

DEVELOPMENTAL PATHWAYS THROUGH MIDDLE CHILDHOOD

*Rethinking Contexts
and Diversity as Resources*

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Soledad's Dream: How Immigrant Children Bridge Their Multiple Worlds and Build Pathways to College

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Soledad¹ was born in central Mexico and came as a young child with her family to live in California. Both of her parents went to elementary school (*primaria*) in rural Mexico. Now living in a rural California community, her father has worked painting houses and her mother cleaning businesses as they dreamed of college and professional careers for their children. We began to hear Soledad's unique story at age 11, when she wrote an application essay in Spanish for a community college outreach program about her ideal job, her resources, and her obstacles: "I would like to write stories that will teach children many things, like becoming interested in reading. I want to help my community by finding economical resources so that the children don't leave their studies and other things. . . . My obstacles are that I have cerebral palsy. Another obstacle is the English language." At age 13, in the outreach program's Summer Institute activities, Soledad wrote the following in English:

I want to be a writer and a DJ at a radio station. I have decided to go to [UC] Berkeley. I want to go to Berkeley because it has a program for disabled people and I have problems like that. The college is close but not too close. . . . My challenges are my disability, working to pay for college, and having problems

¹Soledad's real name is used at her request, but all other children's names in this chapter have been changed to protect their privacy.

in college. . . . My resources are my teachers, college, books, and DJs of other radio stations.

At age 15, Soledad read five of her poems, in English and Spanish, on her first radio appearance and encouraged her listeners to become writers themselves (see Fig. 11.1). By age 16, she had started her own weekly show, on a university public radio station, entitled "Teen Power/Poder de Juventud," that features an eclectic blend of Latino music, soccer score an-



FIG. 11.1. Soledad Rosas (on right), reading her poems on her first radio show, with the guidance of graduate student Cathy Angellilo.

nouncements, guest interviews, and call-in participation. And at 19, Soledad continued her show while completing her first year as a student at the local community college. And she cotaught a summer class for youth on radio broadcasting, through which she taught younger students and sought a host to take her show when she leaves for a career in commercial radio.

Like Soledad and her family, generations of immigrant families come to the United States with dreams of a better life for their children. Although some immigrants come as refugees from war with goals of survival (see García Coll, Szalacha, & Palacios, this volume), many also come primarily with dreams of education and a better life for their sons and daughters. Immigrant parents have described schools as the "hills of gold" for moving up from their lives of hardship and sacrifice (Azmitia, Cooper, García, & Dunbar, 1996; Cooper, García Coll, Thorne, & Orellana, this volume; Rumbaut, 2000; Suárez-Orozco & Suárez-Orozco, 2001). As Soledad explained, her dream "to help my community by finding economical resources so children don't leave their studies" grew from her mother's stories of Mexico, where she left school for work to help support her family.

How might diversity and context function as resources for children of immigrants like Soledad as they build pathways through childhood? First, we consider diversity, contexts, and pathways through childhood in terms of the "academic pipeline problem." This chapter considers the role of diversity and contexts as resources for children's emerging identities by asking how children of Mexican immigrants—the largest group of immigrants in the United States—navigate across their worlds of families, peers, schools, and community as they build pathways through childhood to college and careers.

DIVERSITY AND EQUITY IN ACCESS TO EDUCATION: THE ACADEMIC PIPELINE PROBLEM

Children's pathways through school can be seen as moving through an "academic pipeline" from childhood through school to adult family, work, and community roles (Gándara, Larson, Mehan, & Rumberger, 1998). However, despite the fact that communities value equal access to education and each cohort of children entering school represents its community demographics, low-income, ethnic minority, and immigrant youth leave school in higher numbers and are less likely to attend college than middle-class and ethnic majority youth. Thus, as each community's cohorts reach age 18 and make the transition to college, they have become demographically unrepresentative of their community.

This academic pipeline problem has emerged in many nations as immigrants, refugees, and guest workers remain in host countries and send their children to school. And, it is especially likely when parents have not at-

tended college, schools lack guidance counselors, and support programs target preschool or high school but leave a gap from elementary into middle school, when children's pathways toward or away from college diverge. Of course, college is not the only mark of success, but education is clearly linked to life opportunities and choices and predicts income in all ethnic groups, and youth who leave school with low skills can drift toward illegal work and other high-risk activities. Although research on the academic pipeline problem has focused on children and youth who drop out of school, this chapter asks how immigrant, low-income, and ethnic minority children build pathways to college.

RETHINKING DIVERSITY, CONTEXTS, AND PATHWAYS: CAPITAL, ALIENATION, AND CHALLENGE

Debates on the academic pipeline problem offer insights about its persistence and remedies from three viewpoints we shall call *capital*, *alienation*, and *challenge*. Although stemming from different disciplinary roots, each theory points to the significance of the interplay of diversity and contexts—especially families, peers, schools, and community programs—for immigrant children's identities and their pathways through school (Cooper & Denner, 1998).

"Capital theories," developed by sociologists, suggest that children whose parents attended college are more likely to develop academic identities, college-based career goals, and achieve at higher levels than those whose parents have had less education, thus reproducing social hierarchies across generations (Bourdieu & Passeron, 1987; Coleman, 1988; Dika & Singh, 2002). Evidence for this model is seen in multination studies showing social class hierarchies are maintained even while average levels of educational attainment rise (De Graaf, De Graaf, & Kraaykamp, 2000). Recent sociological studies ask how low-income, ethnic minority, and immigrant youth may create cultural capital—knowledge of how opportunity structures work—and develop academic identities by building ties from families and peers to teachers, counselors, and college-preparatory programs (Mehan, Hubbard, & Villanueva, 1994; Stanton-Salazar, 1997).

