Factors Affecting the Retention, Persistence, and Attainment of Undergraduate Students at Public Urban Four Year Higher Education Institutions

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ABSTRACT

Preliminary research into the populations of public urban four year higher education institutions indicates that race/ethnicity and Verbal SAT scores may be acting as proxies for immigration status and the use of a home language other than English. There are indications of differences in the behavior of immigrant/other language students that may impact retention, persistence, and attainment. This paper uses data from the 2000 National Postsecondary Student Aid Study (NPSAS:2000) and the 1996 Beginning Postsecondary Students Longitudinal Study (BPS:96/01) to construct and test models of these measures for large city institution populations compared to other public four year institutions, with attention to immigration issues. It focuses on some outcomes for students who lived with family or other relatives during the first year vs. those who had other living arrangements. The results suggest that, at least for some immigrant students, assimilation theory may be a better fit than current retention theory for explaining successful outcomes.

INTRODUCTION

Public urban higher education institutions that identify themselves as having an urban mission have been having conversations for some time about the fact that they differ from their public flagship counterparts (some of which may be located in urban areas) and their private counterparts (regardless of where they might be located) in a number of ways. The Coalition of Urban and Metropolitan Universities (CUMU), the Urban 13/21, and the Urban University Statistical Portrait Project which evolved into the Portrait of Universities with Metropolitan Alliances (PUMA) have all developed at least partly to explore these differences. After much discussion and consultation, representatives of a number of institutions that made up PUMA developed a list of defining characteristics for urban institutions. These involved an especially strong focus on Access and Support, Student Learning in the Urban Context, Diversity and Pluralism, Civic Engagement, the Urban Relevance of Programs and Scholarship, and especially in the diversity of the students they serve (Portrait of Universities with Metropolitan Alliances, 2004). Susan Choy's (2002) recent report for the American Council on Education identified understanding the recent explosion of diversity in college populations as essential to the appreciation of access and attainment in higher education. Public urban universities are in the forefront of dealing with this diversity, and if they are to not only provide access to higher education but the appropriate tools to be able to succeed in higher education, they will need to look below the surface diversity of race/ethnicity so that they may be able to identify the cultural and linguistic diversity within the reporting categories with which they have become comfortable and perhaps complacent.

Background

Tinto's Student Integration Model proposes that retention and persistence is related to the ability of the student to leave his or her previous life and become integrated into the academic and social life of the higher education institution (1993). A competing model is Bean's (1980) Student Attrition Model which proposes that students leave school for many of the same reasons that employees leave work organizations. Cabrera et al (1992) did not find these two theories to be incompatible. However, they believe that institutional commitment means somewhat different things in the two theories, and that while Tinto supposes a commitment to the institution based upon competent social and intellectual membership in the community of the specific institution, Bean's concept of institutional commitment might be better characterized as institutional fit.

A major problem with both theories is that they deal only with traditional four year institution students. Indeed, Bean tested his model with a sample that was made up exclusively of White non-Hispanic, U.S. citizens, under the age of 22, single, first time full time freshmen in their first semester. The large city populations may require a different model in which immigration and language status should play a large part. Where Tinto (1993) sees a feeling of competent citizenship in a particular institution and Bean's (1980) view may be characterized as institutional fit, institutional commitment may be strongly related to proximity to family and community for immigrant populations, particularly if the language used in the family is other than English.

Brower (1992) notes that the traditional integration concept was designed to explore the interactions between student and institutions but that the existing instruments measure

only the conformity of the student to the "goals values and ideals of the university"(p.444). He then states that their performance "depends on how they establish a niche in the university based in part on their own perceptions, goals, choices, and actions" (Ibid).

Tinto (1993), Bean (1980), and Carbrera et al (1992) see a closed bilateral relationship when they view how the institution interacts with the students and vice versa. Brower at least understands that students bring an inner life to the university experience, but misses the fact that many students bring a complete life to the university experience. For immigrant students in particular, this may involve maintaining a complex web of relationships and responsibilities. That high proportions of the newer immigrant populations are members of what Americans perceive as minority groups complicates the assimilation process.

