.3	+658%
Third Generation	187.6	219.6	+17%
Not Elsewhere Classified	2.6	15.5	—
% Distribution			
First Generation	19%	40%	—
Second Generation	25%	44%	—
Third Generation	55%	15%	—
Not Elsewhere Classified	1%	1%	—

(Estimates by authors from 1970 and 1990 PUMS. Includes those between ages 5 and 18, and living at home with parent, parents, or a custodial adult.)

Immigration was clearly the cause of the rapid growth in the number of Asian Pacific American children. Obviously the entry of immigrant children increased the number: between 1970 and 1990, the number of first generation children increased by over a half million, accounting for nearly half of the total net increase. The remaining increase was attributable to the dramatic increase in the number of U.S.-born children of immigrants. In 1970, second-generation children numbered 87,000; 20 years later, the total was 651,000.

Unlike the first and second generations, third generation Asian Pacific Americans increased only slightly. Their numbers in 1990 were scarcely larger than two decades earlier. Because of the vast difference in growth rates, the third generation became a proportionately smaller part of the population, declining from a majority of 55 percent to a minority of 15 percent. Two factors may account for the slow growth. The first is a decline in the fertility rate among U.S.-born Asian Pacific American women due to both acculturation and higher economic status (Ong and Hee, 1993; and

Appendix B). The second is the increase in inter-racial marriages between U.S.-born Asian Pacific Americans and non-Asian Pacific Americans (see Appendix B). In 1990, nearly a half million interracial couples, where one spouse or partner was an Asian Pacific Islander, were counted. An unknown, but perhaps sizable, number of children from these families is not classified as Asian Pacific American. As a consequence of these and other factors, the third generation declined in relative importance.

Table 3. Ethnic Composition of Asian Pacific American Children

	First Generation	Second Generation	Third Generation
1970			
Japanese	12%	8%	60%
Chinese	45%	51%	19%
Filipino	35%	38%	13%
Korean	9%	3%	8%
SE Asians	n.a.	n.a.	n.a.
Other	n.a.	n.a.	n.a.
1990			
Japanese	4%	3%	32%
Chinese	21%	22%	15%
Filipino	15%	26%	21%
Korean	12%	11%	20%
SE Asians	33%	16%	2%
Other	16%	22%	10%

(Estimates by authors from 1970 and 1990 PUMS.)

The category of Asian Pacific American children has experienced significant ethnic recomposition and diversification as well as tremendous growth. Among the third generation, the relative number of Japanese Americans declined from a large majority in 1970 to only a plurality in 1990. Chinese Americans also experienced a decline, dropping slightly from 19 percent to 15 percent of the third generation. On the other hand, Koreans, Filipinos, and other Asians increased both absolutely and relatively.

The second generation also became more diverse. Japanese Americans comprised a small and shrinking share (9 percent in 1970 and only 3 percent in 1990) due to the absence of large-scale immigration from Japan after 1965. While both second generation Chinese and Filipinos experienced an absolute growth, their proportions declined. Consider Chinese

Americans, who constituted a small majority in 1970 but less than one quarter in 1990. On the other hand, the relative number of second generation Koreans, Southeast Asians, and "other Asians" increased to the point where they collectively comprised nearly one-half of all second generation Asian Pacific American children.

The ethnic recomposition of the first generation paralleled the pattern of the second generation, with a decline for Japanese, Chinese, and Filipinos. One unique characteristic of immigrant children is the substantial increase in the number of Southeast Asians, who accounted for one-third of the first generation in 1990. Between 1975 and 1991, over one million Southeast Asian refugees came to the United States, and a significant number were children. Their increased presence was due to the influx of political refugees after the end of the Vietnam War.

The Education of Asian Pacific American Children: Needs, Policies, and Costs

Few recognize the distinct educational needs of first and second generation children. When the immigrant children and U.S.-born children of immigrants are Asian Pacific Americans, the absence of attention is especially evident. In this context, we attempt to bring light to the discussion of the education of children of Asian immigrants in three areas: (1) their needs for particular kinds of educational services; (2) federal, state, and local educational policies that might address these needs; and (3) the degree to which children of Asian immigrants benefit from these policies and the potential cost of the services provided.

Educational Needs

The absence of basic data that would permit an assessment of educational needs of first and second generation Asian Pacific American students is problematic. Until recently, school districts with substantial Asian Pacific American enrollments categorized Asian Pacific Americans as "other" when identifying students by race. Many school districts with relatively small numbers of Asian Pacific American students continue to follow this practice. School districts that count Asian Pacific American children often fail to disaggregate the students by ethnicity. For example, Japanese American students have different characteristics and educational experiences than Cambodian American students. Thus, the lack of ethnic-specific data about Asian Pacific American students prevents a careful look at the diversity of

their needs, as well as the range of educational opportunities provided to them and the variability in outcomes.

National educational data sets are similarly flawed. Asian Pacific Americans are not identified as such, data on Asian Pacific Americans by ethnicity are not collected, or samplings collected are not large enough to permit more than superficial analyses. For example, 15 percent of the "Asian American" students in the National Educational Longitudinal Survey of 8th Grade Students do not fit the census definition of "Asian Pacific American." Those surveyed include Iranian, Afghani, Turkish, Iraqi, Israeli, Lebanese, and other youngsters from West Asian and Middle Eastern backgrounds.

Local school districts and state and national educational agencies make no effort to collect comprehensive data on any first and second generation students. Since California's Proposition 187 is currently blocked, no school districts anywhere in the country are required to identify students by their immigration status or by the immigration status of their parents. Public schools open their doors to all children, including undocumented immigrants, who are constitutionally entitled to a public school education under the U.S. Supreme Court's ruling in Plyer v. Doe, 457 U.S. 202 (1982).

Since appropriate data on Asian Pacific American students are scarce, their needs have been little studied. We are forced, therefore, to survey the scant literature on the educational achievement of Asian Pacific Americans to deduce the needs of those who are first and second generation. Appendix C contains the literature review in full, but key points are summarized below.

Asian Pacific American students in elementary school, middle school, high school, and college appear to earn higher grades and grade point averages than many other categories of students. In some studies, they have higher grades and grade point averages than whites and all other first and second generation students. Other studies indicate that, among Asian Pacific Americans, first and second generation students have higher grades than U.S.-born students of U.S.-born parents. Some evidence points to variations in ethnicity and subject matter. Chinese Americans, for instance, earn higher grades in mathematics compared to other subjects; while Filipino Americans may earn higher grades in English compared to other subjects.

With the exception only of the children of the most recent Asian immigrants, Asian Pacific Americans seem to score higher on mathematics achievement tests than whites and other first and second generation students. Eighth grade Asian Pacific Americans, both as a group and when

disaggregated by ethnicity, perform at the same level as whites on reading tests. The average reading score of Asian Pacific American tenth graders with at least six years of residency in the country is also the same as that of their white counterparts. The limited evidence suggests, however, that other categories of Asian Pacific American students score lower than whites on measures of language, reading, and verbal ability. The level of reading achievement among Cambodian, Laotian, and Hmong children is particularly low.

Among Asian Pacific Americans, first and second generation students seem to have higher mathematics and reading test scores than U.S.-born students of U.S.-born parents. Students from low socioeconomic status do poorly on reading and mathematics tests compared to those from high socioeconomic status. Those for whom English is not their best language, or who have low English proficiency, score lower on reading tests than those for whom English is their best language or who have high English proficiency. On mathematics tests, however, students whose native language is not English do not appear to be disadvantaged.

Cambodian, Laotian, and Hmong children receive relatively high grades despite performing poorly on reading and mathematics achievement tests. Vietnamese students seem to be doing quite well in terms of grades and mathematics test scores. Nevertheless, some anecdotal evidence supports a high dropout rate among Southeast Asian students in Massachusetts and California.

Several caveats must accompany this brief description of Asian Pacific American student achievement. The description is based on relatively little research, much of which is situationally specific. For example, most of what we know about the educational achievement of Cambodian, Laotian, and Hmong students comes from only two studies of youngsters attending schools in the San Diego school district. The information about Asian Pacific American eighth graders is open to question because the National Educational Longitudinal Survey of 8th Grade Students (NELS:88) contains data on "Asian Americans" who do not fit the census definition of Asian Pacific Americans. The survey also excludes Asian Pacific American (and other) students whose educational needs may be most in need of attention, namely, those judged by teachers as lacking the English competency needed to complete the survey questionnaire. Existing literature on Asian Pacific American students, however, forms the only available basis for a thoughtful analysis of their educational needs.