"Alienation models," proposed by cultural anthropologists, argue that racial and economic barriers can dim ethnic minority families' high hopes for their children's futures and lead youth to disengage from school by forming oppositional identities that affirm peer bonds and buffer against school failure (Fordham & Ogbu, 1986). Evidence for this view includes ethnographic work with African American youth, where disengagement across school, family, and peer contexts undermined youth engagement in school and their goals for college and careers (Ogbu, 2003). Other ethnographic studies report

that being marginalized from opportunities to belong in families and in schools was typical of youth who developed gang identities in Latino, African American, and Asian communities (Vigil, 2004). Anthropologists have also compared youth who sustain school engagement to those who develop alienated identities. Gibson (1997) found academically successful Punjabi Sikh and Mexican immigrant high school youth were optimistic about their own future prospects while aware of their peers' limited opportunities.

Finally, "challenge models" suggest that immigration, poverty, or racism can, under some conditions, motivate children and youth to take action to succeed on behalf of families and communities and prove gatekeepers wrong. In their Students' Multiple Worlds Model, educational anthropologists Phelan, Davidson, and Yu (1998) chose the geographical metaphors of "worlds" to refer to cultural knowledge and expectations held in each social context, and "navigation" to capture youths' actions and experiences as they try to move across borders among their family, school, and peer worlds. The Bridging Multiple Worlds Model (Cooper, 2003; Cooper, Cooper, Azmitia, Chavira, & Gullatt, 2002) builds on this work to trace how ethnically diverse children forge their sense of identity by navigating across their worlds of families, peers, schools, and communities on pathways to college and adult work and family roles. This multilevel developmental model traces the interplay of challenge and support at personal, relational, institutional, and cultural levels. It proposes that challenges in the context of support foster identity development and pathways to college. This paradoxical interplay of challenge and support in development is also a key process in Erikson's (1968) account of identity development and Werner and Smith's (1992) studies of resiliency.

As shown in Fig. 11.2, the Bridging Multiple Worlds Model targets five dimensions or levels over time that follow children's transitions as they navigate through the academic pipeline:

1. Demographics along the academic pipeline—families' national origin, ethnicity, home languages, and parents' education and occupation gauge equity in access to educational opportunities among cohorts of students moving from childhood to college.
2. Identity pathways to college, careers, and family roles.
3. Math and language academic pathways through school.
4. Challenges and resources across children's worlds of families, peers, schools, and communities.
5. Cultural research partnerships that boost resources children draw from each world as they build pathways to adulthood.

Studies of this theory involve culturally diverse cultural communities, including U.S. youth of African, Chinese, European, Filipino, Latino, Native

American, Japanese, and Vietnamese descent, as well as Japanese youth and multiple-heritage youth (Cooper, 1999, 2003; Grotevant & Cooper, 1998). The work addresses three related aims: scientific goals of conceptualizing and understanding how ethnically diverse children navigate their worlds of families, peers, school, and communities along their developmental pathways; policy issues of equity in access to education; and issues of educational practice in multicultural communities.

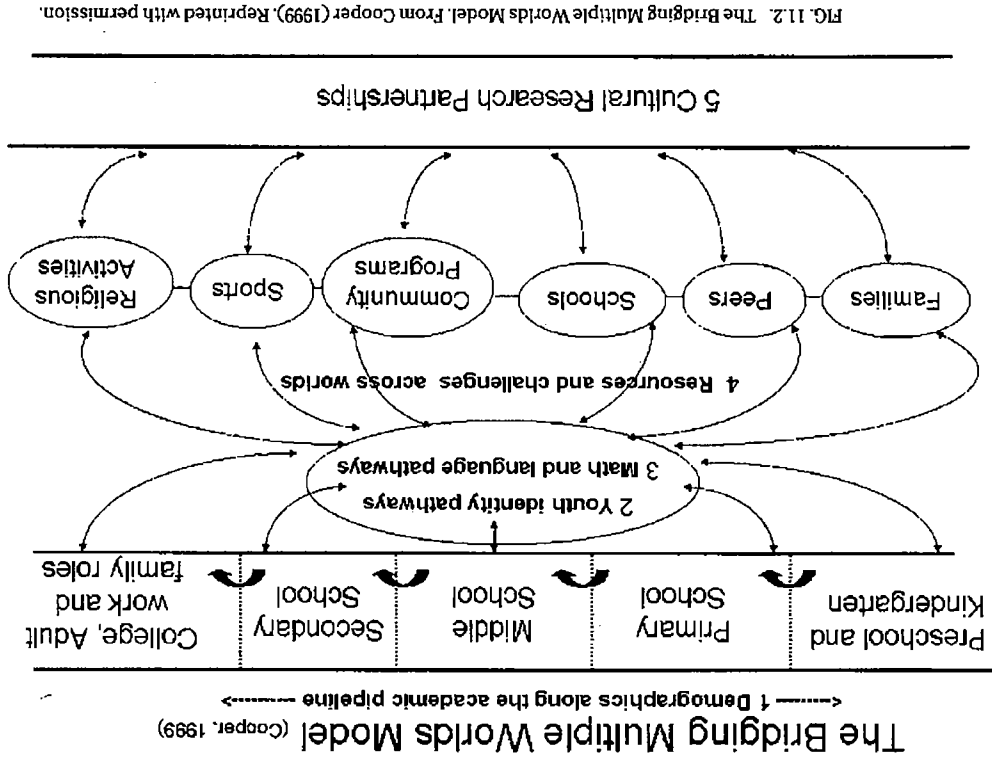
This chapter illustrates the testing, application, and revision of this theory in a longitudinal study of emerging identities of Mexican immigrant children as they navigated the academic pipeline from childhood to college. Mexican-heritage children are of special interest on issues of immigration, identity, and education. In both the 1990 and 2000 U.S. censuses, Mexican-origin families were the largest group of immigrants and the largest group among Latinos in the nation (U.S. Immigration and Naturalization Service, 2000). This chapter complements others in this volume that focus on children's transition into elementary school (e.g., Stipek, this volume) by targeting the transition from childhood into adolescence as a key time when children's pathways toward or away from college diverge.

