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The Effects of Articulation on College Choice

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Abstract

This paper reports and discusses the results of a study that was undertaken to determine factors that influence choices that secondary school students make between enrolling in community college or university, and in particular whether or not those choices are affected by the degree of “articulation” within a public system of post-secondary education. There are several studies that have emerged recently in the United States and Canada that examine factors that influence the choice of university and four-year college. There are a few studies that examine the choice of community and two-year college. None, however, either in Canada or in the United States, has sought to examine “college choice” comparatively among students who apply to baccalaureate and (four-year colleges and universities) and sub-baccalaureate (community colleges) programs. This study examines college choice on the basis of two series of longitudinal surveys conducted in the province of Ontario since the late 1980s, and on a series of surveys and interviews of students, parents and guidance counselors in six secondary schools, each with a different student population, since 2004. The third study -- called the “college choice” project -- tracked secondary school students as they made decisions about attending college or university, and as they finally selected the institutions that they would attend. The study concludes that greater conventional articulation will not significantly affect rates of transfer, that for most students plans to transfer develop after they enter college and are not a major factor in their initial “choice,” that the rate of transfer is highly dependent on the corresponding arrays of programs at colleges and universities, and that articulation might better be thought of as a subset of other basic forms of inter-institutional cooperation.

It is often assumed that rates of transfer from college to university are affected more by access to university than by demand on the part of college students. Stated another way: demand exceeds supply, and supply is limited by the complication of admission to university. The principal complication is then assumed to be limitations on the transfer of credit. In turn, policy-makers call variously for the removal of “barriers” to transfer by installing agreements that “articulate” relations between colleges and universities. Sometimes, as in the recent American cases of New Jersey and Indiana, full transfer of credit is legislatively mandated, which in practical effect is an extreme example of articulation. [In this study Canadian terminology will be used; college denotes a less than four-year

institution offering sub-baccalaureate credentials and university denotes a four-year or more institution offering baccalaureate degrees and higher.]

There is a lot of pre-judgment in these assumptions. Although it is difficult to track and accurately calculate the rate of transfer (Wellman, 2002; HEQCO, 2006) the rate of transfer has not risen significantly since the mid-1980s, in either the United States or Canada (Cohen, 1996; Grubb, 1991; Szezenyi, 2001; Rae, 2005). Yet, during this period a number of American states and Canadian provinces have either toughened or expanded arrangements for articulation (Wellman, 2002; Andres, 1999). As of 2006 approximately 25 per cent of American states and 33 per cent of Canadian provinces have articulation agreements. However, and counter-intuitively, a recent study concluded that the rates of transfer in states that have articulation agreements are almost the same as the rates in states that do not (Anderson, Sun, and Alfonso, 2006).

None of this is not to say that inter-institutional transfer – horizontal or, in this case, vertical -- should not be encouraged. But it is to say that the issue is much more complicated than supply and demand, and in particular the equivalency of credentials and articulation among college systems and university systems. It is also more complicated than relations among institutions. In reality, students do not transfer from institution to institution; they transfer from program to program.

This study asks questions that precede some of the assumptions about transfer from college to university. The purpose of these questions within the context of this study is to inform policy decisions about system structure, articulation, and institutional initiatives by providing information about what students want, how they plan, and when they decide. Why do students want to transfer? Is the decision to transfer part of educational plans that students formulate when they are about to leave secondary school and participate in the admissions process? In other words, is transfer a planned behaviour that begins in secondary school? Does the assumption that transfer the only option for students who are dissatisfied with the programs and institutions that they initially chose disguise and leave uncorrected deficiencies to which transfer might not be either the only solution or the preferred solution? What are the conditions that create that demand? One of those conditions may be under-capacity in universities and over-capacity in colleges. Extensive research is not needed to demonstrate that application and registration trends are already moving in those directions (McPherson and Schapiro, 2001; National Center for Education Statistics, 2001; National Center for Public Policy and Higher Education, 2000; Wellman, 2002).

