

A SECOND CHANCE FOR HIGHER EDUCATION: Academic Preparatory Programs in Israel

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The Israeli academic preparatory programs (APPs) challenge the sorting regime of regular education by offering a genuine second chance for higher education to youngsters who have failed to acquire the necessary prerequisites via the mainstream. The study analyzes the success of the APPs to produce changes in their students in light of the failure of a different second-chance framework, the community college, to do so. The analysis of a sample of APP graduates indicates that background characteristics and high school history, powerful sources of differentiation upon admittance to the APPs, lose their discriminating power after graduation. All graduates join any postsecondary educational framework, regardless of their initial disadvantages. The success of the APPs in eliminating initial gaps among the students is assigned mainly to their nonconformity to the selection criteria of regular education. The purpose of this research was to assess whether second-chance educational programs that challenge the sorting criteria of the mainstream succeed in enhancing social equality in education. Outcomes of the "challenging" second-chance academic preparatory programs in Israel are analyzed in light of the reported failure of community colleges to moderate inequalities in higher education.

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COMMUNITY COLLEGES AS A SECOND-CHANCE FRAMEWORK

The underrepresentation of underprivileged youngsters in higher education is well documented. The lower rate of these youngsters in universities negates the egalitarian values prevailing in modern societies. Consequently, frameworks aimed at providing a second chance for higher education have been developed.

An impressive body of literature has been devoted to one second-chance framework—the community college (e.g., Dougherty, 1987; Brint and Karabel, 1989; Nora and Randon, 1990; Lee and Frank, 1990). The conclusions of this research are not very encouraging in terms of the contribution of community colleges to the promotion of the participation of lower-status youngsters in higher education. It has been shown that members of privileged social groups and students with good educational histories take the best advantage of these

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colleges, using them as a pathway toward four-year colleges. These findings led Lee and Frank (1990) to conclude that: "Since family background and advantage that students bring to the institution are the stronger predictors of academic success within them, we can offer little evidence . . . that community colleges change individuals much" (Lee and Frank, 1990, p. 191).

The failure of community colleges to produce a change in their students may lead to the conclusion that the effort to enhance the enrollment rates of underprivileged youngsters in higher education is hopeless. However, one question arises at this point: Why would community colleges be expected to produce any change in their students in the first place?

The literature on community colleges does not provide any evidence to support the notion that these institutions should have eliminated initial gaps among students. Community colleges are indeed nonselective and accept students who may have been rejected by other institutions (Dougherty, 1987). However, the mere admittance of youngsters of different backgrounds to the same educational institution can by no means be considered a sufficient device for overcoming their initial differentiation.

Moreover, an analysis of community colleges using concepts developed in the framework of research on second-chance education suggests that community colleges should have been expected a priori to maintain existing inequalities among their students. The research on second-chance education distinguishes between educational frameworks that conform to the sorting regime of the mainstream and those that challenge it (Inbar and Sever, 1986). Community colleges bear characteristics of the first "conforming" category, since (1) lower-status students and students with poor high school history are assigned more often to vocational programs not aimed at transfer to four-year colleges (Pincus, 1980) and (2) students who wish to transfer but are not considered suitable for higher education according to their past achievements are exposed to a process of "cooling out" (Clark, 1960; Dougherty, 1987). Differently stated, community college students are stratified according to the sorting criteria of regular education from the very beginning. It is not surprising, hence, that the stratification of the students upon graduation from the college is not very different from their stratification upon admittance.

The nonconforming second-chance programs have different features. Assuming that students who have failed in the regular system still have the chance and the capacity to obtain higher education, these systems offer opportunities for higher education regardless of students' former attainments. Programs belonging to this category are more likely to produce changes in their students. Our analysis concentrates on whether they do so in fact. More specifically, our analysis is aimed at exploring whether educational programs that challenge the sorting criteria of the mainstream have a better chance at reducing or even

eliminating initial gaps between students. We approach this question by assessing the contribution of a nonconforming framework—the Israeli academic preparatory programs—to the reduction of initial gaps between students of different social strata.

THE ISRAELI ACADEMIC PREPARATORY PROGRAMS

The Israeli academic preparatory programs (hereafter APPs) constitute a second-chance framework that challenges the selective mechanisms of the mainstream by offering an opportunity for higher education to youngsters who have failed to obtain the necessary prerequisites via regular education. This opportunity is offered both to members of dominant and disadvantaged social groups. Due to their nonconforming character and their social composition, the APPs provide a highly appropriate setting for our study. We shall devote the rest of the section to some additional information on both the APPs and the Israeli education system.