The study draws from one cultural research partnership between university researchers and a community college outreach program that awards scholarships and offers support to help students from low-income, mostly Mexican-descent families to stay on track to college. The partnership has collected long-term data from children, beginning with their entry into the program at ages 11 to 12, through their high school graduation at age 18. This chapter draws on these data to focus on students beginning in late middle childhood and their challenges and resources navigating from childhood to college. We first describe group-level longitudinal patterns reflecting the five levels of the Bridging Multiple Worlds Theory: (a) demographics along the academic pipeline, (b) children's college and career identities, (c) their math and English pathways, (d) their challenges and resources across worlds, and (e) the cultural research partnership over time. We then consider three longitudinal case studies of children in the program to illustrate the group-level patterns in the lives of individual children and to probe more closely under what conditions children of immigrants build pathways to college (Yin, 2003). Finally, we reflect on implications of our findings for science, policy, and practice.

METHOD

A Program and a Partnership

The study was conducted in a cultural research partnership with a community college outreach program that involves about 500 children and youth at any one time. The program awards \$1,000 scholarships to the community



college to sixth-grade students from low-income families and offers supportive activities from sixth grade to college to help students stay on track to high school graduation and college. These include a spring awards ceremony for new students and high school graduates and their families, an annual Summer Institute, Saturday Academies in fall and spring, year-round tutoring at students' schools, counseling by the program director, and family involvement activities (Denner, Cooper, Dunbar, & Lopez, 2005). The program was founded in 1991 by the president of the community college, who was inspired by Eugene Lang's "I Have a Dream" program. In 1995, as part of the MacArthur Network (see chapters by Garcia Coll et al., and by Thorne, this volume), the partnership was created by the first author (a university professor) and second author (the program director) to examine how the program worked with children from low-income and immigrant families to build pathways to college and careers.

The partnership is ongoing, with regular meetings with program and research staff, scholarship donors, families, and youth, to identify questions and integrate data collection and analysis with program activities. Program staff and youth participate in data collection, analysis, and interpretation, and research staff help with program planning, delivery, and communicating with scholarship donors (Denner, Cooper, Lopez, & Dunbar, 1999). Members of the partnership ask questions useful to them. For example, the director has asked questions such as the following: (a) Who participates? (b) Who attends activities such as tutoring? (c) Do students' grades rise and fall or are they stable? (d) How do peers matter for students' pathways to college? and (e) How useful do graduating students consider the different components of the program?

During each Summer Institute, beginning in 1996, children and youth in the program have written about their family trees, their college and career goals, charted their math and English pathways, and described who helped and caused them difficulties in schoolwork, in math, staying in school, and thinking about college. Youth also have written their reflections on the partnership findings, suggestions for improving the Summer Institute, and about the impact of the program on their lives. The partnership created a longitudinal database for all children in the program, including program records, application essays, grades, and responses to annual Bridging Multiple Worlds activities.

Participants

The primary analyses for this chapter focus on 116 children (83% of those selected) who had a Spanish surname (76 girls and 40 boys) and who entered the program at age 11 or 12 (in sixth or seventh grade) between 1995 and 1997. The children were living in two adjacent communities in a single California county, 34% in the town of Santa Cruz, a small city with a majority

European American population in the "north county" and 66% in the town of Watsonville, a rural, predominantly Spanish-speaking community in the "south county." The community college is located, by design, midway between the two communities.

Measures

In the mixed-methods design, the partnership drew on census data from national, state, and county sources; children's, parents', school, and program perspectives; as well as the observations of university researchers. To tap children's views, we adapted the Bridging Multiple Worlds Survey originally developed for high school youth (Cooper et al., 2002; Cooper, Jackson, Azmitia, & Lopez, 1998) into a bilingual activity format entitled "It's All About Choices/Se trata de todas las decisiones: Activities to Build Identity Pathways to College and Careers" (Domínguez et al., 2001). These activities constituted two of the four Summer Institute classes. Program staff compiled children's attendance at the annual Summer Institutes. We also analyzed children's program application essays, their pre- and post-Summer Institute surveys, and interviews with students at age 18 by the bilingual program staff.