Economists talk about “frictional unemployment,” which is the level of unemployment that is unavoidable and natural. There may be a similar way of thinking about transfer. Townsend, to use another

descriptive idiom, talks about the role of the community college in serving “the unable and the unwilling” (Townsend, 2005). There is plentiful research literature about what in the relevant research literature is generally called “college choice.” That literature indicates that some students plan to transfer because they were not admitted to the institution or program of their choice. Other students make poorly advised choices and seek to transfer to correct those mistakes. In these cases transfer is a coincidental behaviour that is triggered by an unplanned and possibly undesired event. For other students transfer is a second choice; their preferred choice is the correction of unsatisfactory conditions at the institution that they selected in the first place. Finally, there are students who transfer for personal reasons that have nothing to do with their educational plans. Facilitating transfer will not solve all these problems, nor should it. In some cases, transfer cannot solve the problem and may disguise it.

Context

The Province of Ontario is the largest and most populous in Canada. It has 20 provincially chartered and funded universities, and 24 provincially owned and operated colleges. The colleges are organized into what in most jurisdictions would be easily recognized as a “state system.” The universities on the other hand each have their own enabling acts or charters, are highly autonomous, and are a system only in the sense that they are financed under a single funding formula.

In 1965, when the college system was planned and founded, its structure was deliberately binary. There was no transfer function in any formal or policy sense. The colleges all were called “Colleges of Applied Arts and Technology” or simply “CAATS.” They could award a variety of certificates and diplomas, but could not award what in the United States is called an associate degree. The term community college was and still is often used colloquially, even by provincial premiers (Vigil Laden, 2005).

Since 1990 there have been a number of reviews (Ontario Council of Regents, 1988; Rae, 2005) and institutional initiatives that have begun to break down the binary divide, to the extent there are now various limited transfer arrangements in place, mainly what Floyd (2005) categorizes as “articulation models,” “university center models,” and “concurrent use campuses.” There is a new college charter that moves implicitly in the direction of decentralization. The new system now comprises two kinds of institution: the original CAATs and Institutes of Technology and Applied Learning or “ITALs.” So far eight CAATs have opted to become ITALs under the new charter. An ITAL has the jurisdictional authority to award four-year “applied arts” degrees in addition certificates and diplomas. Having the authority to offer four-year degrees, however, has not changed the de facto role of the ITALs; in terms of the distribution of students and programs they are still predominantly community colleges. Some institutions that are formally ITALs continue to call themselves

colleges for the purposes of student recruitment. There are still no associate degrees as that term would be understood in the United States.

In terms of enrolment, the ITALs are still predominantly CAATs. Within the context of this study, the most significant characteristic of post-secondary education in Ontario is that students who complete secondary school successfully actually have a relatively wide-range of choice among post-secondary options. So questions about choice are not hypothetical.

A secondary, but still important, characteristic about colleges and universities in Ontario is that they are financed under funding formulas, and the formulas are more like one another than they are different. Colleges and universities have access to the same student financial aid program. The relevance of these factors is that public policy interest in transfer is often motivated by financial, instead of educational, concerns (Anderson, Sun, and Alfonso, 2006; Carnevale et al, 1984; Junor and Parkin, 2005). The deployment of funding formulas, especially when the respective formulas are very similar, make "back of the envelope" comparisons of cost apparently simple. In terms of net cost, being simple is not the same as being correct, but it nevertheless makes the political economy of transfer relatively obvious to politicians and to the public generally. Thus it was feasible to ask students about the comparative effects of cost on their choices.

Choice

This study examines "college choice" comparatively among students who apply to baccalaureate (four-year colleges and universities) and sub-baccalaureate (community colleges) programs. The study is based on two series of longitudinal surveys conducted in the province of Ontario since the late 1980s, and on a series of surveys and interviews of students, parents and guidance counselors in six secondary schools, each with a different student population, since 2004. The third study -- called the "college choice project" -- tracked secondary school students as they made decisions about attending college or university, and as they finally selected the institutions that they would attend.

Ontario Graduate Survey and Key Performance Indicators

For the past ten years the province of Ontario has had in place a series of "Key Performance Indicators" that are calculated on the basis of surveys that are conducted annually of graduates of colleges and universities. Graduates are surveyed twice, six months after graduation and two years after graduation. Each survey collects data in 22 areas. The data are then used to calculate seven indicators. Of particular relevance to this study is the fact that five of the seven indicators apply equally to community colleges and universities. The indicators are required to be made accessible by students in order to inform their choice of college or university. In terms of variables,

analysis of the data compares student preferences based on, for example, rates of employment and rates of return on private investment with the availability of formal opportunities for transfer through articulation. In conjunction with the qualitative research in the study, this survey provides contrasting quantitative and longitudinal results.