The APPs were established as a response to the substantial inequality prevalent in the Israeli educational system between members of the two main Jewish ethnic groups: students of European or American origin (EuAm) and students of Asian or African origin (AsAf). This inequality is particularly manifest in higher education (Yogev and Shapira, 1987) but is rooted in earlier stages. Students of AsAf origin, the less prestigious Jewish ethnic group, are most often found in the lower-ability groupings in junior high school and consequently in the vocational tracks in high school (Yogev, 1981). Only a minority of the vocational-track students obtain the matriculation diploma, which comprises a necessary (albeit insufficient) “entrance ticket” to the universities. Hence, the underrepresentation of AsAf students in higher education is, to a large degree, a consequence of their earlier educational experience.

The long history of AsAf’s educational disadvantage has produced the view that they are incapable of acquiring higher education. AsAf youngsters themselves seem to share this view. Being convinced of their incapacity to acquire higher education, the more ambitious AsAf youngsters are attempting to achieve upward social mobility through economically rewarding yet educationally non-demanding occupations (Yuchtman-Yaar, 1985). The initiation of the APPs is based on the rejection of the idea that this established link between AsAf origin and educational disadvantage is inevitable. By introducing the APPs their originators express the assumption that this link is mainly a consequence of inappropriate treatment by the system and can be reversed by the proper intervention.

Following this assumption, the APPs provide lower-status AsAf youth who had failed in regular education with an additional opportunity to acquire the

matriculation diploma and to prepare for higher education. During their first years the APPs catered exclusively to AsAf youngsters with some high school education who failed to acquire the matriculation diploma. However, by the time our survey was conducted, the target population of the APPs had been broadened to include higher-status students with better high school histories, most of them of EuAm origin. These students were included in the program to promote social integration and prevent its stigmatization as a framework for the "second best." Many students of this second group already had a diploma upon admittance to the APPs and joined the program to improve their scores. Such improvement is essential for students who wish to enter the more selective fields of study. The APPs bear a certain amount of selectivity, and applicants, most of them in their early twenties, have to take an ability test and reach a certain score. However, this score is far below the one required from regular university applicants.

The APPs consist of one-year on-campus programs and constitute a separate division within the universities in which they are located. The responsibility for their operation is shared by the Israeli Ministry of Education, which subsidizes them, and the hosting university, which provides the academic staff. The APPs' curriculum, which includes mainly high school material, is established by both the Ministry and the university. At the end of their year in the APP the students take examinations that substitute for regular matriculation exams and they are allowed to apply to the university.

The special features of the APPs are most clearly revealed in the approach toward the students. The notion guiding the APPs' authorities is that the system is aimed at providing the students with the best chances to succeed. APPs' faculty are instructed to help the students overcome their initial shortcomings and to smoothe their future passage to the university. The general effort is directed toward assisting the students in achieving the ultimate goal—higher education.

As noted, the analysis concentrates on the assessment of the programs' contribution to the reduction of initial inequalities among students. The research deals with three sources of social inequality: ethnic origin and socioeconomic status, which were already mentioned, and gender. The research on community colleges indicates their better utilization by male students (Lee and Frank, 1990). The Israeli high school system has been found to operate in favor of females, who are found more often in the prestigious academic track (Kfir, 1988). However, research on gender differences in areas of study has indicated that Israeli female students tend to restrict themselves to traditionally "feminine" subject areas, both in secondary and higher education (Kfir, Ayalon, and Shapira, 1989). The current study addressed the question of whether the APPs' nonconservative frameworks contribute to the reduction of gender differentiation in selecting areas of study.

METHOD AND PROCEDURE

Sample

The data for the study were obtained from a 1986 survey of the 1980–1982 graduates of the APPs. The minimal three-year postgraduation period enables the collection of data regarding the consequences of the APPs for their graduates. The social characteristics of the respondents were acquired from their APP files. In addition, the graduates completed a mailed self-administered questionnaire and were personally interviewed.

The original sample included about 20 percent randomly sampled students for each of the three years studied. The final sample was reduced, mainly due to difficulties in locating the graduates, to 15 percent of the 2,073 students, yielding 304 respondents. Both ethnic groups and both genders were proportionally represented in the final sample.