Demographics Along the Academic Pipeline. We conducted longitudinal analyses of pathways through school from 1996 to 2003 with regard to national origin, ethnicity, home languages, and parents' education and occupation as well as students' gender. We drew on national, state, and county census data to compare to our local sample of children as they moved through the academic pipeline. Information about sample families' national origin and parents' education and occupation were compiled from program and school records. In addition, in "It's All About Choices," children were asked the following: "Who is in your family? Where were your parents born? How far did they go in school? What are their jobs?"

Children's Identity Pathways to College and Careers. Children's career goals were measured with children's program application essays ("Describe your ideal career goal") and their Summer Institute pre-session and post-session surveys (e.g., "Name the career you would like to have when you finish school"). Answers were coded by social class (Hollingshead & Redlich, 1958) from 1 to 7 (higher executives and major professionals to unskilled labor). Children's college and career knowledge was also assessed in the Summer Institute pre-session and post-session surveys, in which children were asked, "How many years after high school would you need to attend school to attain your career goal?" Answers were coded from 1 to 3 (1 = *unrealistic answer*, 2 = *has some idea*, 3 = *knows answer*).

Children's math and language academic pathways were coded from school transcripts for math and English classes and grades from sixth through high school. A coding system from prior studies of children's math and language pathways was adapted for this sample that distinguished trajectories of students' grades over time as high, declining, increasing, back on track (declining then increasing), and low pathways (Cooper et al., 2002). The year in school students passed Algebra 1 with a grade of C or higher was used as an indicator of being on track to college.

Challenges and Resources Across Children's Worlds of Families, Peers, Schools, and Communities. In "It's All About Choices," children were asked "Who helps you?" and "Who causes you difficulties?" for several topics, including with schoolwork, with math, going to college, and being a good person. They were also asked, "Who do you help with these things?" Responses were coded for person and traced longitudinally (Holt, 2002; Mena et al., 2001). In the "career pyramid," children wrote a sequence of steps they anticipated toward their school, career, and family goals, and, on either side of the pyramid, their challenges and resources attaining these goals.

Cultural Research Partnership: What Is Success? The director, scholarship donors, and community college executives discussed and defined students' success as any of the following: graduating from high school; attending college, whether 2-year community college, technical school, or 4-year college or university; or entering military service. The leaders defined program success as increasing the percentage of students at age 18 with any of these pathways compared to other students at schools program students attend, compared to county demographic data, and compared to prior cohorts of students moving through the program. Based on this definition, the research partnership assessed participants' post-high-school status with a postcard survey and follow-up telephone interview by a bilingual program staff member. Questions included the following: "Did you graduate from high school? Did you attend college after high school? If yes, where? If not, do you still plan to attend?" Responses were coded from 0 to 7 (0 = *moved or lost contact*; 1 = *will graduate from high school in year interviewed*; 2 = *did not graduate from high school*; 3 = *high school graduate only*; 4 = *enrolled in technical school*; 5 = *enrolled in military*; 6 = *enrolled at 2-year community college*; and 7 = *enrolled at 4-year college or university*).

KEY FINDINGS

First, we consider group patterns from 1995 to 2003 across the five levels of the Bridging Multiple Worlds Theory to examine under what conditions children from low-income immigrant families do and do not build success-

ful pathways to college. In brief, demographics revealed how children of low-income immigrants from Mexico gained access to educational opportunities as they applied and were selected for the program, although more girls than boys applied and were accepted for the program and this gender imbalance grew over time. Children's identity pathways to college and careers reflected growing understanding of their college and career goals during the program Summer Institute. Children's math pathways diverged early, with elementary grades predicting later grades. As with peers at their schools, passing Algebra was a challenge, with many needing extra time to complete it. The challenges and resources across children's multiple worlds shifted as children increasingly drew on both families and peers to build college-bound networks. The cultural research partnership, tracing longitudinal data from age 11 to 18, found children built pathways to more than one type of college, and the partnership appeared to increase in effectiveness over time. Finally, three longitudinal case studies illustrate the configuration of dimensions of the Bridging Multiple Worlds Theory in individual lives and also highlight the complementary nature of capital, alienation, and challenge viewpoints.

Group Patterns Over Time

Demographics Along the Academic Pipeline Reflect Access and Attribution. In the partnership, demographics of participating children were traced from the year they applied for the program at age 11 to age 18. Following program guidelines, teachers and the director chose among applicants whose families were considered low-income by their eligibility for federal free and reduced-price school meal programs. Neither children's country of birth, whether they wrote application essays in Spanish or English, nor elementary school grades, predicted which children were selected (Denner et al., 2005). As they entered the program, the children were comparable in math and English grades to a school-based sample from the same communities (Azmitia et al., 1996; Azmitia & Cooper, 2001).

Participating children were mostly Latino and of these, almost all of Mexican descent. Census records indicate that the high number of Mexican-heritage children in the sample was representative of schools in Watsonville ("south county") but not Santa Cruz ("north county"). Among children in the program, program records indicated that parents' formal education, usually in Mexico, was typically less than high school, and for many, at the elementary level. Children's descriptions of their families revealed their parents worked picking strawberries, mushrooms, or lettuce, on cannery or factory assembly lines, or cleaning houses and hotels. Thus, the children in the program were typical in national origin, ethnicity, parent education, home language, and income, for south county, and school achievement of

both north and south county. However, more girls than boys applied and were selected for the program. This gender imbalance of more girls participating than boys increased over the years from elementary through high school, and parallels state and national imbalances in college enrollment (Edgert & Taylor, 1996).