As the summary of the literature indicates, many Asian Pacific American students are doing relatively well in school. Of note are recent findings that first and second generation students do better than third generation students. The evidence indicates, however, that Asian Pacific American students who are limited English proficient, living in poverty, or who most recently immigrated—in particular, Cambodian, Laotian, and Hmong children—require educational services in order to raise their achievement.

Sizable proportions of Asian Pacific American children fall into one or more categories of concern. Table 2 above gives some indication of the number of Cambodian, Laotian, and Hmong school-age children. Along with other Southeast Asians, they were 33 percent of the total number of first generation Asian Pacific American children in the 1990 census. Vietnamese began to arrive in large numbers only after 1975, while Cambodians and Laotians began to enter in large numbers only after 1980. Given the recency of their arrival, 100 percent of Southeast Asian school-age children are probably either first or second generation Americans.

In 1990, 14 percent of the total population of Asian Pacific Americans in the United States were below the poverty line (Ong and Hee 1994). The Asian Pacific American subpopulations most likely to experience poverty were Southeast Asians and immigrants who arrived in 1985, or later. Among Southeast Asian households, 46 percent were in poverty, while 26 percent of recent immigrants lived in poverty. We deduce from these figures that first and second generation Asian Pacific American students most likely to be in poverty are Southeast Asians or children whose families have resided in the country for less than five years. This is important since educational research has long established that, all else being equal, socioeconomic status of children is related to academic achievement.

Census data can be used to estimate the number of limited-English-proficient (LEP) students among Asian Pacific Americans. In the 1990 Census, respondents were asked to evaluate their ability to speak English. For this analysis, the LEP population can be defined to include those who fell into the categories "not well" or "not at all."[7] Approximately a quarter of all Asian Pacific American children, over 300,000 in absolute numbers, fell into the categories "not well" or "not at all."[8]

As with the total number of Asian Pacific American children, the number of LEP children increased dramatically between 1970 and 1990. Although the 1970 Census did not collect data on English language proficiency, one estimate can be provided by applying the generation-specific proportions found in 1990 to the 1970 counts. This method leads to an

estimate of about 42,000. This would mean that the number of LEP children increased by more than seven-fold over two decades.

The relative size of the limited English-proficient population varies by generation, as evident in Table 4. Over two-thirds were first generation Asian Pacific American children. Among first generation students, four in ten were LEP. Variation by other factors is apparent. Of the Asian Pacific American eighth grade students who were language minorities in 1988, 33.5 percent said they had moderate or low English proficiency, as opposed to high English proficiency (National Center for Education Statistics 1992).9 High proficiency varied according to ethnicity, once socioeconomic status was controlled. Only 59 percent of Chinese language minority eighth graders and 56 percent of Southeast Asian language minority eighth graders rated their English proficiency as high. On the other hand, 75 percent of Korean eighth graders and 78 percent of South Asian eighth graders reported they had high English proficiency.

Table 4. English Language Ability of Asian Pacific American Children, 1990

	First Generation	Second Generation	Third Generation
Native English Speaker	10%	42%	90%
Very good	6%	38%	46%
Good	2%	13%	28%
Poor	1%	7%	14%
Non-English	0%	0%	2%

(Estimates by authors from 1990 PUMS.)

Educational Policies

What educational policies address the needs of Asian Pacific American children who are limited English proficient, poor, and/or brand-new immigrants? This section describes federal, state, and local programs that specifically or potentially address students with these characteristics.

The only current federal program specifically intended to serve immigrant students is the 1984 Emergency Immigrant Education Act (EIEA). Funds are designated for immigrant students who have lived in the United States for less than three years. School districts cannot apply for EIEA funds unless either 500 eligible students are enrolled or 3 percent of their total enrollment consist of eligible students.

Previously, Asian Pacific American immigrant students who entered the country as refugees qualified for assistance under the 1979 Indochina Refugee Children Assistance Program. Grants were made to elementary and secondary schools that enrolled eligible refugee children in school year 1979-80. The following year, Congress replaced the Indochina Refugee Children Assistance Program with the Transition Program for Refugee Children (TPRC), which operated until 1989-90. Children could receive TPRC services if they resided in the country for no more than three years.

Since 1965, the Bilingual Education Act (Title VII of the Elementary Secondary Education Act) has assisted limited-English-proficient students. In 1990, most of the Title VII appropriation of $115.8 million was awarded to school districts for 800 projects of three years duration (McDonnell and Hill 1993). A majority of these projects were designed to provide "transitional bilingual education," in which students are given subject matter instruction in their native language while they learn English. Over time, they transition to English-only instruction.

Chapter 1 is the largest, federally funded Elementary Secondary Education Act program, with an appropriation of $5.2 billion in fiscal year 1990. Its intent is to serve educationally disadvantaged students in school districts with high concentrations of children from low-income families. Both immigrant and limited-English-proficient (LEP) students in 1990 were nearly twice as likely as other students to be poor (U.S. Government Accounting Office, January 1994). Approximately 30 percent of immigrant students and 37 percent of LEP students were in poverty, compared with only 17 percent of all students. Since immigrant and LEP students are concentrated in relatively few—primarily urban—school systems, many are likely eligible for Chapter 1-funded programs and services.

In Lau v. Nichols, 414 U.S. 563 (1974), the U.S. Supreme Court mandated schools to pay attention to the educational needs of children who are limited English proficient. As a result, many states with sizable populations of LEP students gave their support to school districts operating bilingual education programs. Two such states with numerous Asian Pacific American LEP students are Illinois and New York. Another is California, whose 1976 Bilingual-Bicultural Act made funds available for a decade to school districts providing services to limited-English-proficient children. Funding for the education of such students was then included in Economic Impact Aid (EIA) block grants to school districts (McDonnell and Hill 1993). The number of LEP students in a school district triggers the award level of EIA funds.

Given the paucity of federal and state policies concerning the education of first generation children, local school districts carry primary responsibility for insuring equitable learning opportunities. They do this by focusing almost exclusively on the English language needs of the students. Few school systems attend to the children's distinctive characteristics that are rooted in their immigration experiences. Among these traits are: (1) physical and mental health conditions stemming from the trauma of war and refugee camp life; (2) lack of previous schooling if the children have come from countries without educational systems; (3) transiency if the children's families are struggling to find housing; and (4) little or no awareness or understanding by parents of how U.S. schools function and what the expectations are for both students and parents. School districts that do acknowledge special needs of immigrant students usually establish an intake center or a newcomer school.

An intake center is intended to serve as an immigrant family's first point of contact with a U.S. school system. Essential information about the system is available multilingually. An assessment of the child's English proficiency is conducted, and the child is enrolled and placed in a school. At newcomer schools, immigrant students are provided—usually for no more than one academic year—intensive instruction in academics and English as a second language, as well as extensive orientation to the local community and American culture. Health screening, mental health counseling, and social service assistance may also be provided.

School district responses to educational needs of immigrant students are best labeled idiosyncratic, not coherent and consistent. The Rand Corporation studied 55 schools in eight school districts that together enrolled the majority of immigrant students in the nation. Researchers found that programs and services provided are a function of "situational imperatives that individual principals and teachers face in trying to meet these students needs" (McDonnell and Hill 1993:11). Put differently, few school systems have designed and implemented comprehensive strategies to address the needs of immigrant students. By default, responsibility falls to principals and teachers in the specific schools where immigrant families enroll their children.

Additional Costs

The basic cost of educating the children of Asian immigrants is similar to that for all other children. Potential additional costs are related to programs that meet specialized needs of Asian children who are new immi-

grants, limited English proficient, or poor. As noted above, however, only one federal educational policy focuses on immigrant children; and only a few other federal and state programs encompass add-on services or programs for first or second generation children based on language or socioeconomic status. The available evidence suggests, moreover, that few Asian Pacific American children have benefited from any of these federal and state policies.

For example, less than 6 percent of Asian Pacific American language minorities in the National Educational Longitudinal Survey of 8th Graders reported receiving instruction in mathematics, science, literature, or social studies in a language other than English (National Center for Education Statistics 1992). Less than a quarter reported ever enrolling in an English language assistance program. Nearly 34 percent, however, lack high English proficiency.