Portes and Rumbaut (2001) believe that the ability of immigrant youth to maintain contact, goals, and values with parents is more likely to lead to consonant acculturation in which both generations can develop a sense of assimilation into the new culture. Abandonment of this contact and the goals and values of the parents and culture can lead to dissonant acculturation which may be marked by role reversal between parents and children as the children outstrip their parents' knowledge of the U.S. culture and lose the immigrant culture as they more rapidly assimilate. The ability to simultaneously maintain contact not only with family but with a sizeable community of co-ethnics may lead to an even more positive outcome, selective acculturation, in which these youths develop a sense of acculturation into the new culture without abandoning the old. Both consonant and selective acculturation are more likely to allow immigrants and their children to avoid segmented or downward assimilation in which they might identify with an existing underclass and adopt

the expectations and behaviors of that underclass group. (Portes and Rumbaut 2001; Portes 1995). Kelly and Schauffler provide a particularly succinct definition of downward assimilation as "a process defined by the incorporation of immigrants into impoverished, generally nonwhite, urban groups whose members display adversarial stances toward mainstream behaviors, including the devaluation of education and diminished expectations." (1996, p.31).

Failure to have a positive acculturation experience is likely to add stress to the lives of these immigrant youth, which in turn is likely to adversely affect the potential for retention, persistence, and graduation. Bean et al (2000) believe that stress is related to leaving college.

> Students who cope well with the difficulties of college are those who successfully reduce stress with positive outcomes. Such students are more likely to gain attitudinal perspectives of successful academic and social integration. As a result, they are less likely to leave college before graduating. (Bean et al, 2000, p. 51)

These immigrant populations may be particularly at risk of downward assimilation if they move into residential areas with existing minority populations with whom they share a so called racial identity but with whom there are few cultural ties. In these cases, the incoming populations (particularly youth) may abandon their own expectations and take on the diminished expectations of the resident population who "may … be children who have developed an anti-school culture because of poor prospects of social mobility" (Roberts, 1995, p. 75). Hirschman (1996) noted that among immigrants in general, patterns of school attendance by length of time in the U.S. differed for younger Caribbean immigrants and

some European immigrant groups who may have identified with existing U.S. groups and stated that "The interpretation would be that greater exposure to American society has dulled the ambitions for higher education that remain strongest among the newest immigrants" (p.73).

A more positive outcome may occur for those who delay leaving the ethnic community, because as Portes (1995) states, "immigrant youth who remain firmly ensconced in their respective ethnic communities, may, by virtue of this fact, have a better chance of educational and economic mobility through access to the resources that their communities make available" (p.251). Further, Portes and Rumbaut (1990) believe that "Ethnic solidarity has provided the basis for the pursuit of common goals through the American political system . . ." (p.141). This has implications for immigrant's choice of higher education institutions, because choosing an institution closer to home continues access to those resources, and may provide more immediate goal reinforcement.

Portes and Rumbaut (2001) believe that selective acculturation with maintenance of contact with a sizeable co-ethnic culture can help to insulate immigrant youth from the effects of discrimination. This is accomplished because racial discrimination is "Filtered through ethnic networks and confronted with family and community support" (Portes and Rumbaut, 2001, p.63). They also find that selective acculturation with the maintenance of close contact with even a "…modest but tight knit communities can be a valuable resource, as their ties support parental control and parents' aspirations for their young. Among immigrants of limited means, this function of social capital is vital" (Portes and Rumbaut, 2001, p.65). If this is so, we might expect to find that immigrants and immigrant children of

more limited means may stay closer to family and the ethnic community when selecting a postsecondary institution.

If institutions serve large populations of immigrants and their children, they must understand and adapt to this because "as the study of retention has developed, so too has awareness that each institution must tailor retention to fit the specific needs of its students and the context of that particular institutional environment" (Tinto, 2005, p3).

Students bear some of the responsibility for the relationship also. In discussing considerations for minority student retention, Rendon et al (2000) state that, "Theoretically, the concept of dual socialization seriously challenges the assumptions of separation. In addition, there are retention policy considerations. Navigating two landscapes, one of which is almost entirely different from home realities, requires both individual and institutional responsibility" (p.137). However, they also emphasize that the institution has a major role, "To this end, the critical role of the institution cannot be overstated, yet it is often diminished in retention and involvement studies" (Ibid).