Children's Identity Pathways to College and Careers Reflect Looking Up and Giving Back. In their program application essays, the 116 children described their dreams of college-based careers—becoming doctors, lawyers, and mechanics. As in other studies of low-income Mexican immigrant families in school-based inclusive samples (Azmitia et al., 1996), children dreamed of college and college-based careers for themselves. Their goals were striking given their parents' modest levels of education and lives of physical labor. And children wrote about their parents' lives while describing their own future career goals, challenges, and resources (Holt, 2002). This indicates that children who build successful pathways to college appeared to do so not in spite of their parents' modest education and occupations but because of their parents' hardships, support, and guidance. On the pre- and post-Summer Institute surveys, children's college knowledge of how many years it takes after high school to reach their career goals increased even over a single 1-week Summer Institute (Chavira et al., 2003).

Math Academic Pathways to College and Careers Diverged Early But Some Got Back on Track to Algebra and Beyond. We followed 106 students for whom we had transcripts from when they entered the program at sixth grade through high school (Azmitia & Cooper, 2001; Chavira et al., 2003). By the ninth grade, 40 (38%) had taken and passed Algebra, a key step to eligibility for 4-year colleges and universities. The earlier students took Algebra, the more likely they were to pass it, with 7 of 7 (100%) passing at eighth grade, 33 of 49 (67%) at ninth grade, 11 of 24 (46%) at 10th grade, 5 of 9 (56%) at 11th grade, and 18 students not taking Algebra. (These figures compared favorably to data from the local high school, where, of 980 ninth-grade students in 1999–2000, 30.4% passed Algebra I.) All were eligible for community college, where Algebra I is the only math required for an Associate Arts degree. Their math pathways diverged early: students who passed Algebra I by ninth grade had made higher grades in sixth grade than students who failed Algebra or took remedial classes.

When we traced the 106 children's math pathways of classes and grades from 6th to 12th grades, we replicated our earlier findings of consistently high (15%), declining (18%), increasing (5%); this pathway often shown by immigrant children learning English), back on track by declining then increasing (8%), and persisting at low levels (8%). In addition, we observed path-

ways we labeled *struggling*—increasing and then decreasing in the opposite pattern of back on track—(8%), and *rollercoaster* (38%). These patterns resemble the excellent, positive, low, abysmal, and mixed academic pathways from fourth to sixth grades among children of Dominican, Portuguese, and Cambodian immigrants described by García Coll et al. (this volume). Some students moved back on track after experiencing challenging personal events and others moved up from remedial math to Algebra, sometimes re-taking Algebra before more advanced classes. These findings suggest children would benefit from help early to ensure they finish high school with the skills to find legal employment; youth on pathways through the juvenile justice system for theft and drug-related crimes typically have sixth-grade academic skills (Haycock, 1996). Students who attended more Summer Institutes did not differ in when they passed Algebra 1, but they were more likely to graduate from high school compared to those participating less often; this pattern could reflect either differential attrition or the effect of the program. See Fig. 11.3.

Challenges and Resources Across Children's Worlds of Families, Peers, Schools, and Communities Shifted as Children Built College-Bound Networks. At age 11 in their application essays, children described challenges across their multiple worlds to attaining their dreams of college and careers, such as their families needing them to work, peers pressuring them

Five Typical Pathways of Math or Language Grades:
High, Decreasing, Increasing, Back on Track, and Persisting

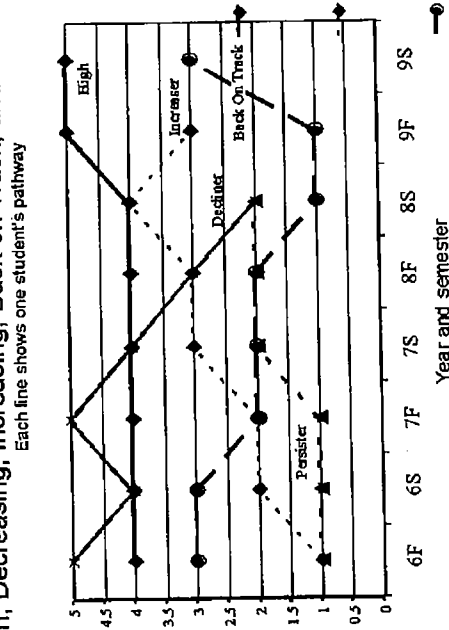


FIG. 11.3. Prototypic math pathways through school: Each line represents one student's pathway.

to take drugs, and being immigrant minorities ("people that don't like us people [who are] brown"). Children saw resources in families, friends, teachers, counselors, coaches, and outreach program staff; in their own qualities ("never giving up and studying a lot"); and in scholarships and loans. At age 13, children attending the Summer Institute were much more likely to list their families as resources than as challenges (70% vs. 10% in 1997; 73% vs. 10% in 1998). Both in 1997 (77 children) and 1998 (84 children), students listed peers as both challenges and resources at comparable rates (30% vs. 40% of students in 1997; 50% vs. 55% in 1998). With peers, students described challenges by listing boyfriends, girlfriends, peer pressure, "temptation of friends dropping out," "friends as bad examples," gangs, "bad friends," "bigger students," "illegal friends," and "enemies." Many also listed "drugs," "sex," "having babies," or "pregnancies." As resources, students also listed friends, boyfriends, "bigger students," girlfriends, and "leave your boyfriend if he takes too much time." These findings replicate other research (Fordham & Ogbu, 1986) on how peers challenge students' school engagement and also point to the central role of families—many of whom had completed only elementary school—on their pathways to college (Azmitia et al., 1996).