The Emergency Immigrant Education Act (EIEA) probably is also underused.10 During academic year 1989-90, an estimated 700,000 immigrant students lived in the country for less than three years (U.S. Government Accounting Office 1994). About 20 percent were thought to be Asian Pacific Americans, and 90 percent were considered limited English proficient. They were enrolled in 4,500 different school districts. About 564,000 children, 85 percent of the total number of eligible, were enrolled in the 529 school districts that received EIEA funds, yet EIEA dollars did not reach all eligible students in these districts. Los Angeles public schools had 61,648 EIEA-eligible students in 1989-90, but only 12,000 were served with the funds (McDonnell and Hill 1993). Of the 9,284 EIEA-eligible students enrolled in New York City high schools, only 1,800 were served by EIEA funds.

This sporadic placement of children of Asian immigrants in programs to address their education needs is due to three main reasons.11 The first relates to deficiencies in the identification of students who are limited English proficient. The National Center for Education Statistics (1992) found that 73 percent of the nation's Asian Pacific American eighth grade students were language minorities, but only 27 percent were recognized as such by their teachers. In 1990, the Council of Chief State School Officers estimated that only 36 percent of all students in the country who were limited English proficient had been identified as such.

The second reason for underservice stems from the misperception among educators that limited-English-proficient children are not eligible for Chapter 1 services. Only 35 percent of limited-English-proficient stu-

dents in 1993 received Chapter 1 services (U.S. Government Accounting Office January 1994).12

The third reason is the increasingly inadequate funding. For example, under EIEA, Congress can appropriate up to $500 per immigrant student, but actual appropriations have fallen fall short of this figure. In 1984-85, school districts that received funds were given only about $86 per student, and by 1993-94, allocations had fallen to just $27 per student (U.S. General Accounting Office April 1994). Furthermore, appropriations stayed flat while the eligible student population skyrocketed. Similarly, while the population of limited-English-proficient students grew by 25 percent over the last ten years, funding of the federal Bilingual Education Act decreased by 40 percent (U.S. Government Accounting Office 1994).

The problem is compounded by a lack of meaningful support at the state level. Illinois and New York, for example, provide less than $150 per student for bilingual education programs (McDonnell and Hill 1993). Even though the number of limited-English-proficient (LEP) students is used as one of the triggers for California's Economic Impact Aid (EIA) to school districts, EIA funds are not required to be used to serve such students. California also does not provide school systems with special funds to enable them to conform to state policies regarding the development of English competency among LEP students and insuring their access to the core curriculum.

General funding of local school districts, especially urban systems that enroll most of the nation's Asian Pacific American children and most of the nation's immigrant children, is abysmally inadequate as well. California school systems are especially hard strapped to provide high quality basic education to any student. Only eight states in 1993-94 ranked lower than California in terms of the proportion of state revenues spent on K-12 education (California Tomorrow, November 1993); only four spent fewer dollars on public schools per $1,000 of personal income. In such a fiscal climate, California school districts with large populations of immigrant students find it difficult to respond to their needs. For example, intake centers and newcomer schools are uncommon. San Francisco's four newcomer schools have the capacity to serve less than 20 percent of newly enrolled immigrants (McDonnell and Hill 1993).

If educational programs and services to children of immigrants were systematically provided, what might be the incremental cost? While potential added costs of intake centers or newcomer schools has not been studied, few estimates have been made of the incremental costs of bilingual

education programs, such as programs intended to increase English proficiency and to provide content instruction in a non-English language at the same time.

Parrish (1994) compared services received by limited-English-proficient students to those received by all students in 15 elementary schools in 11 different California school districts. He found that the total supplementary cost was $361 per student, of which $60 was the supplementary cost of instruction alone. Schools in the study provided different forms of English-only instruction, as well as bilingual instruction; but the cost for each specific instructional approach was not estimated. Carpenter-Huffman and Samulon (1981) focused on the total added cost of bilingual education in 60 schools in six school districts in California, Texas, and Washington. They estimated the total added cost to be $200 to $700 per student, of which $100 to $500 was the added cost of instruction alone.

Determining the total amount of funds per student served that school districts in California and New York receive from federal and state sources is quite difficult. Some data is available from 1986 awards for EIEA, Title VII, and TPRC. California school districts won federal EIEA and Title VII grants amounting to $79 per student served, the figure for New York was $193.13 Grant awards included dollars for administration, staff salaries, teacher training, curriculum materials, and overhead. Information on the amount that went specifically to classroom instruction or about the types of programs and services provided was not available.

Federal dollars for add-on services must be viewed in the context of overall state spending on K-12 students. The average per pupil expenditure in California in 1986 was $3,728; in New York the figure was $6,497. Funding for basic education continues to be so low in California that the issue of the cost of any add-on service or program pales in comparison, yet 39 percent of the total national population of Asian Pacific Americans reside in California, as do 41 percent of the country's total number of immigrant children (Population Reference Bureau 1992).

Parental Contributions to Public Education

This section examines Asian immigrant parents' various contributions to public education in general and to the academic achievement of their children in particular. First, parents' financial contributions to school systems is analyzed by family income. Second, the question of how immigrant parents might positively influence their children's education through explicitly clear and high expectations for learning is explored.

The amount of relevant taxes paid by Asian Pacific American parents is difficult to calculate, given enormous variations in the way revenues are collected and distributed by local governments and school districts. Examining family income, however, seems a fair proxy of what is the likely contributions from Asian Pacific American parents. A reasonable correlation between family income and taxes can be drawn, although differences in consumption patterns, savings rate, and sources of income can affect the relationship. Evidence suggests that Asian Pacific Americans, including immigrants, tend to invest more in housing and home ownership than the general population. Since many school districts rely on property taxes as a major source of revenue, Asian Pacific Americans are consequently likely to contribute more of each income dollar to public education.

For this analysis, parents are classified in three categories: (1) U.S.-born parents; (2) immigrant parents with at least one U.S.-born child; and (3) immigrant parents with only immigrant children. Note that a family in the second group can also have a foreign-born child or foreign-born children. The third category by definition includes individuals who started their families prior to immigration. This third category also is not a static one; over time a parent can move into the second category if he or she has an additional child born in this country. The analysis is based on one Asian Pacific American parent, usually the head of the household, but a minority of cases is based on the Asian Pacific American spouse in an interracial family.

Table 5. Asian Pacific American Parents

	Immigrants w/Immigrant Children only	Immigrants w/U.S.-Born Children	U.S.-Born
In 1970	26.6	42.8	85.8
In 1990	269.4	418.2	94.6
Percent Increase	913%	877%	10%

(Based on head of household or Asian Pacific American parent in an inter-racial family. Estimates by authors from 1970 and 1990 PUMS.)

Table 6 provides statistics on family incomes for Asian Pacific American parents relative to a prevailing median family income figure. Data for 1970 and 1990 were used to estimate medians for all families for each of the twelve metropolitan areas with the largest number of Asian Pacific American children in 1990.14 (See Appendix D for listing and discussion

of method used in this analysis.) For all other metropolitan areas and non-metropolitan areas, national medians for families in all metropolitan areas were used as the prevailing median. Overall, median family income for Asian Pacific Americans increased from $40,545 in 1969 to $43,770 in 1989. As a comparison, general population medians for the twelve metropolitan areas were $40,545 in 1969 and $38,856 in 1979. This simple comparison suggests that, on average, Asian Pacific American parents contribute at least as much taxes as other parents to the public schools.

Using the median, however, does not reveal the diversity within the Asian Pacific American population. Asian Pacific American parents can be found throughout the income spectrum. About 20 percent had an income that was less than half of the metropolitan median. At the same time, a slightly smaller proportion had an income more than twice the metropolitan median. This means that some parents contributed proportionately less, while others contributed proportionately more.

Table 6. Asian Pacific American Parents by Family Income

	Immigrants w/Immigrant Children only	Immigrants w/U.S.-Born Children	U.S.-Born
Median in 1989			
1970	$30,578	$35,815	$44,599
1990	$32,330	$49,000	$53,083
Relative to Prevailing Median			
1970			
below 50%	38%	19%	20%
50%-84%	26%	27%	17%
85%-115%	16%	20%	22%
116%-200%	17%	26%	33%
over 200%	3%	8%	8%
1990			
below 50%	30%	14%	10%
50%-84%	22%	17%	16%
85%-115%	14%	15%	16%
116%-200%	23%	32%	39%
over 200%	10%	22%	19%

(Estimates by authors from 1970 and 1990 PUMS.)

The wide variance in relative family income is not surprising. Diversity in such characteristics such as years in the United States, English language ability, and educational attainment influence an individual's earnings (Borjas, 1990). These diversity factors for Asian Pacific parents are tabulated in Table 7. The most disadvantaged group is comprised of immigrants with only immigrant children; a larger percentage of this group was also more likely to be comprised of newcomers and individuals with little education. One-third did not have an effective command of the English language, which limited employment opportunities.