Immigrants are not homogeneous. Alba and Nee (1997) note that human capital immigrants, those who arrive with high education levels or in demand skills, can fairly rapidly experience economic success and residential mobility. However, labor migrants, those who arrive without facility with English, special work skills, or higher degrees of education, are slower to experience economic success or to move out of ethnic communities. Children of the human capital immigrants may have similar educational experiences and economic and postsecondary educational expectations as do the children of the mainly white middle class with whom they live and go to school in the suburbs. Children of labor migrants may have entirely different expectations for postsecondary

education. It is imperative that institutions be sensitive to which populations they are serving. The children of recent Indian immigrants who hold engineering degrees and move directly to fairly well off suburbs, and the children of Southeast Asian immigrants who arrived with major health problems and move into ethnic enclaves in the city may both be Asian for federal reporting purposes, but they may have very different needs for support and services from their postsecondary institutions. Indeed, the choice of postsecondary institution may be made at least partially on the basis of some of these differences, and this study will be attentive to possible differences between not only Immigrants and Other Citizens and between Urban vs. Other Locale, but will look for differences between Immigrants who attend in the Large Cities and Immigrants at the Other Locale institutions.

It seems clear that timing is important, and that higher education institutions should be reaching out to immigrant communities before the members of those communities experience downward assimilation. Institutions must be prepared for the immigrant groups not to have been fully acculturated and not to have fully developed English language skills, and the institutions must be prepared to provide appropriate services. To wait until the group is more acculturated or the members have a stronger grasp of English, is to risk losing at least one, and perhaps several generations to a set of diminished expectations. As Pascarella and Terenzini (1991) note, “Social mobility, as defined by changes in occupational status and income is inextricably linked to postsecondary education in modern American society” (p. 369). Public higher education can support that upward social mobility, or it can ignore the specific needs of these immigrant populations and bear witness to social mobility in a downward direction.

DATA AND METHODOLGY

Data

The data used in this study come from the restricted data sets for the National Postsecondary Student Aid Study of 2000 (NPSAS:2000) and the Beginning Postsecondary Students Longitudinal Study (BPS:96/01). The BPS:96/01 is based upon the 1996 National Postsecondary Student Aid Study (NPSAS:1996), with follow-ups in 1998 and 2001. Our analysis only involves information on students who began at public 4 year higher education institutions.

We use a number of variables in each data set to identify the location of the institution as being either Urban, which means that it is inside a city with a population of 250,000 or more, or Other Locale which means that the institution is located anywhere besides these larger cities.

We also constructed a variable called Immigrant, which here means either a foreign national who is a permanent U.S. resident or a naturalized citizen. These are compared to Other Citizens who are native born U.S. Citizens. We refer to this comparison group as Other Citizens to emphasize that many in the Immigrant group are citizens of the United States. Non-Resident Aliens, also known as International students, are not considered at all in this analysis. These International students may contribute much to the institutions they attend, but the focus of this paper is on the services provided by public higher education to citizens or permanent residents of the U.S.

In other analyses, our third variable of interest would be based on the primary language spoken in the students' homes when they were children. However, in this paper,

we deal only with Immigration status in order to more directly address assimilation theory issues.

Throughout this paper, the variables may be addressed individually, which will provide 2 categories for comparison, in 2 way combinations which will provide 4 categories, or in 3 way combination which will provide 8 categories. Beyond that number of categories, the significance of means tests we will be using become meaningless because of the limited number of observations available for analysis.

The NPSAS:2000 data set is larger, and we have somewhat more confidence in it because the sample closely matched the race/ethnicity information for undergraduates at all public 4 year urban higher education institutions. We ascertained that by using the Integrated Postsecondary Educational Data System (IPEDS) Peer Analysis System (PAS) to get the official and comprehensive public urban 4 year higher education institution undergraduate enrollment data for both 1996 and 2000. The BPS:96/01 data doesn't match the 1996 IPEDS data nearly as well.

Besides conflicts between the 2 data sets and IPEDS for the race/ethnicity figures, there are also some marked differences between the NPSAS:2000 and the BPS:96/01 data sets as far as the percentage of Immigrants, with the BPS:96/01 data showing considerably smaller percentages of Immigrants than showed in the NPSAS:2000 data. The proportions seem skewed downward for Black non-Hispanics and Asians and upward for Hispanics.

While we believe that NPSAS:2000 provides a more representative sample for Immigrants in the Urban areas, it doesn't have information on the success of the beginning students from 2000. BPS:96/01, while not as representative, allows us to identify success measures such as one year retention either at the first institution or in post-secondary

education (PSE) as a whole, 3 year persistence also for first institution or PSE as a whole, and in graduation and enrollment status 6 years from beginning PSE. Other variables describing demographics or behavior are available in both data sets.