On more specific topics of who helped and who caused them difficulties in schoolwork, math, thinking about the future, and staying on track to college, as children continued through the program, they increasingly named both parents (especially mothers) and peers as resources. On average, students reported more help from mothers than siblings, peers, or extended family, and more from fathers than peers. Even so, peers caused the most difficulties, more than mothers, fathers, or extended family, but not siblings. Over time, students listed peers helping them more with schoolwork and math, and parents, especially mothers, helping most in thinking about the future, about college, and staying in school (Mena et al., 2001).

This surprising finding of how children increasingly saw parents and peers as resources contrast with school-based studies on how adults pull away support for children as they move from elementary to middle school and how peers challenge children's school engagement (Azmitia & Cooper, 2001; Eccles et al., 1993). These findings point to the continuing importance of immigrant parents—again, many who had completed only elementary school—as resources and challenges in children's pathways to college and career identities.

These patterns were evident when children at the Summer Institute were asked to write about "who helps you with math," typical of their responses were the following (Holt, 2002): (a) "No one helps me but my math teacher. Sometimes I ask my mom but she doesn't know that kind of math," and (b) "The person who helps me out the most when it comes to math is one of my friends. She goes through the math problem step by step as clearly as she

can. Most of the time I understand how to do it but I still have trouble a lot of the time. For example, the day before a quiz I always get extra help from her." When students wrote about who helped them think about going to college, the following responses were typical (Holt, 2002): (a) "My mom helps me think about going to college because she says that if I don't go to college I wouldn't have a good future. Also, because she doesn't want me working on the fields (picking crops). She makes me understand that a good education is good for me. Also that I could study whatever I wanted to be in the future"; (b) "My mom loved to go to school, but had to quit school to start working at the age of 12. Her mom didn't let her do her homework and she really liked to do homework. Instead she had to do chores. She's always telling me about how good it is for me. She tells me that I need to seize the time that I have to go to college and not drop out of school"; and (c) "My parents told me to go to college because if I wanted to get a house I had to get a good job. Going to college helps you get a career instead of being a gangster, drug dealer or other things that cause you to get in trouble with the cops even though you get good money in a dangerous way." One interpretation of these findings is that the program helped children by boosting resources they drew across their worlds of families and peers rather than by operating alone. This resembles findings for the Big Sisters-Big Brothers program that mentors were indirect rather than direct resources for children's well-being by boosting mothers' impact (Rhodes, Grossman, & Resch, 2000).

Cultural Research Partnerships: What Is Success? Pathways traced for 106 children from age 12 to 18 revealed they built more than one pathway to more than one type of college, and that the program appeared to play a key role in keeping the pipeline open to college and college-based careers. Table 11.1 shows the range of math pathways and students' status at age 18. When the partnership compared cohorts of children over time, those

TABLE 11.1
Math Pathways Through School: Six Longitudinal Case Studies

	Grade in School		Math Pathway	Follow-Up at Age 18
	Passed Algebra			
Luis	9th	High	High	Directly to university
Monica	9th	High	High	Community college and then technical school
Soledad	10th	Increasing	Increasing	Community college and plans for university
Jana	10th	Back on track	Back on track	Community college then to university
Raul	9th	Declining	Declining	High school graduation
Mike	?	Low	Low	High school graduation and community college

who entered the program from 1996 to 1998 graduated from high school and attended college at higher rates compared to children who entered the program from 1991 to 1995 and compared to high school peers, or to adult census counts. This suggests growing effectiveness of the program and partnership.

A Closer Look at Diversity and Contexts as Resources With Longitudinal Case Studies

Three longitudinal case studies of children in the college outreach program, followed from childhood to young adulthood, show the interplay of family demographics, children's college and career identities, their math pathways through Algebra 1 and beyond, their challenges and resources across worlds, and their pathways at age 18. These cases show how group-level findings occur in individual lives yet how the distinctive patterns of these configurations make each child's experience of building pathways through school unique.

Luis: A High Math Pathway to University. A son of immigrants from Mexico, Luis was born in the United States. His parents owned a small catering business. His career dream that he wrote about as a child was to become an engineer. His family—his parents, brothers, and cousins—and his program tutor encouraged him and helped him stay on track to college. "My mom didn't know about college, and she wanted to learn what I was feeling, and about the qualifications." He built peer networks by making friends from different schools, and even hung out with students from his rival high school. Luis was one of the most engaged students in the college outreach program: his attendance was very high, as he participated in almost every activity—in his words, "every time they had them"—from 6th to 12th grade. He did not attend afterschool tutoring often because he worked, although he said he needed help on math, but he went to most program events, "because I wanted to know about college . . . I knew I wanted to go to college, and I was looking for a school. (The program director) knew all my family and the information was helpful . . . I wanted to look at other schools (besides the local community college) and she would take me." Luis passed Algebra 1 in ninth grade along the "high pathway" in math and English, took honors classes, and graduated from high school eligible for the university. He now attends a 4-year university and majors in engineering.