Table 7. Characteristics of Asian Pacific American Parents, 1990

	Immigrants w/Immigrant Children only	Immigrants w/U.S.-Born Children	U.S.-Born
English Language			
Native English	3%	7%	75%
Very good	31%	49%	17%
Good	31%	30%	5%
Poor	28%	13%	2%
Non-English	7%	2%	0%
Years of Schooling			
Less than H.S.	28%	19%	9%
High School Degree	16%	14%	20%
Some College	18%	22%	33%
Bachelor's Degree	22%	21%	24%
Graduate Degree	14%	23%	14%
Years in the U.S.			
0-5 yrs	40%	3%	NA
6-10 yrs	35%	19%	NA
11-15 yrs	17%	28%	NA
16+ yrs	7%	49%	NA

While Asian Pacific American parents — either on average or as a group — are contributing at least the same tax revenues to public education, two additional and offsetting factors should be addressed. First, Asian immigrants tend to have larger families and, second, Asian immigrants transfer human capital, such as educational backgrounds, to the United States.

The size of the family is an important consideration. Families with more than the average number of children would receive a net gain through public education, assuming no greater tax contribution. Among all family-based households with school-age children in the twelve metropolitan areas,15 the average number of school-age children in 1990 was 1.7. For Asian Pacific American family-based households with school-age children, the average was slightly higher, 1.9. Interestingly, since the higher average number of school-age children for Asian Pacific Americans is roughly equal to those with higher income, one can infer that the proportionately greater demand placed on the school system is offset by their higher contributions to school revenues.

The average number of school-age children for the U.S.-born Asian Pacific Americans is higher (2.3) than that for immigrants (1.8). This is interesting given that fertility rates drop with acculturation into U.S. society. This apparent contradiction can be explained in part by the fact that immigrant parents tend to be older and are more likely to have adult-age children not included in the calculations.16 While Asian Pacific American parents who are U.S.-born had proportionately more school-age children, they also have considerably higher family income. The group that arguably receives a net subsidy is comprised of immigrants with only immigrant children.

On the other hand, the U.S. economy benefits from the many immigrant parents who received their schooling abroad. For non-immigrants, the cost of educating parents can be ignored because the cost and eventual returns (e.g., through taxes) are integral to, or internalized within, the educational system and economy. Over two-thirds of immigrant parents with at least one U.S.-born child, however, received their primary and secondary education abroad, and about nine-tenths of immigrant parents with only immigrant children received their primary and secondary education abroad.17. The cost of educating these immigrant parents is external to the U.S. educational system because the schooling was paid for by a foreign government. When an individual migrates, he or she essentially transfers the benefits of that education to the United States, both as gains in individual earnings and to the society as a whole.

Similarly, immigrant children who have obtained some schooling in Asia transfer the benefit of their education to this country as well. Compared to their parents, where the identifiable U.S. gains are seen in earnings, the observable gains associated with the pre-U.S. education of immigrant students may be visible through higher mathematics achievement18

Recent research on the education of first and second generation children suggests another factor that offsets the demands placed on public education by immigrants. Kao and Tienda (1995) looked at the relationship between a student's immigrant status, on the one hand, and grades, test scores, and aspirations, on the other. They determined that having an immigrant parent, specifically, an immigrant mother, significantly promoted academic achievement and high educational aspirations. Students with U.S.-born parents did less well in school and had lower aspirations than students with immigrant parents. These findings were most pronounced for Asian students, although they pertained to Latino students as well.

To explain the effect of having immigrant parents, Kao and Tienda (1995) maintain that an "immigrant optimism" is operative: Immigrant parents are confident about their children's prospects of achieving upward mobility in a country to which parents have voluntarily moved with the goal of improving their life. This optimism is somehow imbued in their children, with education being identified as the key to success.

How does immigrant optimism manifest itself? With respect to Asian Pacific American parents, especially clear and high expectations for their children's academic achievement may be communicated. These expectations are highly correlated with their children's school performance (see, e.g., Peng and Wright 1994).

- Asian Pacific American youngsters in a large-scale high school study conducted by Steinberg, Dornbusch, and Brown (1992) were more likely than all other groups of students to state that their parents had high, explicitly defined standards for academic performance. These students reported that "their parents would be angry if they came home with less than an A minus" (p. 726).
- Schneider and Lee (1990) found that 100 percent of Asian Pacific American parents, compared to 67 percent of white parents of elementary and middle school children, said that "C" or "satisfactory" grades were not acceptable. These expectations were clearly understood by Asian Pacific American children. One child reported (p. 370): "If I get a 'B,' my parents say it isn't that good. They get mad. They want all As."
- In the same study, one parent observed: "I think there will be discrimination against my children because they are minorities.... Therefore I tell my children to study for two hours when white children study for one hour. If they ask me the reason, I tell them I will let them know later" (Schneider and Lee 1990:370).19

- Vietnamese immigrant parents interviewed in New Orleans said they believed that education was their children's chief way out of "the poorest part of a poor area in a poor city in a poor State [sic]" (Zhou and Bankston 1994: 828). Researchers observed that parents had "adjusted their cultural patterns to orient the younger generation toward educational and occupational attainment." If they did not, their children might become permanent members of the underclass.20

Immigrants add value to their children's education and U.S. society through their parenting. Certainly financial contributions to school systems are important in an analysis of the financial demands placed on public education by immigrants. The parents' social contributions to the high level of their children's learning somehow seems relevant as well.

Economic Returns to Educating Children of Immigrants

The short-run costs of education generate long-term benefits because of the role schools play in preparing children to be productive adult workers. Despite severe constraints on the availability of relevant data, this section represents a preliminary attempt to calculate types of returns for Asian Pacific Americans.

Longitudinal data following children of immigrants as they mature and enter the labor market would be helpful. Unfortunately, census data only refer to the characteristics of a sample at one point in time. Asian Pacific American adults, however, who received at least a part of their primary and secondary education in the United States can be examined. This inquiry can be initiated by taking those between the ages of 25 and 38 in 1990, who had resided in the United States in 1970, the year when these individuals would have been between ages 5 and 18. This sample includes all U.S.-born Asian Pacific Americans and Asian immigrants who entered the country in 1970 or earlier.

Because of data limitations, certain generational categories cannot be determined. For U.S.-born Asian Pacific Americans not living at home, the second and subsequent generation cannot be distinguished. The best that can be done is to examine whether an individual spoke a language other than English at home. A person who did is likely to be second generation, and this group is used to represent the achievements of the second generation. This group is labeled as U.S.-born and bilingual.

This approach is far from being ideal. A large number of second generation persons may no longer use their parents' native language, but a good guess is that only half of the second generation Asian Pacific Americans in the sample used a language other than English. The analysis uses two other categories: monolingual, or those who were U.S.-born but spoke only English at home; and all Asian immigrants.

The Census data show that children of Asian immigrants do become highly educated adults, thus adding to the skill base of our labor force. Table 8 compares the educational attainment of U.S.-born non-Hispanic whites with Asian Pacific Americans who were children in 1970. As the figures show, Asian Pacific Americans in all three categories were more likely to be better educated than non-Hispanic whites. While two in five non-Hispanic whites had no more than a high school education, only one in five Asian Pacific Americans did. At the other end of the spectrum, Asian Pacific Americans were twice as likely to have a graduate or professional degree. While some differences among the three Asian Pacific American categories listed in Table 8 are apparent, distributions by educational attainment are remarkably similar.

Table 8. Educational Attainment, 1990
Selected Persons Ages 25-38

	Non-Hispanic Whites	Asian Pacific Americans		
		Monolingual U.S. born	Bilingual U.S. born	Pre-1971 Immigrants
Years of Schooling				
Less than H.S.	10%	5%	7%	6%
High School	31%	16%	12%	14%
Some College	32%	34%	30%	36%
B.S. Degree	19%	33%	36%	30%
Grad. Degree	7%	13%	15%	14%

(Estimates by author from 1990 PUMS.)

Annual earnings are used as a measure of an individual's contribution to the economy. Table 9 shows that Asian Pacific Americans fared better than non-Hispanic whites. Distributions by income category in the top panel include those with zero and negative earnings. While a majority of non-Hispanic whites had earnings below $20,000 per year, only a minority of Asian Pacific Americans did (a difference of about 10 percentage points).