The numbers of respondents to the survey has varied only slightly from year to year: about 12,000 (24 per cent) university respondents and about 9,000 college respondents (75 per cent). Results are tabulated and reported by institution and by program.

What is most important to know about the Key Performance Indicators in Ontario with regard to this study is that they were devised as a matter of explicit public policy to influence student choice. When the KPIs were initially installed, no funding was attached to them. Their entire purpose was to create quasi market conditions. The basic idea behind the key performance indicators was that students as consumers needed to know more about the province's colleges and universities. Michael Spence, when receiving the Nobel Prize in 2001, was asked by a journalist "whether it was true that you could be awarded the Nobel Prize in Economics for simply noticing that there are markets in which certain participants don't know certain things that others in the market do know?" (Spence, 2001) The answer, of course, was yes: the degree of asymmetry, if not simple, was surprising. In economic terms, the market for higher education is highly asymmetrical. Thus the original idea behind the Key Performance Indicators was to strike a balance of information between buyers and sellers in a market for higher education. That being the objective, the first deployment of performance indicators in Ontario was for the purpose of public information. The reasoning was that if the information provided by performance indicators was added to the information already available in the market from universities and colleges, students would then make better choices, and, in theory anyway, select programs and institutions with higher employment rates, lower default rates, better cost-benefit ratios, and so on (Lang 2005). In this regard, KPIs in Ontario are somewhat like what Burke calls "performance reporting" in the United States: they do not affect funding but they are defined and required by the state as public information (Burke and Minassians, 2003).

College Choice Project

In a study sponsored by the [Ontario] Ministry of Training, Colleges, and Universities researchers at the University of Toronto undertook a project to determine the factors that influence students' choices of college and university. Unlike other studies that typically inquire about college choice after the choice has been made (Acumen, 1998, 1999; Astin, 1993), this study tracked about 140 students in six secondary schools from the time they first considered applying to a community college or university to the time that they actually made selections among the offers of admission that they had

received. The tracking comprised semi-structured personal interviews and survey questionnaires. The participating students' "best friends," parents, and guidance counselors were also interviewed and surveyed. Although the research was conducted at the University of Toronto, students who participated in the College Choice Project did not have to be applicants to the University of Toronto, and if they were applicants they did not have to have been offered admission or to have accepted admission to the university.

Six secondary schools participated in the College Choice Project. The schools were selected on several criteria. First, they represented a broad array of secondary schools: single gender, co-educational, independent, public, comprehensive, elite, secular, and sectarian (which in Ontario are publicly funded Roman Catholic schools). Second, each took a somewhat different approach to guidance counseling for college placement. This was a potentially important criterion because many studies of the factors that influence college choice indicate a major role played by guidance counselors.

The schools also represented varied student populations in socioeconomic terms. The first step prior to the final selection of schools was to gather the postal codes of all students who were in their final years of study. The postal codes were then matched to census data from Statistics Canada. Specifically, the postal codes were matched to data about household income, employment of parents, and educational level of parents.

The postal code-to-census data match was also used later to identify the socio-economic background of individual students. It was used as well to validate self-reported information about family income and parental education that was collected by questionnaires that were given to students before their first interviews.

The selection of schools, or, more exactly, types of schools, corresponds to the schools that were part of a similar study that was conducted in Los Angeles, California, between 1995 and 1996 (McDonogh, 1997). This was done to allow potentially for comparisons of Canadian and American findings.

After the schools were selected, the guidance counselors in each were asked expressly and as a matter of priority to identify students who in their judgment were "typical" of students who would be applying to university and community college in the coming year. The reason for the priority was the presumption that the population of such students would be relatively small (Acumen Research Group, 1998, 1999; College-University Consortium Council, 2007; Ontario Council of Regents, 1988). Counselors were also asked to identify "typical" students who would be applying either only to college or only to university. Thus three groups that could be compared were formed.

The point of reference for "typical" was each school individually. "Typical" meant students who were definitely admissible, but who

neither exceptionally strong nor exceptionally weak as prospective applicants for university and college respectively. In other words, they were students who would actually have realistic choices. This study thus is not about college students who were inadmissible to university and who later applied to transfer to university on the basis of their academic performance in college. Those students are numerous, but they constitute a different population that would require a different methodological approach.