Variables

The technical details of the variables and the descriptive statistics are presented in Table 1. The analysis consists of four sets of variables: background characteristics, high school history, high school outcomes, and post-APP variables. The background characteristics included in the analysis are known as sources of educational inequality both in Israel and in other societies: ethnic origin, gender, and socioeconomic status. High school history is represented by curricular tracking, a major factor in the status attainment process in Israel (e.g., Shavit, 1984). High school outcomes are represented by their best indicator in Israel: ownership of the matriculation diploma (MATRIC). An additional pre-APP variable is motivation (MOTIVE), defined as the expectations of the students from the program. The outcomes of the APPs are represented by post-APP education of the students.

Method

The empirical analysis is based on a series of logistic regressions. Logistic regression, which is often recommended for the analysis of binary response variables (e.g., Agresti, 1990), is particularly valuable for the present study. One of our dependent variables, post-APPs, has a very high mean, indicating extreme marginals. This would have affected the estimation of the associations if the dependent variable was treated as a simple dichotomy. However, since the dependent variable takes the form of log odds,¹ coefficients estimated under logistic regression are independent of the marginal distributions of the variables (Bishop, Fienberg, and Holland, 1975; see also Mare, 1980), implying that the

TABLE 1. Description and Distribution of the Variables

		Mean	S.D.
SES (<i>N</i> = 270)*	Composite standardized variable; sums: father's education, mother's education, father's occupational prestige (according to Hartman's 1979 scale).	-.00	.99
Gender (<i>N</i> = 295)	1 = females; 0 = males	.28	.45
AsAf origin (<i>N</i> = 303)	1 = Asian-North African origin (AsAf); 0 = European-American origin (EuAm)	.47	.50
Vocational Track (<i>N</i> = 304)	1 = vocational track; 0 = academic track	.44	.50
Matriculation Status (MATRIC) (<i>N</i> = 290)	1 = respondent owns the diploma; 0 = respondent does not own the diploma	.46	.50
Expectations from the Program (MOTIVE) (<i>N</i> = 302)	1 = preparation for higher education; 0 = acquisition of the diploma	.64	.48
Post APPS Education (<i>N</i> = 285)	1 = higher education; 0 = postsecondary nonacademic education	.86	.35

*Changes in *N* are due to missing data.

results pertaining to post-APPs indicate their relationships with the independent variables without being affected by the margins.

In order to assess the effect of the background characteristics and high school variables on differentiation among the students upon admittance to the APPs and after graduation, high school outcomes serve as the dependent variables in the first analyses, and post-APP education of the graduates serve in the latter. To produce a meaningful comparison between the two periods, the model pertaining to matriculation status is applied to the analyses of both MOTIVE and post-APP education. MATRIC serves as an additional explanatory variable in a second, extended equation pertaining to MOTIVE. The extended equation pertaining to post-APP education consists of both MATRIC and MOTIVE as additional explanatory variables. The comparison between the same students before and after their APP experience bears characteristics of a before-after experiment, which compensates, at least partly, for the shortcomings of the sample. Due to the significance of the before-after comparison in the present context,

TABLE 2. Coefficients of Logistic Regressions Pertaining to Matriculation Status (MATRIC), Motivation (MOTIVE), and Post APPs Education (POST APPs) (N = 234; standard error in parenthesis)

Independent ^a Variables	Dependent Variables ^a						
	MATRIC		MOTIVE		POST APPs		
	MATRIC1 (1)	MATRIC2 (2)	MOTIVE1 (3)	MOTIVE2 (4)	POST1 (5)	POST2 (6)	POST3 (7)
SES	.09 (.08)	.09 (.09)	.05 (.09)	-.02 (.10)	-.03 (.12)	-.05 (.12)	-.07 (.13)
AsAf	-.45**	-.14	-.19	.02	-.35	-.01	.04
ORIGIN	(.17)	(.20)	(.23)	(.10)	(.30)	(.36)	(.37)
GENDER (females)	-.34** (.17)	-.35** (.17)	-.68** (.18)	-.62** (.18)	-.28 (.22)	.27 (.42)	.38 (.89)
VOCATION. TRACK	-.28* (.15)	.11 (.21)	-.17 (.25)	-.19 (.26)	-.36 (.31)	-.21 (.31)	-.26 (.31)
VOCATION. TRACK		-.79** (.29)	-.50* (.31)	-.33 (.32)	.28 (.39)	.02 (.42)	.16 (.43)
AsAf ^b MATRIC				.60** (.17)			.53** (.23)
MOTIVE							-.01 (.22)
AsAf FEMALES ^c						-.85* (.51)	-.93* (.51)

^aFor specification of variables, see Table 1.