Although only a minority of Asian Pacific Americans had earnings that placed them in the top income category (16 percent in the $40,000 or more per year category), they were roughly one-and-a-half times more likely than non-Hispanic whites to be in that category.

A higher level of labor force participation by Asian Pacific American women contributed to the higher earnings reported in Table 9. Annual earnings of $1,000 is placed at zero or trivial level of paid work. While 24 percent of non-Hispanic white women fell into this category, only 11 percent of Asian Pacific American women did. Not only did proportionately more Asian Pacific American women work, but they had higher earnings. This can be seen in the bottom panel in Table 9, which reports the median for those with at least $1,000 in earnings. While Asian Pacific American males fared moderately better than non-Hispanic white males, Asian Pacific American females fared considerably better than non-Hispanic white females.

Table 9. Annual Earnings, 1989
Selected Persons Ages 25-38

		Asian Pacific Americans		
	Non-Hispanic Whites	Monolingual U.S. born	Bilingual U.S. born	Pre-1971 Immigrants
Less than $10k	30%	20%	27%	24%
$10k-$19,999	25%	22%	20%	20%
$20k-$39,999	34%	42%	39%	38%
$40k or more	11%	16%	13%	18%
% with at least $1k				
Males & Females	86%	91%	86%	88%
Males	94%	94%	90%	93%
Females	77%	87%	81%	83%
Median Earnings*				
Males & Females	$20,000	$24,300	$24,300	$25,000
Males	$25,000	$28,000	$26,000	$29,000
Females	$15,000	$21,000	$21,700	$21,000

(Median earnings is calculated for those with at least $1,000 in income. Estimates by authors from 1990 PUMS.)

Higher earnings of Asian Pacific Americans are tied to educational at-

tainment. Table 10 summarizes results from a statistical analysis. The analysis uses the same sample of 25-to-28-year-old Asian Pacific Americans and non-Hispanic whites, with the additional restriction of including only those with at least $1,000 in income. While findings are not directly comparable to earnings data in Table 9, patterns are consistent: figures show that Asian Pacific Americans on the average earned more than non-Hispanic whites, although variations by gender and the listed Asian Pacific American subgroups are evident.

Monolingual U.S.-born and pre-1971 immigrant Asian Pacific American males earned at least a 10 percent more than non-Hispanic males. Nearly all of that difference is due to higher levels of education. After adjusting for education, no statistical difference in the earnings of these Asian Pacific Americans and non-Hispanic whites appears. Bilingual U.S.-born Asian Pacific American males, on the other hand, did not have higher incomes than non-Hispanic white males. In fact, after adjusting for educational attainment, this group of Asian Pacific Americans earned less, and this remains true regardless of age. This indicates that education is relied upon to compensate for whatever disadvantage is associated with being bilingual. A weaker command of the English language is likely translated into poorer employment opportunities and lower salaries. Whether this applies to all second generation Asian Pacific Americans is unclear.

Estimates in Table 10 show that Asian Pacific American women earned about a third more than non-Hispanic white females. Only a third of those higher earnings is explained by higher educational attainment. Regardless of schooling, Asian Pacific American women still earned 20 percent to 25 percent more. Unlike their male counterparts, differences among the subgroups of Asian Pacific American women (monolingual U.S. born, bilingual U.S. born, and immigrants) are small.

Table 10. Earnings Relative to Non-Hispanic Whites Selected Persons Ages 25-38

	Asian Pacific Americans		
	Monolingual U.S. born	Bilingual U.S. born	Pre-1971 Immigrants
Males			
Unadjusted Difference	+14%*	-2%	+11%*
Adjusted for Education	+2%	-14%*	+1%
Adjusted Ed. and Age	+3%	-8%*	+3%
Females			
Unadjusted Difference	+36%*	+36%*	+34%*
Adjusted for Education	+25%*	+22%*	+22%*
Adjusted Ed. and Age	+25%*	+22%*	+22%*

(Based on the log of 1989 annual earnings. Statistically significant differences are marked by an asterick*. Estimates from regressions by authors from 1990 PUMS.)

As noted, the three categories used in Tables 8, 9, and 10 are not substitutes for generational categories. Viewing the bilingual U.S.-born as a proxy for the second generation and viewing the monolingual U.S.-born as a proxy for the third plus generation is problematic. A large number of second generation persons may no longer use their parents' native language. This problem can create a bias in interpreting the above analysis if the findings are attributed to generational differences. The issue comes down to whether the bilingual U.S.-born group is representative of all second generation Asian Pacific Americans, ages 25 to 38.

An analysis of the 1994 Current Population Survey indicates that the answer is no. This data set contains information on the respondent's nativity and parents' place of birth. The number of Asian Pacific Americans in the survey is too small for reasonable estimates similar to statistics in Tables 9 and 10; but the survey sample is sufficient to test for any statistical difference in earnings between the third and second generation. The analysis shows that the second generation earned on the average about 13 percent more than the third generation, with most of the difference due to higher educational attainment. In other words, the U.S.-born children of Asian immigrants, along with other Asian Pacific American children, grew up to be well-educated and highly productive.

Conclusion

The American social contract is predicated upon an intergenerational commitment to providing public education to each and every child. Through education, the United States endeavors to enable all children to develop their intellect, spirit, and capacity for action, both for their individual interests and for the interests of the common good. To consider excluding the children of immigrants from the social contract based upon a transitory economic problem or a perceived marginal cost is to begin the unraveling of the social fabric. If we deny one child an education, then we put all children, and our collective future, at risk. This is not to say that economic exigencies do not matter with respect to the public good. Rather, this is an argument that the obligation to make responsible, well-considered, comprehensive analyses and decisions where children are concerned is a sacred one.

The analysis in this paper does not reveal any fiscal or educational crisis that would even remotely suggest that this nation should limit its promise to educating the next generation. Although relevant short-term or long-term costs and benefits have not been quantified, the evidence supports the argument that providing public education for the children of Asian immigrants makes good sense. The additional costs are minimal; the contributions of Asian Pacific American parents are at least equal to that of other parents; and Asian Pacific American children mature to become highly educated and productive. The children of Asian immigrants and their parents enhance, rather than diminish, the vitality of our nation.

Appendix A: Data

The main source of information for this chapter comes from the decennial Census. While we use published information when appropriate, published reports seldom provide statistics in a form that directly addresses the issues in this chapter. We overcome this problem by using the public use microdata samples (PUMS) from the 1970 and 1990 census. These are large data sets containing individual records that can be tabulated and analyzed according to the needs of the researcher. When possible, the two 1 percent samples from 1970 are combined. In that census, two long forms were used. Although the two forms shared many questions in common, each also asked a different set of questions. For example, one form asked immigrants when they entered the United States, but the other did not. For 1990, the 5 percent sample was used for Asian Pacific Americans, and the 1 percent sample is used for non-Hispanic whites.

Before any analysis can be done, the PUMS data have to be rearranged. The hierarchical structure required the creation of working data set in two steps: one for all Asian Pacific American children and one for all Asian Pacific American parents. The children and parents in the same household were then merged together for the analysis. For the majority of the Asian Pacific American children in the samples, this approach yields appropriate matches. This approach presents a problem, however, for Asian Pacific American children in a household with a single parent who is not Asian Pacific American, and for Asian Pacific American children with adopted parents who are not Asian Pacific American.

For both censuses, individuals who were U.S. citizens at birth were classified as U.S.-native. This includes those born in the United States or U.S. territory and those born abroad to U.S. citizens. This approach is consistent with the categories and definitions in governmental publications for the 1990 Census. The characteristic of the heads of the household is used to determine if the parent is U.S.-born or foreign-born. In cases where the head of the household is not Asian, the spouse is used to determine the nativity of the parent. (Also language ability is used when there is no match.) The term foreign-born and immigrants are used interchangeably.

This study used the Current Population Survey for March 1994. This is a monthly survey whose main purpose is to track the economy, particularly employment and unemployment. The data set for the March survey is known as the "Annual Demographic File," which contains detailed demographic information and income data for the previous year. The survey includes responses from approximately 57,000 households. Because this is a national survey, the sample size for Asian Pacific Americans is small. For the earnings analysis of Asian Pacific American adults by generation, the sample size was between only 400 and 500.

Appendix B: Additional Tables

Fertility Rates: The effects of acculturation can be seen in Table A2, which reports average fertility rates based on 1990 data. For every age category, the fertility rate for U.S.-natives is lower than those for immigrants. The difference is particularly noticeable for those over the age of 55.