Monica: A High Math Pathway and the Challenge of Early Motherhood. Monica and her parents were born in Mexico. At age 11, when she applied for the college outreach program, her career dream was to become a surgeon. Monica and her sisters were very involved with the program and

Monica participated in all program activities. She actively built bridges across her multiple worlds—when she became a cheerleader at school, she invited the program director to a game. And when she became a teenage mother, she didn't lose sight of her college dream. The director went to see her when she came home from the hospital with her baby, and her first words to the director were, "don't worry, I'm going to graduate from high school." She did graduate on time with her class. Monica had help staying on track to college from her parents and sisters, her baby's father, the teen mother program at her high school (which provided child care), as well as the college outreach program. Monica was on the "high pathway" in math, taking and passing Algebra 1 in ninth grade. She enrolled in the local community college and claimed her scholarship. After two semesters, she transferred to a technical college, where she earned a Medical Assistant certificate. She then worked as a medical assistant in a local clinic and plans to apply to the nursing program at the local community college.

Mike: A Low Math Pathway of Alienation, Persistence, and Disengagement. Mike's story includes economic hardship, being homeless and separated from his family, stealing bicycles with gang-affiliated peers, and being chosen for the college outreach program in sixth grade. His participation in the program was limited by his moving in and out of school because of time in the juvenile justice system for theft. When another student in the program told the director that Mike was back in high school, this allowed the program director to get in touch with him at the end of his junior year. Being in jail made Mike appreciate life; he appreciated that he was remembered, and he thanked the director "for not giving up hope in me." Mike was on the "low pathway" in math and graduated from high school without having passed Algebra 1. He enrolled in the local community college and claimed his scholarship from the program, but since then, the program director has lost touch with him.

These case studies show both more and less successful pathways from childhood to college. The case of Luis provides an example of a child of immigrants with high math grades and aspirations to become an engineer who built ties across his worlds of family, peers, school, and community programs on his pathway to college and career identity. His case also shows how children can play key roles in creating social and cultural capital for college and career mobility. The case of Monica shows how a high math pathway and a dream of becoming a surgeon was challenged by early motherhood but supported by her family, the baby's father, school, and both college outreach and teen mother programs. She sustained her high math pathway and built her identity pathway to college and her college-based career. And the case of Mike shows "the limits of resiliency," in which a child with many challenges and few resources from families and peers

was helped by a peer and a community program, yet ongoing challenges still undermined his long-term pathway.

These cases clarify the interplay of diversity, challenges, and supportive resources in children's identity pathways to college predicted by the challenge hypothesis of the Bridging Multiple Worlds Theory. The cases also hint at processes described by social capital and alienation theories. We caution that the case studies and larger database were not designed to test rival hypotheses to determine which is the best fit for the data. Rather, these cases suggest factors that may contribute to causal explanations and further questions for analysis. Following Yin's (2003) pattern matching approach, we are developing case study templates to align and compare social capital, alienation and engagement, and other theories of family-school-community partnerships to link with multivariate analyses of challenges and resources within and across cultural communities in sites across the United States.

IMPLICATIONS FOR SCIENCE, PRACTICE, AND POLICY

Aligning Capital, Alienation, and Challenge Models

This work builds on studies of Mexican immigrant families, the largest immigrant group in the United States, that show parents hold high hopes of their children moving up from parents' lives of physical labor picking strawberries or lettuce, standing on factory assembly lines, or cleaning houses and hotels, to technical or professional careers (Azmitia et al., 1996). In essence, they seek to "beat the odds" and disprove theories of social reproduction—that each society's social class hierarchy tends to be reproduced from generation to generation. The longitudinal study described in this chapter suggests that families, schools, peers, and community programs can bridge to community colleges and universities for children to support both college-bound and remedial students, whom scholars often find to be increasingly pessimistic, disengaged, and alienated as they move through school (Fordham & Ogbu, 1986; Gibson, 1997; Matute-Bianchi, 1991). Programs that begin in late middle childhood may be especially important for keeping students engaged in school and continuing through the academic pipeline.

These findings also indicate that future studies of models linking diversity, contexts, and pathways through childhood will benefit from mapping configurations of features of children's lives with families, peers, schools, and community programs over time. We are pursuing this approach to compare capital, alienation and disengagement, challenge, and ecocultural

theories by linking longitudinal case studies to variable-based analyses (Cooper, Brown, Azmitia, & Chavira, 2005; Yin, 2003). In doing so, we found different life histories may exemplify patterns of variables predicted by different theories. Thus, the cases of Luis, Monica, and Mike could be considered as cases of building capital, rebounding from challenge, and struggling with alienation, respectively. Social scientists increasingly view life histories through multiple theoretical lenses, with each revealing valuable insights. For example, Weiss and her colleagues (Chapter 1, this volume) are writing a casebook that offers a set of theoretical lenses for educators to use in reflecting on families' relations with schools.