Methodology

Throughout this paper, unless otherwise specified, retention will mean the return of a student to the same institution for the second fall semester after he or she originally enrolled as a first time freshman, and persistence means the continuation of the student at that same institution through the first three years. Graduation is the attainment of a bachelor's degree from any institution. The reason that we focus on the same institution for retention and persistence is that "institutional continuity in one's post-secondary educational experience not only enhances degree attainment but has additional positive implications…" (Pascarella & Terenzini, 1991, p.607). Staying at the same school has benefits for attainment, but if the degree has already been attained, it is a moot point.

The limited number of observations that we have available for analysis, along with the fact that many of them are missing data makes using more sophisticated multiple regression models problematic. The loss of many of the observations is particularly problematic in that we know that several of our populations of interest are disproportionately represented among the students who are missing values for such important variables as high school grade point average (HSGPA) and SAT scores. Therefore, we will generally be using relatively simple difference of means tests between the various categories made up of the Locale, Immigration, and behavior variables.

RESULTS

There are marked differences in the living arrangements of students by Immigration status and Locale. Overall, about 60% of the BPS:96/01 students lived in a dorm or off campus in school owned housing, 25% lived with parents or relatives, and the other 15% were in independent apartments or had some unspecified living arrangement. Overall, the Immigrants were more than 50% more likely to live with parents than are the Other Citizens. The Urban group was twice as likely to live with family as the Other Locale group. When the two attributes are combined, the Urban Immigrants were about 150% more likely to live with family than are the Other Locale Other Citizens. This is bound to create a vastly different college going experience. Within Locale, the Immigrant group is significantly more likely to live with family than is the Other Citizen. Details are presented in Table 1.

Table 1: Proportion of Students Living with Family, by Immigration and Locale

	Mean	Std. Err.	95% Conf.	Interval
All	24.7%	0.0196	0.2080	0.2853
Other Locale	21.5%	0.0219	0.1715	0.2579
Urban	42.4%	0.0398	0.3460	0.5029
Other Citizen	22.6%	0.0166	0.1937	0.2591
Immigrant	36.5%	0.0426	0.2816	0.4493
Other Locale, Other Citizen	19.6%	0.0175	0.1617	0.2306
Other Locale, Immigrant	29.5%	0.0466	0.2030	0.3869
Urban, Other Citizen	40.4%	0.0387	0.3277	0.4802
Urban, Immigrant	52.5%	0.0752	0.3772	0.6737

A key question is why the Immigrant group is so much more likely to have lived with family during the first year than the other groups. It would certainly fit in with Portes' concept of the Immigrant youth maintaining contact with family and perhaps the culture in order to have a more positive acculturation experience. The BPS:96/01 data set didn't offer too much information about the background of the Immigrants, so we turned to the NPSAS:2000 data set. We found that on average, the Urban Immigrant group who lived with family had arrived in the U.S. about 3 years more recently than the Urban Immigrant respondents who didn't live with family, and 1.5 – 2 years more recently than both the Other Locale Other Citizen and Other Locale Immigrants.

We also found that this group had the lowest mean Verbal SAT scores of any of the Immigration, Locale, and Living Arrangement combinations. Further, for each Immigration/Locale combination the students who lived with family had significantly lower Verbal SAT scores than did the students who had other living arrangements. Details are presented in Table 2.

Such a strong relationship between Verbal SAT scores and whether the student lived with family didn't seem to make much sense for the Other Citizen groups. We examined income by using a variable that adjusts for family size by expressing income as a percentage of the federal poverty level for a family the size of the student's family. We found that the patterns were quite similar to those of the Verbal SAT scores, and we believe that the Verbal SAT scores are acting as something of a proxy for wealth/income. Details are presented in Table 3.

We went back to the BPS:96/01 data set and looked at the comparable variables. We found that the Urban Immigrant students who lived with family also had the lowest overall Verbal SAT scores, and that in each of the other Immigration/Locale pairs, the students who lived with family had significantly lower Verbal SAT scores than did the students who had other living arrangements.