Table B1. Fertility Rates of Asian American Women

	US-natives	Pre-1980 Immigrants	1980-90 Immigrants
Age			
25-34 years	1.18	1.07	0.74
35-44	1.98	1.97	1.51
45-54	2.30	3.05	2.17
55+	3.32	4.65	2.63

(Estimates by authors from 1990 PUMS.)

Interracial Marriage Rates

The effects of acculturation on interracial marriages can be seen in Table A2. The figures are based on Asian Pacific Americans who were married with the spouse being present. Because our sample includes all Asian Pacific Americans from the 5 percent PUMS for 1990, we were able to match married couples with both spouses being Asian Pacific American. Those without a match were consider to be married to a non-Asian Pacific American. The summary statistics show that for every age group, the interracial marriage rate is higher for U.S.-born natives than for immigrants; and among immigrants, the rate is higher for those in the country longer than for newcomers.

Table B2. Asian Americans Married to Non-Asian-Americans

	Pre-1980	1980-90	US-natives
By Age Groups			
15 & over	20%	12%	33%
25-34	24%	14%	52%
35-44	20%	9%	44%
45-54	17%	7%	28%
55+	19%	11%	12%

(Estimates by authors from 1990 PUMS)

Appendix C: Review Of Literature on Asian Pacific American Student Achievement

This review contains two major sections. The first focuses on small-scale, local studies of Asian Pacific American students. The second focuses on large-scale, national studies. In the main, the studies did not identify whether the youngsters were first or second generation, and slightly different definitions of the research subjects were used. Based on the time frame when most of the studies were conducted, and based on our analyses of census data discussed in the first section of this paper, we believe that the majority of Asian Pacific American children included in the studies surveyed were either immigrants or children of immigrants.

The Achievement of Students in Specific Localities

During school year 1982-83, Korean, Chinese, and Japanese American youngsters in a Chicago K-8 school and a suburban middle school for grades six through eight earned higher grades than Anglo students (Schneider and Lee 1990). Students in the middle school had achievement test scores higher than those of their Anglo classmates during 1981-82 and 1982-83. Children who had immigrated to the United States after 1978 were excluded from the study.

Lao, Hmong, and Cambodian students scored the lowest on a reading achievement test among 5,000 foreign-born children and children of foreign-born parents attending schools in San Diego, and Dade and Broward Counties, Florida (Rumbaut 1994). The sample consisted of Asian, Latin American, and Caribbean youngsters enrolled in the eighth and ninth grades in the spring 1992. Specifically, Cambodian students scored at the 14.0 percentile, Hmong at the 15.2 percentile, and Lao at the 22.3 percentile. Other Asians, primarily Chinese, Japanese, Korean, and East Indian, had the highest reading achievement test scores, followed by Filipino students. They scored at the 62 percentile and at the 51.1 percentile respectively.

The Hmong students scored at the 29.7 percentile on a mathematics achievement test, the lowest among all students in the study. Both Laotians and Cambodians scored below the national norm, at the 42.1 percentile and 35.7 percentile, respectively. Other Asians did the best on the mathematics test, scoring at the 74.3 percentile. The second highest scoring students were Vietnamese youngsters, who scored at the 60.4 percentile. Filipino students followed, scoring at the 59.1 percentile.

Although Hmong students scored well below national norms in reading and mathematics, they earned an average grade point average of 2.95. Their grade point average was exceeded only by those of their Vietnamese classmates, who had a grade point average of 3.04, and their Other Asian classmates, who had a grade point average of 3.24.

Put another way, Asian students in the study, nearly all of them San Diego students, did both the best and the worst in terms of reading and mathematics achievement test scores. Youngsters from Mexico, Cuba, Nicaragua, Colombia, Haiti, Jamaica, and the West Indies scored in between. All Asian students, however, earned higher grade point averages than all the Latin American and Caribbean students. The lowest grade point average earned by a group of Asian students was 2.93 among Filipinos. Jamaican students earned the highest grade point, 2.58, average among Latin American and Caribbean students.

In academic year 1987-88, East Asian 11th and 12th graders had the highest grade point average of all groups of language minority students in San Diego high schools (Ima and Rumbaut 1989). East Asians included as Chinese, Japanese, and Korean American students. Students with the second highest grade point average were Southeast Asians. Southeast Asians were defined as Khmer, Lao, Hmong, and ethnic Chinese and Vietnamese from Vietnam. Other language minority students in the 11th and 12th grades were Hispanics and other immigrants. "Other immigrants" included those who came from Iran and India, as well as Arab and European nations.

An analysis of spring 1985 data on California schools with the highest concentrations of limited-English-proficient students revealed that the "highest average attrition rate was for the schools with large concentrations of Southeast Asians" (Olsen 1988:88). An astounding 48 percent of Southeast Asians in such schools dropped out. Unfortunately, "Southeast Asians" were not precisely defined.

In 1986, every 12th grade California student was tested as part of a statewide assessment program. Among language minority students who were categorized as fluent English proficient, Southeast Asian students had the lowest reading scores of any group of students (Olsen 1988), with a score of 28.5 percentile. The second lowest scoring group of fluent-English-proficient language minority students were Spanish-speaking students, who scored at the 30.9 percentile. Once again, the term "Southeast Asian" was not delineated.

For all Asian language minority groups categorized as fluent English proficient, reading and writing test scores were lower than their mathemat-

ics test scores. For example, fluent-English-proficient Chinese language minority group students scored at the 71.2 percentile in mathematics, but only at the 50.0 percentile in writing and the 38.3 percentile in reading.

A large survey of 6,750 Southeast Asian refugees living in Seattle, Houston, Chicago, Boston, and Orange County, California was conducted in the early 1980s by Caplan, Choy, and Whitmore (1992). They looked at the academic performance of 536 school age youngsters who, on average, had been in the U.S. for three and one-half years. The children were evenly spread across all the grade levels. The researchers did not exactly describe their population of "Southeast Asians." Given the time frame when the study was conducted and the average amount of time the subjects had lived in the U.S., we guess that the children were predominantly, if not exclusively, Vietnamese.

The average grade point was 3.05. Only one-fifth earned grade point averages of C or lower. Almost 50 percent earned A's in math; another one-third earned B's. The youngsters did less well in English, history, and social studies. In those subject areas, the average combined grade point was 2.64. One-half of the children scored in the top quartile on a mathematics achievement test, with 27 percent scoring in the highest decile. The mean score on the language and reading achievement test, however, was a little below the national average.

The Achievement of Students in the Nation

Eighth Grade Student Achievement. In 1988, the federal government launched the National Educational Longitudinal Survey of 8th Grade Students, called NELS:88. This survey oversampled Asian Pacific American students and is considered by some to be the first and only national education survey that includes an adequate sample of Asian Pacific Americans. There were 1,505 Asian Pacific American eighth graders in a total sample of 25,000 eight graders enrolled in 1,000 public and private schools. Seventeen percent were Chinese Americans, 20 percent Filipino, 13 percent Southeast Asian, and 11 percent Korean. Pacific Islanders and South Asians were 9 percent each, and 6 percent were Japanese. The remaining 15 percent encompassed students not usually categorized as Asian Pacific American, namely, Iranian, Afghani, Turkish, Iraqi, Israeli, Lebanese, and other West Asian and Middle Eastern youngsters. It is unclear if or how the inclusion of West Asian and Middle Eastern students skewed the data about the more generally accepted categories of Asian Pacific Americans. Nearly 80 percent of the Asian Pacific Americans in NELS:88, including West Asian

and Middle Eastern youngsters, were first or second generation students. Children with extremely limited English proficiency were *excluded* from the study. Peng and Wright (1994), Kao and Tienda (1995) and Kao (1995) and the National Center for Education Statistics (1992) have all done analyses of the educational achievement of Asian Pacific American students in this dataset.

Peng and Wright (1994) did not distinguish among Asian Pacific American eighth graders by generation, ethnicity, or language proficiency. They found that Asian Pacific Americans had higher combined reading and mathematics achievement test scores than all other minority students. There was no significant difference between Asian Pacific American and white achievement test scores.