All the students thus identified received a package that contained information about the project, a preliminary questionnaire, and a consent form. The preliminary questionnaire collected, among other data, information about parental and sibling education, and gender.

The goal was to have about ten participants from each school; approximately the rate of participation in the Los Angeles study. The rate of voluntary participation was higher than expected. To avoid the introduction of an artificial selection factor, all students who volunteered were invited to participate. As a result, the number of students in the Canadian study is more than twice as large as the number in the American study.

During the first interview each student was asked to nominate a "best friend" who would then be invited to participate in the study. This was done to learn about the role played by peers in college choice. The "best friends" who agreed to participate also were interviewed and sent a survey questionnaire. Also after the first interview, questionnaires were sent to parents to ascertain their role in their children's college choice and their own educational backgrounds, which in turn made it possible to identify "first generation" students. Some parents also volunteered to be interviewed.

Depending on information collected in the first interview, follow-up interviews were conducted either in April, for applicants who had applied for Early Admission or Early Action, or in June (by which time virtually all applicants had received decisions about their applications). At that time, all participants, including "best friends" and guidance counselors, received Likert scale survey questionnaires that inquired about 24 factors that influence college choice. The College Choice Project surveys replicated the series of questions that the University of Toronto had asked in its "University Applicant Survey." In the case of counselors, they were asked to score the questionnaires twice: once in terms of how they thought students would make their selections and once in terms of how they thought students should make their selections.

Finally, grades for each participating student were collected. These were the grades that were submitted to the colleges and universities to which each respective student applied. In most cases, the grades were not final grades. One reason for collecting this information was to verify the reliability of self-reported information

about the students' perceived academic strength that was collected in the first interviews. The ultimate point was to learn whether or not students' perceptions of their own academic strengths led to self-selection in their choices of college.

In the end 141 students had complete dossiers: a questionnaire, at least two interview reports, a completed survey, and a grade report. There were 112 "best friend" interview reports, and 36 parent interview reports. Sixty-six dossiers were from students who were applying to a college and to a university. There were 39 complete dossiers from the university-only group and 36 from the college-only group. Although at the start of the project all the students who were selected for participation indicated an intention to apply for admission to at least one college and one university, not all did. At the time of the survey, all respondents still intended to apply to both. By the time of the first interview, which was also time by which most students would have submitted applications, the number of dual applicants had dropped to 62. Students who ceased to be dual applicants continued in the project, but their subsequent data were "flagged" and in methodological terms became part of either the college-only group or the university-only group. Finally, the number of participants who received offers of admission from at least one college or university was 121.

Distribution across the participating schools remained approximately equal. Distribution by group within the schools, however, was not equal. For example, there were either no college-only or no college and university applicants in two schools: a "gifted" school and an elite independent school. The distribution by gender reflected the distribution of college and university entrants in Ontario for the respective years: about 55 per cent female and 45 per cent male. Thirty-nine of the students with complete dossiers were "first generation," which in Ontario means that neither parent (or guardian) had participated in post-secondary education. Students were asked whether or not they either had or would apply for financial aid, which in Ontario is done centrally through a common application. Some students apply for financial aid at the same time that they apply for admission, but many do not. The participating group as a whole was somewhat but not very different from the overall population of first-year students; 53 per cent were applying for aid while 47 per cent were not. The respective percentages for the larger population were 48 and 52. It is important to keep in mind that for participating students this was self-reported information, and was partly information about intentions.

Academic strength, however, was a self-reported factor that could be confirmed by grade-reports to which participating students had consented to allow access. It should not be a surprise that university-only applicants had perceived and actual academic strengths that were greater than the comparable college-only strengths. For both groups perceived strength was higher than actual strength. In the college and university group, however, there were two

differences. First, perceived strength was slightly lower than actual strength, which suggests a predisposition to underestimate. Second, both perceived and actual strength was closer to the college-only group than to the university-only group. In some cases, however, the differences were a matter of only two or three points of GPA.