Table 2: Mean Verbal SAT Scores, by Immigration Status, Locale, and Living Arrangement for NPSAS:2000 Data

	Mean	Std. Err.	95% Conf. Interval	
Other Citizen, Other Loc., Other Living Arr.	531	2.99	524.65	536.41
Other Citizen, Other Loc., Live w/Family	509	3.78	501.63	516.49
Other Citizen, Urban, Other Living Arr.	538	6.65	525.30	551.44
Other Citizen, Urban, Live w/Family	505	6.55	492.18	517.90
Immigrant, Other Loc., Other Living Arr.	504	11.75	480.76	526.94
Immigrant, Other Loc., Live w/Family	457	19.23	419.58	495.13
Immigrant, Urban, Other Living Arr.	475	16.92	442.13	508.63
Immigrant, Urban, Live w/Family	420	11.47	397.29	442.36

The income pattern for BPS:96/01 was similar to NPSAS:2000 also. The Urban Immigrant group had lower Income as a percent of the poverty level than all but the non-Urban Immigrant group who lived with family. While lower than the Urban Immigrant group who lived with family, it was not significantly so. We had anticipated that because the numbers available for analysis were much smaller and the confidence intervals much larger than in the NPSAS data set, findings of statistical significance would be somewhat

less likely. Details of the Verbal SAT scores and the percent of poverty level for the BPS:96/01 data are presented in Tables 4 and 5.

Table 3: Mean Income as Percent of Poverty in 1998 by Immigration Status, Locale and Living Arrangement for NPSAS:2000 Data

	Mean	Std. Err.	95% Conf. Interval	
Other Citizen, Other Loc., Other Living Arr.	367	5.04	356.99	376.78
Other Citizen, Other Loc., Live w/Family	323	10.80	301.55	343.97
Other Citizen, Urban, Other Living Arr.	359	7.53	343.76	373.34
Other Citizen, Urban, Live w/Family	320	11.02	298.03	341.33
Immigrant, Other Loc., Other Living Arr.	275	13.17	249.06	300.82
Immigrant, Other Loc., Live w/Family	238	24.57	189.72	286.27
Immigrant, Urban, Other Living Arr.	258	14.01	230.28	285.33
Immigrant, Urban, Live w/Family	215	17.87	179.82	250.03

Given the similarities in the Verbal SAT scores and income patterns between the NPSAS:2000 and the BPS:96/01 data, we believe that we can make the assumption that the Urban Immigrants who lived with family were also more recently arrived.

However, we still don't know why such a high proportion of the Urban Immigrants live with family. It may be for mutual support as both parents and children undergo the acculturation process, or it may be a function of economics given that in all of the other Immigration/Locale groups the students who lived with family had lower Verbal SAT scores than those with other living arrangements and a pattern of lower income also. If it is correct that that the ability of immigrant youth to maintain contact, goals, and values with parents is more likely to lead to a positive acculturation experience that avoids

intergenerational conflict and allows the students a better chance of social and economic mobility by avoiding pressures of downward assimilation, then we might expect to see some positive difference in outcomes for the Immigrant students who lived with their families during the first year (Portes and Rumbaut 2001; Portes 1995).

Table 4: Mean Verbal SAT Scores, by Immigration Status, Locale, and Living Arrangement BPS:96/01

Verbal SAT	Mean	Std. Err.	95% Conf.	Interval
Other Cit., Other Loc., Other Living Arr.	449	4.74	440.10	458.79
Other Cit., Other Loc., Live w/Family	419	7.56	403.94	433.75
Other Cit., Urban, Other Living Arr.	419	11.41	396.59	441.59
Other Cit., Urban, Live w/Family	347	17.04	313.64	380.80
Immigrant, Other Loc., Other Living Arr.	485	12.64	460.32	510.13
Immigrant, Other Loc., Live w/Family	402	9.08	383.91	419.72
Immigrant, Urban, Other Living Arr.	422	25.46	371.73	472.11
Immigrant, Urban, Live w/Family	316	14.23	287.52	343.63

We looked first at the proportion of students who returned to the original institution for the second year. There wasn't a lot of variation in this one year retention rate based on the Immigration and Locale variables we have been focusing upon. This one year retention rate is not the same as the official one year retention rate that is reported to the U.S. Department of Education, because students in the sample may have started other than in the fall semester. When we raised the level to have 4 categories rather than 8 by removing Locale, it appeared that there might be some positive effect of living with family for

Immigrants of whatever Locale. Oddly, the only significant difference was that the Immigrants who lived with family were significantly more likely to return to the first institution for a second year than were the Other Citizens who lived with family (F(1, 216) = 6.43, P>F= .0119). Details are presented in Table 6.