^bDummy variable; vocational-track graduates of AsAf origin are coded 1, otherwise 0.

^cDummy variable; females of AsAf origin are coded 1, otherwise 0.

**Significant at $p < .05$.

*Significant at $p < .10$.

we have used leastwise deletion of missing data and base all the analyses on the 234 respondents about which we have complete information.²

RESULTS: EVALUATION OF THE APPs

Sources of Inequality Upon Admittance

The characteristics of the APP graduates appear in Table 1. The table reveals that both ethnic groups are equally represented in the APPs, males are highly overrepresented, and graduates of vocational education, who constitute more than 50 percent of high school students, are slightly underrepresented.

The first logistic regression, with MATRIC dependent (Table 2, col. 1), indicates that upon admittance to the APPs, ownership of the diploma is attached to both background characteristics and high school history.

Two variables are significantly linked to MATRIC: ethnic origin and gender. High school track reaches the threshold of statistical significance, and SES appears to lack any net effect. EuAm students, males, and to a certain degree academic track graduates, are more likely to own the diploma.

The findings pertaining to ethnic origin are of special interest because this characteristic has been perceived as the main source of inequality in the Israeli education system. EuAm students' advantage regarding matriculation status is apparent. This superiority may stem from concentration in academic education during high school, and indeed, EuAm youngsters who join the APPs are more often academic-track graduates.³ However, the significant net effect of ethnic origin after controlling for high school track marks this interpretation as insufficient. One possible reason for EuAm's superiority lies in the assumption that vocational education may bear different meanings for the two ethnic groups. This assumption is based on the findings indicating that the relatively few matriculation-oriented vocational programs are dominated by EuAm students (Yogev and Ayalon, 1991).

The assumption that vocational education is not uniform across ethnic groups suggests an ethnic origin and high school track interaction. The interactive model is presented in the second column. The interaction is represented by a dummy variable, VOCATIONAL TRACK AsAf, coded 1 for vocational track graduates of AsAf origin and 0 for all others.

The findings indeed support the assumption of a different sense of vocational education for the two ethnic groups. The significant negative effect of VOCATIONAL TRACK AsAf suggests that APP students of this group join the programs with an apparent disadvantage: They less often have a matriculation diploma.

The inclusion of the interaction term reduces the main effects of both high school track and ethnic origin, which lose their statistical significance. This implies that regarding APP students, only the combination of both AsAf origin and vocational track produces disadvantage in high school outcomes.

As noted, the significant effect of gender indicates to the advantage of male students. Since male and female high school graduates in Israel earn the diploma in similar proportions, this gender inequality points to an intergender basic distinction among APP students. It seems that male students belong more often to the group of higher achievers who have managed to acquire the diploma upon graduation from high school, but their scores do not correspond to their ambition to enroll in prestigious fields of study. APP female students belong, in higher proportions, to the group bearing a genuine need for a second chance, due to their failure to earn the diploma via mainstream education.

Both background characteristics and high school history carry significant effect on MOTIVE—the expectations of students upon admittance to the APPs (Table 2, col. 3 and 4). These expectations can be twofold: The students may concentrate on the acquisition of the matriculation diploma, or they may view the program as a path to higher education. Formally, the program aims to fulfill both functions; however, its main purpose is to prepare the students for higher education. A study of students' expectations may show their odds of utilizing the APPs to their fullest.

As indicated by the table, female students and, to a certain degree, vocational-track graduates of AsAf origin exhibit lower expectations from the APPs—they more often wish just to acquire the diploma. Bearing in mind the link between these characteristics and the ownership of the diploma, their effect on MOTIVE may result from differential matriculation status. The analysis presented in column 4 of Table 2, which adds MATRIC to the previous reduced equation, tests this issue. The inclusion of MATRIC (whose own effect on MOTIVE is straightforward) causes one major modification: It reduces the effect of VOCATIONAL TRACK AsAf (from $-.50$ to $-.33$) and places it far below the point of statistical significance ($p > .30$). This implies that the lower expectations of vocational-track AsAf students stem mostly from their inferior matriculation status.