An obvious question might reasonably be whether or not these rates of participation in the College Choice Project are indicative of the rates of relative interest in colleges and universities. In other words, if approximately one-half of the participants applied to a college and a university, is that percentage reflective of the total population? The answer is in two parts: no and we don't know. The answer is partly no because the instructions to the participating schools were that only "typical" applicants should be nominated, and that college-university applicants should particularly be nominated. The answer is partly "we don't know" because Ontario has two province-wide application centers: one for colleges and one for universities. Unfortunately for the purposes of this research the data bases of the two centers cannot be cross-referenced.

University Applicant Survey

The University of Toronto conducted nine "University Applicant Surveys" between 1981 and 2000. All students who were offered admission to first-year programs were surveyed, whether or not they accepted the offers of admission. Thus each survey comprised over 6,000 students. Many of these students were at other universities. A few were at community colleges. Students were surveyed before they began post-secondary study. Thus their responses were based solely on their experience in the selection of the college or university that they would attend.

The results of this survey are relevant for two reasons. First, because they span a relatively long period of time they are indicative of general changes in student attitudes towards participation in post-secondary education. Second, within the time span of the survey, post-secondary education in Ontario moved from a strict binary structure with virtually no articulation to a system with several different forms of articulation. Analysis of data from the survey allowed one to test the hypothesis, raised by Anderson, Sun, and Alfonso (2006), that the probability of transfer may not necessarily be dependent on the presence of articulation. Third, because respondents were asked to report to which institutions they had been offered admission and which offers they accepted, the results could be organized to form sub-groups comparable to those in the College Choice Project.

Results

Students who applied to colleges and universities had secondary school GPAs at the time of application that were only slightly lower than those of students who applied only to universities: 74 per cent versus 78 per cent. They were nearly the same as those

of students who applied only to colleges: 74 per cent versus 73 per cent.

No student who applied to a college was refused. Every student who applied to a university received at least one offer of admission. This meant that every student had a choice between attending a college or a university. Twelve students accepted an offer of admission from a college; the balance – 54 – chose to attend a university.

The students who chose to attend a college indicated unanimously that their choice was based on access to a specific program that they believed to be relevant to their career interests and of high quality. Specifically, these two factors were ranked first and second on the students' surveys. The possibility of future transfer to a university ranked sixth. Cost ranked seventh. The interest in a specific program, instead of a general interest in an institution, is potentially significant for articulation. Much of the discussion about articulation, as well as the form of articulation in jurisdictions that have adopted it, focuses on systems and institutions. But as Knoell (1996) observed nearly two decades ago most inter-institutional collaboration functions at the faculty (meaning "program") level. This finding suggests that many students have the same view. In Ontario, 70 per cent of students who transfer from college to university are in accounting programs (College-University Consortium Council, 2007).

Interviews of the students who chose to attend a college indicated a tentative interest in transfer. Two thirds of them chose to attend a college that had some kind of articulation agreement with a university. Their interest was tentative in the sense that their choice of college was not conditional on being able to transfer. The opportunity to transfer was seen as a bonus. It, however, was not seen as a second chance or failsafe; these students expressed confidence in their choice of a college over a university.

Just under 40 per cent of university "first choice" applications were successful. This was "first choice" at the time of application, which for most participating students coincided with their second interview. Just over 70 per cent of students who received an offer of admission from their "first choice" institution, accepted the offer. This means that nominal "choice" changed more often than previous research would anticipate (Hossler, Schmit, and Vesper, 1999). This might have been due to the fact that the decision to apply to college and university was sufficiently unusual, at least in Ontario, to cause students to have second thoughts. This was confirmed in interviews with "best friends" and parents, and by the number of students who did not follow through with multiple applications.

Students who applied to colleges that had articulation agreements with universities "paired" their college choice with the respective partner university only slightly more frequently than students who applied to colleges that did not have articulation

agreements. Thus, while the opportunity to transfer was seen as a bonus, it was not a recruitment advantage for specific colleges.

Student preference for community college or university depended more on socio-economic status and parental educational background than on academic performance. This finding is important, but it is also complex and somewhat uncertain. The socio-economic factor is based on information reported by students in their surveys. This self-reported information was compared to census data based on postal codes. The comparison indicated potential errors in self-reporting about family income. This is not an unusual occurrence in student surveys. Nevertheless, with errors in self-reporting taken into account, there is at least some propensity for students from lower income brackets to favour college over university. Factually, however, the Graduate Survey and Key Performance Indicators, to which all students and their guidance counselors had access, indicated that rates of employment and incomes were higher for university graduates six months and two years after graduation. Loan default rates (another KPI) were also lower for university graduates. The relevant point here is not the actual rates, but the relative absence of awareness of the information provided by the KPIs. They did not affect the choices that students made between colleges and universities, or their interest in transfer. Or, as Michael Spence might have said, they did not correct market asymmetry between buyer and seller.