Table 5: Mean Income as Percent of Poverty in 1995 by Immigration Status, Locale and Living Arrangement for BPS:96/01 Data

	Mean	Std. Err.	95% Conf. Interval	
Other Cit., Other Loc., Other Living Arr.	385	10.33	364.56	405.26
Other Cit., Other Loc., Live w/Family	298	12.23	273.91	322.14
Other Cit., Urban, Other Living Arr.	301	31.18	239.50	362.41
Other Cit., Urban, Live w/Family	159	23.49	113.17	205.75
Immigrant, Other Loc., Other Living Arr.	392	16.86	358.97	425.45
Immigrant, Other Loc., Live w/Family	312	16.12	280.07	343.61
Immigrant, Urban, Other Living Arr.	230	38.37	154.42	305.66
Immigrant, Urban, Live w/Family	193	34.15	126.07	260.70

We then looked at students who were still enrolled at the first institution at the end of the third year. Because of the small numbers, we didn't distinguish between those who had maintained continuous enrollment and those who had stopped out for a period of time and later returned. Those few who had graduated by the end of the third year were also included in the returned group. Overall, about 65% of the students were enrolled at or had graduated from the original institution at the end of the third year. There wasn't a

statistically significant difference by Locale. Immigrants were significantly more likely than Other Citizens to still be enrolled (71.8% vs. 63.6%, F (1, 216), P>F=.0242).

Table 6: Proportion of Students Returning to the First Institution for the Second Year, by Immigration Status and Living Arrangements

	Mean	Std. Err.	95% Conf. Interval	
Other Citizen, Other Living Arrange.	80.4%	0.0118	0.7812	0.8276
Other Citizen, Live w/Family	73.2%	0.0201	0.6919	0.7713
Immigrant, Other Living Arrange.	81.9%	0.0399	0.7404	0.8979
Immigrant, Live w/Family	86.1%	0.0457	0.7709	0.9510

When we examined living arrangements on their own in relation to completion of the third year at the first institution, we found that overall, students who had lived with parents or other relatives during the first year were significantly less likely to be enrolled at the original institution than were students who had other living arrangements (58.3% vs. 66.9%, F(1 ,216) P>F .0004). There were no significant differences in the rate of return for the combination of Locale and living arrangements. When we combined Immigrant and living arrangements, we found that the Other Citizen students who lived with family had significantly lower rates of return than the other 3 groups. We also found that Immigrants who lived with family were less likely to return than Immigrants with other living arrangements, although not significantly so. Details are presented in Table 7.

The most remarkable differences were observed when we combined Immigration, Locale, and living arrangements. We found that the return rates ranged from a low of 55.2% for the Other Citizen Other Locale students who lived with family to a high of

81.5% for Urban Immigrants who lived with family. Both of the Other Citizen groups who lived with family returned at a rate of less than 60%.

Table 7: Proportion of Students Enrolled at the First Institution at the End of the Third Year by Immigration Status and Living Arrangements

	Mean	Std. Err.	95% Conf. Interval	
Other Citizens, Other Living Arr.	66.2%	0.0143	0.6339	0.6901
Other Citizens, Live w/Family	55.4%	0.0220	0.5106	0.5971
Immigrant, Other Living Arr.	74.8%	0.0417	0.6660	0.8306
Immigrant, Live w/Family	67.7%	0.0567	0.5652	0.7887

The Urban Immigrants who lived with family returned to the first institution at a rate significantly higher than 5 of the other groups, excepting only the Other Locale Immigrants who lived with family and the Urban Immigrants who had other living arrangements. This suggests that there is a tie between contact with family and persistence at the first institution for the more recent Immigrants. Details are presented in Table 8.

Next, we used less specific success variable that took on a positive value if the students had graduated at the end of the third year or were still enrolled as an undergraduate in any institution, and 0 otherwise. Overall, about 85.3% of the students had graduated or were active as undergraduates at some institution at the end of the third year. Once again, we found no differences by Locale. Immigrants were much more likely to be active than were Other Citizens (93.7% vs. 84.8%, F (1, 216) P>F = .0000). On its own, living with family once again was negatively related to being active at the end of the third year. Only about 82.4% of those who lived with family had graduated or were active at the

end of the third year compared to 86.7% of those who had other living arrangements (F (1, 216), P>F = .0306). However, for this success measure, the differences were not as concentrated in the Urban Locale as they were for the 3 years at the first institution measure of success.