The mathematics achievement test scores, reading achievement test scores, and grades of Asian Pacific American eighth graders as a group and by ethnicity were examined by Kao (1995). As a group, Asian Pacific Americans earned higher mathematics scores but had comparable reading scores relative to whites, when gender and parental socioeconomic status were controlled. By ethnicity, Chinese, Koreans, and Southeast Asian eighth graders earned higher mathematics scores than white eighth graders from comparable family backgrounds. Students from Filipino, Japanese, South Asian, and West Asian backgrounds had mathematics scores that were the same as white students. All Asian Pacific American ethnic groups earned reading scores equivalent to whites. Additionally, Asian Pacific American eighth graders, as a group, had higher grades than whites at each level of educational aspiration, with aspirations divided into four categories: high school graduation or less, some college, college graduation, and college graduation.

Kao and Tienda (1995) compared eighth grade achievement levels and educational aspirations of U.S.-born children of U.S.-born mothers, on the one hand, with the eighth grade achievement levels and educational aspirations of immigrant children of immigrant mothers and U.S.-born children of immigrant mothers on the other hand. They included black, Hispanic, and Asian youth in their study. With respect to Asian Pacific Americans, first and second generation eighth graders had higher grades, mathematics test scores, reading test scores, and educational aspirations than U.S.-born eighth graders with U.S.-born mothers. First generation students earned the same mathematics test scores as second generation students, but second generation students scored higher on the reading test than first generation students. U.S.-born students with U.S.-born mothers had the worst reading test scores of the three groups of students.

In the analyses of Asian Pacific American eighth graders done by the National Center for Education Statistics (1992), the main finding was that socioeconomic status correlated with students' English proficiency and scores on reading and mathematics tests. For example, those from low socioeconomic backgrounds were more likely than those from high socioeconomic backgrounds to fail to score at the basic level on the reading achievement test (38 percent versus 12 percent, respectively). On the mathematics achievement test, 39 percent of low socioeconomic status students failed to score at the basic level, in contrast to 14 percent of high socioeconomic status students. Even after English proficiency was controlled, socioeconomic status adversely affected both reading and mathematics performance levels.

Among Asian Pacific American language minority students, after socioeconomic status was adjusted, level of English proficiency correlated with reading achievement levels. Sixty-three percent of eighth graders with the least English proficiency did not perform at the basic level on the reading test, compared to 19 percent of those with highest English proficiency. Mathematics performance appeared not to be affected by English proficiency among language minority eighth graders, after socioeconomic status was controlled.

High School Student Achievement. Another national longitudinal survey of students conducted by the federal government is called High School & Beyond (HS&B). Data collection began in 1980 with respect to 10th and 12th grade students and did not oversample Asian Pacific Americans. Peng, Owings, and Fetters (1984) and Wong (1990) have examined this data set.

Peng et al. (1984) found that both 10th and 12th grade Asian Pacific American students had lower verbal but higher mathematics scores than their white classmates. Verbal skills were even lower among Asian Pacific American 10th and 12th graders who had lived in this country from one to five years. Asian Pacific American 10th graders with six years to less than lifetime U.S. residency, however, had higher verbal scores than both U.S.-born Asian Pacific American and white 10th grade students. The highest average mathematics score among 12th graders was achieved by Asian Pacific Americans with six to 10 years of residence in the United States.

Peng et al. also compared percentages of correct answers and nonresponses of sophomores on the achievement tests administered in 1980 to the percentages of correct answers and nonresponses on achievement tests administered to the same students two years later when they were seniors. Researchers determined that the verbal skill growth rate of Asian

Pacific Americans with only one to five years of U.S. residency was slow compared to those with six or more years of residency. Both groups of students, however, demonstrated the same rate of growth in mathematics.

HS&B seniors who were Chinese, Filipino, and Japanese Americans were studied by Wong (1990). More than 58 percent of Chinese American seniors and about 52 percent of the Filipino American seniors were foreign born. A greater proportion of Chinese American 12th graders received As and Bs in mathematics than whites, and greater proportions of Japanese and Filipino American students received As and Bs in English compared to whites.

The federal National Assessment of Educational Progress (NAEP), in 1983-84, conducted a special project on the achievement of language minority youngsters. Asian Pacific American language minority students in the 11th grade read significantly less well than their Asian Pacific American non-language-minority counterparts (Baratz-Snowden and Duran 1987). While approximately 50 percent of Asian Pacific American non-language minorities and whites scored at the advanced reading level, only 20 percent of Asian Pacific American language minorities did so. Since the assessment did not include students considered by their school systems to be too limited English proficient to take the reading test, it is likely that the performance of Asian Pacific American language minority students was gauged higher than in reality.

In 1983, 46 percent of Asian Pacific American freshmen enrolled as first-time, full-time students in four-year colleges and universities had earned an A average in high school (Hsia 1988). Only 29.4 percent of their white counterparts and only 27.6 percent of all their classmates earned the same average in high school.

SAT Scores of College-Bound High School Students. Since 1981, the College Board has published SAT profiles by race and ethnicity, as well as family income. Hsia looked closely at these profiles. In 1985, 42,000 Asian Pacific Americans took the SAT, representing 4.2 percent of all SAT takers and more than 50 percent of all Asian Pacific American 18-year-olds. Asian Pacific American performance on the test's verbal portion was related to whether English was the test taker's best language. Approximately 27 percent reported that English was not their best language.

In particular, there was a difference of 162 points in the verbal portion—more than one standard deviation—between median scores of Asian Pacific Americans with English as their best language and those for whom English is not their best language. When English was not their best lan-

guage, 90 percent of Asian Pacific Americans scored in the two lowest score intervals, between 200 and 400, on the verbal part of the test. The verbal scores of both groups of Asian Pacific Americans were lower than their white counterparts.

The same pattern was not discernible on the test's mathematics portion. The median score of Asian Pacific Americans for whom English was their best language was only one point higher than that of Asian Pacific American for whom this was not the case. Hsia observed that, subsequent to 1985, median math scores of Asian Pacific Americans for whom English was not their best language rose above those of their counterparts for whom English was their best language. Math scores for both Asian Pacific American groups continued to be higher than those of white SAT takers and all SAT test takers.

A spot check of performance on the test since Hsia's 1988 analysis shows that Asian Pacific Americans as a group continued to score lower on the verbal than on the math portion and to underperform whites on the former and outperform them on the latter. For example, the average Asian Pacific American 1992 verbal score was 413, while the average math score was 532 (*The Chronicle of Higher Education* 1992). The average white verbal score was 442, and the average white math score was 491.

Appendix D: Earnings Regressions

Definitions: (1) Monolingual U.S. Asian Pacific American, Bilingual U.S. Asian Pacific American, and Asian Immigrants are dummy variables taking on the value of one if the respondent falls into the category, otherwise zero. The excluded category is non-Hispanic white; (2) Years of Schooling is based on the categories reported in the 1990 PUMS, with the mid-point used when there is more than one year of schooling is used in a category; (3) Professional Degree is a dummy variable for those with a post-bachelor's professional degree; (4) Years of Experience is calculated as age minus the years of schooling and minus five years, and this value denotes the potential years of experience; (5) Experience Squared is the years of experience squared, and then divided by 100.

Table D1. Annual Earnings of Selected Asian Pacific Americans and Non-Hispanic Whites, 1989

Dependent Variable: Log of Annual Earnings

	(1)	(2)	(3)
Independent Variables			
Male			
Constant	10.017	8.757	7.608
Monolingual U.S. Asian American	0.140	0.020	0.032
Bilingual U.S. Asian American	-0.023	0.141	-0.086
Asian Immigrants	0.106	0.005	0.030
Years of Schooling	—	0.091	0.119
Professional Degree	—	0.229	0.258
Years of Experience	—	—	0.104
Experience Squared	—	—	0.290
Adjusted R-squared	.0002	.1025	.1472
Female			
Constant	9.478	7.776	7.659
Monolingual U.S. Asian American	0.356	0.250	0.250
Bilingual U.S. Asian American	0.364	0.217	0.220
Asian Immigrants	0.342	0.215	0.218
Years of Schooling	—	0.122	0.127
Professional Degree	—	0.062	0.059
Years of Experience	—	—	0.001
Experience Squared	—	—	0.020
Adjusted R-squared	.0017	.1044	.1052

Notes

1 The judge invoked the U.S. Supreme Court's decision in Plyer v. Doe, 457 U.S. 202 (1982), when ruling against Proposition 187's denial of public education to undocumented immigrant children. Also cited was the federal, not state, responsibility to establish immigration policy under the U.S. Constitution. No ruling was made on Proposition 187 provisions having to do with the access of undocumented immigrants to public colleges and universities or public social and health services. Lawsuits challenging these aspects of the proposition are pending. It is also likely that the federal court ruling on elementary and secondary school education will be appealed. Meanwhile, due to court injunctions, no aspect of Proposition 187 has yet been implemented.