These findings begin to reveal under what conditions children from low-income immigrant families either build pathways to college, repeat their parents' attainments, or move onto alienated and disengaged pathways. The more we understand why and how students stay on pathways to college, the more effectively we can support them and locate assets for their success. Questions about these pathways from many partners—families, principals, teachers, counselors, programs, university researchers, and children—prompted our developing the Bridging Multiple Worlds Toolkit. Written in English and Spanish, it includes questions in survey and interview formats and an activity format for schools and programs called "It's All About Choices/Se trata de todas las decisiones," as well as templates for analysis, graphing, and presentations that link longitudinal case studies with statistical analyses. The tools allow families, schools, and community programs to help children map their worlds and pathways through school. For example, the tools help them write about their dreams for the future, see if they are off track in math, show them how to get back on track, and find and use resources across their worlds. The activities for elementary, middle, and high school students are being used for teacher training, in school classrooms, and statewide evaluations of outreach programs. The toolkit is available free, with prototypes in English and Spanish, at <http://www.bridgingworlds.org>. Partnerships have adapted the tools to local settings in the Providence, Rhode Island, Southeast Asian community, in a Native American pueblo community in New Mexico, and in rural and urban communities of northern California.

Is the Cultural Research Partnership a Blueprint? Challenges and Resources to Sustainability

In tough economic times across the nation, partnerships are affiliating with broader alliances, such as the Education Trust, the Pathways to College Network, and FINE (Family Involvement Network for Educators), to keep academic pipelines open. Partnerships find that linking local and systemic efforts can be useful. Sustaining the partnership described in this chapter

was strengthened by training ethnically diverse college students as researcher-practitioners, enhancing their mentoring skills, educational leadership, and university studies. This training built on their roles as front-line staff of programs and as students. These young adults defined success in life in terms of both the good moral path—*el buen camino de la vida*—and schooling (Reese, Balzano, Galimore, & Goldenberg, 1995). They helped children with homework and linked families, schools, and communities with their dreams and fears for the future. The young adults also gave children a chance to talk and write about their dreams for careers, education, families, and communities (Cooper, Denner, & Lopez, 1999). They valued children's home communities and many shared home languages and sometimes, family histories, so they could help children understand how to retain community traditions while succeeding in school, college, and community.

Linking Generations by "Looking Up and Giving Back"

The college students presented graphs and summaries of key findings to children and youth in the program and asked them to write about these findings and what other questions they wanted to answer. In this way, children took part in the research partnership to improve the program. As policies involving diversity, immigration, and inclusion continuously change, stakeholders value monitoring diverse children's pathways in both quantitative and qualitative terms. Although few controlled experiments exist, analyses of programs deemed effective appear to sustain parents' and other adults' beliefs that schooling will benefit children (Adger, 2001). We have observed partnerships with students, families, community organizations, schools, districts, and universities at local, regional, state, and national levels. Some partnerships build "vertical teams" to support ethnically diverse children and youth navigating from kindergarten through college to adult careers and family life. We see partnership members, younger and older, becoming increasingly interested and skilled in thinking about longitudinal analyses, especially of case studies that link qualitative and quantitative data.

Although students in this study appeared more academically engaged than those described by Vigil (2004), a striking parallel across the studies are multi-age peer groups, with older experienced members providing examples and lessons beyond the worlds of younger members. Vigil described a compensatory role of gang peers: when family, school, and police fell short and students lost their trust in them, the street peer group took over as family. In contrast, as the community college outreach program graduated its first cohorts, its alumni became role models for younger children as tutors and mentors.

The program also bridged students' families, schools, peers, the criminal justice system, and college. Sometimes the director bridged between stu-

dents and their own families when students were ill, abused, or homeless. She talked with parents, referring them to community agencies and translating between Spanish and English for them. She translated at court hearings, visited students in jail, and explained criminal procedures to parents. She attended school district expulsion hearings and was asked by families to write letters for children getting their "green cards" to document their legal residency status.

Thus, this long-term study became an ongoing partnership among youth, families, schools, and community organizations. Children and youth comment that the activities help them think about the future. Many of their families hold high educational values and goals for them but may be less familiar with the language and practices of schools and need ways to become involved. Community organizations often seek partnerships with families and schools and can provide academic skills, information, high expectations, and a sense of moral goals to achieve on behalf of families and communities, but changes in funding pressure them for program evaluation. School staff—principals, counselors, and teachers—tell us they seek ways to include families with diverse literacies and languages and to monitor longitudinal data on their effectiveness for children's pathways through school.

A further development began in 1999, when the University of California, Santa Cruz Educational Partnership Center, became a partner in the federal GEAR UP program (Gaining Early Awareness and Readiness for Undergraduate Programs), which includes students from all four middle schools in Watsonville. GEAR UP is designed to increase the numbers of low-income students prepared to enter and succeed in postsecondary education, with programs in 48 states and 324 GEAR UP partnerships serving over 1 million students. In the local GEAR UP partnership, students in Grades 6 through 8 participate in a 1-week college awareness curriculum each year, with different activities at each grade level. Among the activities Watsonville teachers chose for sixth graders are those we originally designed as research measures (Cooper et al., 1998) and then adapted for sixth-grade students into "It's All About Choices," including the following: (a) "Who helps you?" (b) "Who causes you difficulties?" (c) the Career Pyramid, and (d) pre- and post-Summer Institute surveys.

Beyond California: Linking Local and Systemic Views in Multisite Alliances

The goal to enhance access to college and legal employment for children of diverse ethnic, racial, economic, and geographic communities rests on customizing programs for local communities while staying attuned to common goals and collaborating among diverse stakeholders—children, families, schools, community programs, legislators, the business sector, and media.