Table 8: Proportion of Students Enrolled at the First Institution at the End of the Third Year by Immigration Status, Locale, and Living Arrangements

	Mean	Std. Err.	95% Conf. Interval	
Other Locale, Other Cit. Other Living Arr.	66.4%	0.0154	0.6341	0.6947
Other Locale Other Cit., Live w/Family	55.2%	0.0258	0.5009	0.6026
Other Locale, Immigrant, Other Living Arr.	64.3%	0.0426	0.5587	0.7268
Other Locale, Immigrant, Live w/Family	56.0%	0.0438	0.4733	0.6461
Urban, Other Cit., Other Living Arr.	75.1%	0.0493	0.6543	0.8484
Urban, Other Cit., Live w/Family	57.6%	0.0823	0.4140	0.7382
Urban, Immigrant, Other Living Arr.	73.8%	0.0767	0.5868	0.8893
Urban, Immigrant, Live w/Family	81.5%	0.0534	0.7093	0.9198

The differences in the proportion of students who had graduated or were still enrolled at any institution appear to be primarily based on Immigrant status and living arrangement, without much effect by Locale. The Other Citizens who lived with family had the two lowest 3 year activity rates, and the Immigrants who lived with family had 2 of the 3 highest rates. Immigrants had the highest rates of third year activity at any institution.

While the Immigrants tended to have higher rates of activity at the end of the third year than did the Other Citizens regardless of Locale, there seems to be a particularly

strong relationship between the Immigrants and Urban Locale for remaining at the same institution, and almost no effect of Locale in combination with Immigration for being active at any institution. We know that the Urban Immigrants are more recently arrived, have somewhat less facility with English as measured by Verbal SAT score, and are generally poorer when income is adjusted for family size. If Portes and Rumbaut's theories are correct, we'd expect to see that the more recent and disadvantaged Immigrants would be more positively affected by maintaining close contact with family, which is what these data suggest. Details of the third year activity rates are presented in Table 9.

Table 9: Proportion of Students Graduated or Enrolled at Any Institution at the End of the Third Year by Immigration Status, Locale, and Living Arrangements

	Mean	Std. Err.	95% Conf. Interval	
Other Loc., Other Cit. Other Living Arr.	86.4%	0.0112	0.8423	0.8863
Other Loc., Other Cit., Live w/Family	78.4%	0.0207	0.7429	0.8245
Other Loc., Immigrant, Other Living Arr.	97.0%	0.0187	0.9332	1.0071
Other Loc., Immigrant, Live w/Family	92.6%	0.0440	0.8396	1.0131
Urban, Other Cit., Other Living Arr.	85.9%	0.0307	0.7983	0.9193
Urban, Other Cit., Live w/Family	84.0%	0.0425	0.7559	0.9233
Urban. Immigrant, Other Living Arr.	89.9%	0.0411	0.8179	0.9801
Urban, Immigrant, Live w/Family	94.1%	0.0347	0.8722	1.0091

We also checked whether the students had received a bachelor's degree from any institution by 2001. Overall about 54% of the students had received a bachelor's degree by the last BPS follow-up in 2001. There was not a statistically significant difference in

degree attainment by Locale, nor by Immigrant status. Those who had lived with family during the first year were significantly less likely to have attained a bachelor's degree by 2001 than were those who started with different living arrangements (58.5% vs. 38.4%, F (1, 215) = 63.59, P>F = .0000).

When the 3 variables were combined, Urban Immigrants who had lived with family during the first year had the lowest degree attainment rates of any group, although significantly so only in comparison to Other Citizen Other Locale students with non-family living arrangements and Other Locale Immigrants with non-family living arrangements. The groups who lived with family during the first year had the lowest degree attainment rates overall regardless of Immigration or Locale. Details are presented in Table 10.

Table 10: Percent of Students Who Attained Bachelor's Degrees from any Institution by 2001, by Immigration Status, Locale, and Living Arrangements

	Mean	Std. Err.	95% Conf.	Interval
Other Locale, Other Citizen, Other Living Arr.	59.5%	0.0177	0.5603	0.6300
Other Locale, Other Citizen, Live w/Family	37.7%	0.0268	0.3237	0.4295
Other Locale, Immigrant, Other Living Arr.	61.8%	0.0476	0.5246	0.7121
Other Locale, Immigrant, Live w/Family	48.4%	0.0991	0.2890	0.6797
Urban, Other Citizen, Other Living Arr.	53.6%	0.0438	0.4492	0.6219
Urban, Other Citizen, Live w/Family	40.8%	0.0360	0.3367	0.4787
Urban, Immigrant, Other Living Arr.	56.0%	0.1051	0.3534	0.7676
Urban, Immigrant, Live w/Family	35.1%	0.0897	0.1741	0.5278

If we combine those who have attained a bachelor's degree and those who were still enrolled as undergraduates in 2001, a slightly different picture appears. While the Urban Immigrants who lived with family tend to have somewhat lower 2001 degree attainment/persistence rates, none of the differences is statistically significant. That almost a third of the Urban Immigrants who had lived with family at the beginning of their PSE careers were still actively enrolled in 2001 suggests that reporting based on a six year graduation rate may not be appropriate for this group. Details are presented in Table 11.