The inclusion of MATRIC does not cause any substantial change in the effect of gender. Apparently, the inferior matriculation status of female students is not the major cause of their modest expectations. The present findings substantiate previous findings on gender inequality in the Israeli educational system. Earlier findings suggested that the educational and occupational aspirations of high school female students were lower than those of their male counterparts, despite the former's advantage in the tracking process (Ayalon, 1991; Kfir, 1988). The common interpretation of the predominant pattern, concluding that such inequality is a consequence of sex-role socialization, probably pertains to the present findings as well.

The first part of our analysis indicates that, similar to the findings pertaining to community colleges (Lee and Frank, 1990), APP students are differentiated upon admittance according to both background characteristics and high school history. Male students, EuAm students, and academic-track graduates of AsAf origin join the programs equipped with better matriculation status and higher levels of motivation. The second part of the analysis studies whether this differentiation sustains after graduation from the APPs.

Sources of Inequality After Graduation

As we have seen, a substantial minority of APP students reported enrolling in the programs merely for the acquisition of the matriculation diploma. How-

ever, as the official target of these programs is the attainment of higher education, their outcomes should be evaluated accordingly.

All APP graduates have acquired some post-APP education, either higher or postsecondary nonacademic. A remarkably high proportion—about 86 percent—of the graduates joined a university. At the time the survey was conducted about 80 percent of these students had either obtained their bachelor's degree or were about to complete their studies.

The logistic regression with post-APP education as dependent is aimed at tapping the sources of the differentiation between the majority who have enrolled in higher education and the minority who have not. However, the fact that all students have joined some postsecondary educational framework, and the high percentage of students who have successfully completed their studies, already points to the significant success of the APPs in obtaining their major goal, that is, providing students with a second chance for higher education.

The reduced equation pertaining to post-APPs (Table 2, col. 5) indicates that high school variables and background characteristics do not affect the post-APP education of the graduates. Vocational-track AsAf students, whose disadvantage upon admittance was apparent, do not differ from their counterparts after graduation. In other words, the combination of ethnic origin and high school track has no effect whatsoever on the post-APP activities of the graduates.

Gender is another factor that exhibits no significant effect on post-APP education in the reduced equation (col. 5). Since nonacademic frameworks (such as nursing and teaching) are considered the most "feminine" areas (Kfir, Ayalon, and Shapira, 1989), the present finding may insinuate that the APPs' moderate gender differences in areas of study. However, Israeli research on gender differences signifies the more traditional sex-role socialization of AsAf females (Kfir, 1988), which suggests a gender and ethnic origin interaction. The interaction is represented by a dummy variable coded 1 for AsAf females, and 0 for all other gender and ethnic origin combinations. The interaction term approaches statistical significance (col. 6), indicating that AsAf female graduates exhibit some tendency to join the postsecondary nonacademic frameworks. The interaction term retains its effect after the inclusion of MATRIC and MOTIVE as additional explanatory variables (col. 7), suggesting that the disadvantage of AsAf women cannot be attributed to either inferior matriculation status or lower expectations, which means that it probably stems from sex-role socialization.

MOTIVE lacks any effect on post-APP education of the graduates, demonstrating that the substantial minority who enrolled in the program simply to acquire the diploma did not settle for this achievement after graduation. This process of upgrading students' expectations constitutes the opposite of the "cooling-out" effect found in community colleges (Clark, 1960; Karabel, 1986) that is aimed at lowering the expectations of students (usually originating from lower social strata) marked as unfit for four-year colleges.

The only variable that retains its effect after graduation is MATRIC—ownership of the matriculation diploma upon admittance. Students who did not own the diploma upon admittance tended less often to enroll in the universities. As its inclusion in the extended equation does not affect the coefficients pertaining to the other variables, it is evident that MATRIC does not reflect the effect of background characteristics, high school history, or motivation. Thus, MATRIC may capture the effect of an unmeasured construct—ability.⁴ Following this assumption, we may conclude that higher-ability students, regardless of their social background and high school experience, better utilize the APPs.

Since the effect of the gender and ethnic origin interaction is quite marginal, we can infer that after graduation from the program background characteristics and high school history, powerful sources of differentiation upon admittance, have lost their discriminating power. However, ownership of the matriculation diploma, probably reflecting a student's ability, does retain its influence after graduation.

DISCUSSION

Do second-chance educational systems that challenge the sorting regime of the mainstream succeed in changing their students? Guided by this question, the present study investigated Israeli APPs that differ from community colleges and other researched second-chance frameworks that accept the selection mechanism of the mainstream. The APPs offer a genuine opportunity for higher education to students who have failed in the selection process of the mainstream but have not accepted their failure as final and express readiness to try again. Thus, the APPs pose a challenge to the sorting criteria used in the mainstream.