2 As of December 1995, the bill pertaining to student loans may be vetoed by the president. Proposals to lower the ceiling on, and alter the priorities for, future legal immigration have been introduced in the House by Lamar Smith (R-Texas) and in the Senate Alan Simpson (R-Wyoming).

3 Huddle (1994), Fix and Passel (1994), and, most recently, Simon (1995) are among those who have weighed in on the issue of cost.

4 In a few households, the head of the household is not a parent but some other relative, such as a grandparent. The three classifications capture the situation of the vast majority of Asian American children. The "Not Elsewhere Classified" category, below, includes, for example, Asian children adopted by non-Asian parents.

5 The term "U.S.-born" encompasses individuals born in the United States, in a U.S. territory, or abroad to U.S. citizens.

6 The number of school-age children is not identical to the number of children attending school because a few are too young to attend and some older teenagers are no longer in school. For example, among Asian Americans in 1990, approximately 30 percent of the five-year-olds and 10 percent of the 18 year-olds were not enrolled in school. Among those between 6 and 17, only 4 percent were not enrolled.

7 Responses to census questions can provide only rough estimates of the population of LEP students. Limited English proficiency is a function of several dynamic factors, among them are educational opportunities for limited-English-proficient students to acquire English, the rate of English proficiency attainment among students enrolled in school, the social context within which the standard for full English proficiency is determined, the quality of instruments used to assess proficiency, the inflow of new immigrant students from non-English-speaking countries, and the birthrate among immigrant parents and the degree to which they speak English at home. Research has shown that it takes a limited-English-proficient child three to seven years to attain the level of English proficiency needed to succeed in an all-English class.

8 The National Center for Education Statistics (NCES, 1992) estimated there were 429,000 children between the ages of 8 and 15 in 1989 who spoke an Asian language at home. Of this number, 118,000 were thought to be limited English proficient. The fact that our figure differs from that of NCES is indicative of the lack of a common definition of limited English proficiency. For example, estimates of the total population of LEP students in the nation range from 2.3 million to 3.5 million. In calculating the lower figure, the U.S. Government Accounting Office (1994) defined LEP students as children between the ages of 5 and 17 who lived in families in the 1990 census, who did not speak English only, and who spoke English well, not well, or not at all. In contrast, our working definition of limited English proficiency among Asian children between the ages of 5 and 17 is more narrow.

9 In educational parlance, a child from a home where a non-English language is spoken is called a "language minority." Language minority students who are also lacking in English competency are considered LEP. In the national survey of eighth grade students done by the National Center for Educational Statistics (1992), 73 percent of Asian American eighth graders reported they were language minorities.

10 It is likely that first generation Asian American children were the primary beneficiaries of the federal Transitional Program for Refugee Children (TPRC), which expired in 1990. Southeast Asians were the dominant refugee population during the program's lifetime.

11 A fourth major factor has to do with the perception that Asian American children are "model minority" students. We will not discuss this factor here except to note that the portrayal of Asian Americans as the "model minority" is used to stigmatize other students of color. The assertion that the relatively high educational achievement of Asian Americans is endemic to their culture is meant to suggest that the relatively low educational achievement of other children of color is similarly endemic to their cultures. In other words, from the model minority perspective, children are held responsible for their own successes and failures as students. Responsibility is deflected from school systems to provide educational excellence to all children regardless of their backgrounds.

12 Some school districts automatically exclude children with low English proficiency (LEP) from Chapter 1 based on the perception that Chapter 1 bars them from providing remedial instruction in the student's native language (Urban Institute 1993). It is also the case that inclusion in Chapter 1 has generally been dependent upon a student's score on a standardized achievement test. Nearly all such tests are written in English. Many school districts do not administer them to LEP students, who consequently have not been placed in Chapter 1 programs. Recent changes in federal Chapter 1 policy may result in greater inclusion of LEP students. Chapter 1 funds are now to be used for school-wide efforts. All children in a school eligible to receive Chapter 1 funds are to receive Chapter 1 services even if some of the children do not meet Chapter 1 eligibility criteria.

13 If California districts had instead combined Title VII monies with TPRC monies, the amount per student served would total $206. The New York figure would be $232. TPRC provided around $650 per student during the early 1980s (McDonnell and Hill 1993). By 1989-90, funding had decreased to $200 per student.

14 Although it is possible to calculate the distribution of Asian Pacific American family incomes relative to the national median, this distribution would be misleading and upwardly biased due to considerable variation in the median family income across metropolitan areas and because Asian Pacific Americans are heavily concentrated in the larger and higher income metropolitan areas. To minimize this problem, the relative distribution is first determined within the 12 metropolitan areas with the largest numbers of Asian Pacific American children: Los Angeles-Long Beach; New York; Honolulu; San Francisco-Oakland; Anaheim-Santa Ana; San Jose; Chicago; Washington, D.C.; San Diego; Seattle; Houston; and Sacramento. Collectively, these metropolitan areas contained over two-thirds of the Asian Pacific population in 1970 and a large majority of the populatin in 1990. For each metropolitan area, the following steps are done:

a) The prevailing median family income for all families with school age children is estimated from the Public Use Microdata Samples (PUMS) for both 1970 and 1990.

b) The estimated metropolitan-specific prevailing median is then used to determine the relative ranking of Asian Pacific American families with school-age children. The rankings are below 50 percent of prevailing median, 50 percent to 84 percent of the prevailing median, etc.

Because the definitions of some metropolitan areas changed between 1970 and 1990, the actual number of metropolitan areas used is greater than 12. For example, the analysis is done separately for Oakland and San Francisco in 1990. For Asian Pacific American families in areas not listed in the table, the national median family income for urbanized areas is used as the prevailing median in determining relative ranking. The rankings of all Asian Pacific American families (relative to either the metropolitan-specific or national median) are then aggregated and normalized to produce Table 6 in the text.

15 The term "family-based" household is used because the mean average is calculated using all school-age children who are related to the head of the household rather than just sons and daughters.

16 There are other factors that contribute to the apparent discrepancy between fertility rate and observed number of school-age children: (1) a higher infant and child mortality rate in Asia;, and (2) children remaining in the sending country.

17 These are rough but conservative approximations based on 1990 Census data. Unfortunately, the data do not indicate the precise age at which an immigrant entered the country, because the year-of-entry data are reported in two- to five-year categories. We use the mid-point to estimate the number of years in the United States, which is then subtracted from the reported chronological age to derive an estimated age at time of entry. We assume that an immigrant had received his or her primary and secondary education if that person was 19 or older at the time of entry. Immigrants also transfer an enormous amount of human capital in the form of post-secondary education received abroad (Ong and Blumenberg, 1994).

18 Immigrant students of all ages come to the United States. We speculate that those who received at least part of their K-12 education in Asian countries may be relatively advantaged in mathematics compared to their U.S. counterparts. International assessments of mathematics performance among students in different countries regularly indicate that Asian youngsters achieve at higher levels than American youngsters (*e.g.*, American School Board Journal and the Executive Educator 1989). Until recently, the pedagogy provided by teachers in Asia is designed to meet higher standards than those in place in this country, and Asian teachers throughout their careers appear to have more opportunities than their American counterparts to continue refining their skills (*e.g.*, Stevenson and Stigler 1992). Mathematics is international in its conceptual content and emphasis on problem-solving skills. Immigrant students may thus experience a relatively seamless transition from learning mathematics in an Asian country to learning it here, and, although new to U.S. schools, they may tend to have a superior mathematics foundation upon which to draw. This foundation may pay off not only in terms of their mathematics achievement but also in other areas. Sue and Abe (1988) found that, among Asian Americans whose best language is not English, performance on the mathematics portion of the SAT is a better predictor of college freshman grade point average than their performance on the verbal portion of the SAT, regardless of college major.

19 We believe it is indeed through hours spent studying that Asian American children respond to their parents' expectations. Several studies indicate that Asian American children spend more time doing homework than other students (see, e.g., Olsen 1988, Caplan, Choy, and Whitemore 1992, Steinberg, Dornbusch, and Brown 1992, Rumbaut 1994). Time spent on homework is correlated with academic achievement (see, e.g., Peng and Wright 1994, Hsia 1988).

20 We are not unmindful of the possible negative effects of high parental expectations. Lee (1994) found that Korean and other Asian high school students suffered anxiety in trying to live up to parental expectations for academic achievement. They felt embarrassed and depressed if they could not meet expectations.

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