Table 11: Percent of Students Who Had Bachelor's Degrees or Were Still Enrolled as Undergraduates in 2001, by Immigration Status, Locale, and Living Arrangement

	Mean	Std. Err.	95% Conf. Interval	
Other Locale, Other Citizen Other Living Arr.	77.0%	0.0141	0.7426	0.7980
Other Locale, Other Citizen, Live w/Family	61.9%	0.0259	0.5680	0.6702
Other Locale, Immigrant, Other Living Arr.	79.3%	0.0394	0.7158	0.8710
Other Locale, Immigrant, Live w/Family	80.2%	0.0613	0.6811	0.9226
Urban, Other Citizen, Other Living Arr.	72.9%	0.0392	0.6519	0.8064
Urban, Other Citizen, Live w/Family	64.9%	0.0561	0.5387	0.7600
Urban, Immigrant, Other Living Arr.	81.9%	0.0718	0.6779	0.9610
Urban, Immigrant, Live w/Family	67.1%	0.0928	0.4881	0.8538

We believe that one factor that might cause the Immigrant students to make somewhat slower progress is English as a Second Language (ESL) coursework. The survey asks about remedial coursework but not about ESL coursework which carries no credit and which Immigrant students might be more likely to take.

Only about 38% of the Urban Immigrants who lived with family in the first year and were active in 1998 had received a bachelor's degree by 2001 compared to about 69% of the Other Locale Other Citizen group who had other living arrangements. The higher third year persistence rates and the lower six graduation/persistence rates suggest that this group should be targeted for programs to get them from third year persistence to attainment.

LIMITATIONS

This paper suggests that Immigrants behave somewhat differently than do Other Citizens, and that Urban Immigrants behave somewhat differently than do Other Locale Immigrants. The chief limitations of this paper (and the larger study from which it's taken) come from the limited number of observations initially available for analysis and from the bias involved with eliminating other observations with missing values for important variables. The limited number of observations and a lack of variation across many of the survey variables have also restricted the methods that can be used on the analysis. Because of the already limited numbers, particularly of immigrants, we have not attempted to separate the populations of public urban institutions with urban missions from those of highly selective public flagship institutions that happen to be located in an urban area.

NPSAS:2004 will generate another BPS study. That BPS will have additional variables to identify the children of Immigrants. These variables were not available in the NPSAS:96 study that generated BPS:96/01. Preliminary work with the NPSAS:2000 data (which identifies the children of immigrants) indicates that the children of immigrants have much in common with the actual immigrant group because children brought to the

U.S. at a very young age (sometimes called Generation 1.5) and children born in the U.S. to recent immigrant parents have similar experiences. The strengths of association between variables should be more apparent in future studies based on that upcoming work.

DISCUSSION

The portion of the population that is affected is not insignificant. The numbers of persons who are foreign born or who speak a language other than English in the home are very large, and have been growing. The U.S. Census Bureau (2004) estimates that in 2003, almost 12% of the U.S. population was foreign born. In 1997, Alba and Nee stated "Just a handful of states and metropolitan areas receive a majority of new immigrants and remain the primary areas of residence and work for immigrants and their children" (p. 857). That may be true if one looks only at raw numbers rather than proportions. By 2003, sixteen states had populations that were 10% or more foreign born, including all five of the most populous states. The fact that so many states have significant proportions of foreign born residents indicates that immigration and assimilation are areas that deserve attention across much of the nation.

Current retention theory conflicts with current assimilation/acculturation theory at the most basic level. Retention theory says that students who separate from family and attach themselves to the institution should do better, but current assimilation theory says that immigrants who maintain close contact with family and community should do better. This paper suggests that at least for some immigrant students, assimilation theory is a better fit. If the public urban higher education institutions are going to serve large immigrant populations, perhaps it's time for them to synthesize the two.

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