According to our findings, we can conclude that the APPs indeed produce notable changes in their students. Background characteristics and high school history, powerful sources of differentiation among the students upon admittance, lose most of their discriminating power at graduation. This process obviously differs from that reported by students of community colleges, where initial discrepancies have been found to sustain after graduation.

How can we explain the unique educational outcomes produced by the APPs? Why do students who were unable to make it in the regular system manage to successfully complete their matriculation exams and enroll in higher education after a year at the APP?

Unique curriculum and nonconventional methods of instruction, two plausible explanations to this phenomenon, have to be ruled out right away. As noted, the APPs adopt the high school curriculum and are very "conforming" in this respect. Similarly, the APPs do not develop any special or nonconventional methods of instruction.

It seems that the apparent success of the APPs derives from their rejection of the idea that the correlations between ethnic origin and educational disadvantage on the one hand, and between high school performance and enrollment in higher education on the other, are unavoidable. Following this nonconventional attitude, the APPs offer opportunities that are not adjusted to match the assumed lower aptitude of the "second best." They are equal to those opportunities offered to students who have done well in high school.

In challenging the inevitability of these well-established links the APPs differ substantially from community colleges where students are stratified according to their achievements in high school and minorities and lower-class students are often found in the dead-end vocational programs (Brint and Karabel, 1989).

This challenging attitude affects the APP outcomes mainly by shaping the messages delivered to both students and faculty. APP students are informed from the very beginning that failure in regular education is not a final verdict and they are encouraged to try again. The message delivered to the academic staff signifies that the students are capable of succeeding and that all efforts of the system should be directed to the achievement of this goal. A completely different attitude shapes the messages delivered to community college faculty. Brint and Karabel (1989) report that the administrators of community colleges instruct their faculty not to emphasize the academic preparation of the students since the latter's chances to compete effectively in the senior colleges are very low in the first place.

An additional advantage of the APPs is their on-campus location. Research on community colleges marks the significance of the nonacademic climate of the institution on students' low transfer rates (Brint and Karabel, 1989). The academic climate prevalent in the universities probably contributes to APPs students' ability to concentrate in their academic work.

All these components seem to bear an apparent socializing effect on APP students. This effect is most clearly revealed by the residual role the initial expectations of the APPs play in shaping their later outcomes. The substantial minority who initially participated in the program only for the acquisition of the diploma did not settle for it after graduation. All graduates, regardless of their former expectations, acquired some sort of postsecondary education. It seems that the year spent on campus together with the constant encouragement convinced the students of their capacity to meet the demands of higher education. Contacts with university teachers and other students probably contributed to a change in the initial attitude of these students, who had originally perceived higher education as unattainable.

Can we conclude that being a nonconforming program is a sufficient device for producing similar outcomes? Probably not. As noted, the APPs bear a certain amount of selectivity and applicants have to perform an ability test and reach a certain score. We can conclude, however, that in frameworks that ques-

tion the verdict of regular education, able youngsters with frustrating high school experience, many of them originating from the underprivileged strata, are able to perform equally well as their more privileged counterparts. The potential contribution of such programs to the reduction of inequality in advancement to higher education is unquestionable.

Acknowledgments. The research on which this article is based was supported by the Pinhas Sapir Center for Development, Tel Aviv University. We wish to thank Ozer Schild and Palti Stavi for their contribution to the study, and Haya Stier for her helpful comments.

NOTES

1. The logistic response model takes the following form:

$$\log (p_i / (1 - p_i)) = \beta_0 + \sum_{i=1}^r \beta_j x_{ij}, \quad i = 1, 2, \dots, 234$$

where P_i is the probability that the i th student will join any university after graduation from the APP; X_{ij} are the values of the r explanatory variables for the i th student; and β_j are the parameters to be estimated by the data.

2. Additional analyses deleting, for each equation, the relevant missing cases only, yielded similar results to those presented in the tables.
3. A total of 44 percent of AsAf students in our sample are academic-track graduates, compared to 58 percent of EuAm students.
4. We have considered an additional unmeasured construct—effort. However, since effort and MOTIVE seem to share a common factor—motivation—we would have expected the MOTIVE variable to capture the effect of the unmeasured effort on post-APPs. Since MOTIVE appears to lack any effect on the dependent variable, we tend to perceive ability as the most plausible unmeasured construct captured by MATRIC.

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Received May 7, 1991.