Generally, "first generation" students were distributed proportionally among the three groups, and displayed behaviours and preferences similar to the larger population of participating students. That initially seemed counter-intuitive given the traditional view of the populations best served by community colleges. On closer examination of survey and interview results it became evident that there were two groups of "first generation" students: students whose families had recently immigrated to Canada, and students whose parents were born in Canada. The immigrant "first generation" group was proportionately most present in the university-only group, more present in the college-university group, and least present in the college-only group. The participation of "first generation" students from families that had been in Canada for several generations was the reverse: they were most present in the college-only group, and so on. Seven of the twelve students who accepted offers of admission from colleges instead of universities were native-born "first generation" students. Two anecdotes might be helpful here to emphasize how different the two groups of "first generation" students were.

School One. One of the participating schools was a relatively small public high school in an industrial city on the outskirts of Toronto. That city for many years has had the lowest rate of participation in post-secondary education in the province. It also has the highest rate of unionized labour, most of which is concentrated in a single industry. A college, which is closely linked to that industry, and a small university are located in the city. The college and the

university have an extensive “concurrent campus” articulated relationship. “First generation” students from this school were native-born and were skeptical about the value of attending university; some were also skeptical about the value of attending college. The school’s guidance counselors described these students as “hard sells” with regard to going to university. To use Townsend’s (2005) terminology, these students were not unable; they were unwilling. In the interviews it was clearly evident that students knew about the local articulation opportunity, but the option of articulation offered by the local college and university had little effect on their college choice; only one student applied to the local college and the local university. The students’ explanation, which was given by parents and guidance counselors as well, was that program of choice was more important than the security and convenience of articulation.

School Two. Another participating school was a relatively large public high school in the city of Toronto. Its student population was mainly immigrant and predominantly non-white. A college, which had an articulated relationship with a university, was located nearby. In this school, students from families that had immigrated to Canada valued college and university attendance highly. Moreover, they valued university over college to such an extent that, when the director of guidance was asked to nominate students, she was uncertain that there would be any college-only applicants. These students not only were not a “hard sell,” they did not need to be “sold” at all on the importance of post-secondary education. They were more strongly influenced by institutional reputation than by quality, and preferred career programs with income security over general arts and science programs. The latter finding coincides with other recent “first generation student” research (Lang, 2007). Although only a few of these students were multiple college-university applicants, and only one of them accepted a college offer of admission over a university offer, in the interviews they were open to the idea of articulation, mainly because of lower cost and opportunity to live at home for the first two or three years.

Where applied baccalaureate programs are available in colleges – either independently or through collaboration -- applicant interest in transfer is very low. Although there has been in Canada considerable controversy between colleges and universities about the recognition of applied baccalaureate degrees by university graduate schools, no student or guidance counselor who was interviewed expressed any concern about the recognition of credits for graduate school. Their planning horizons did not extend that far. Thus, as far as demand and audience are concerned, articulation between school and first-year post-secondary study, and articulation between baccalaureate study and post-graduate study are entirely separate matters.

Geographic proximity between a student’s home and a college was a more powerful factor than proximity to a university. This was, first, a finding of the survey. In the interviews it became evident that this was a factor in some students’ thinking about transfer. The idea

was that they would stay nearer home for a year or two, and then transfer to a university. This view was found most among women, and even more so among first generation women.

Very few students placed a value on the corrective role of transfer. An interview question was, "Are you considering transfer – either from college to university or university to college – as a 'just in case' means of correcting or reversing your original choice after or during first year?" It may be, as is often contended, that transfer plays this corrective role. It indeed may, but it evidently is a role that does not become evident to students until after they have begun post-secondary study. And it may also be that articulation can make correction easier or at least less personally costly, but these are factors that come into play after students have made their initial choices. At the stage at which this research was conducted students did not admit to the possibility of making bad choices that would require future correction. Their guidance counselors, however, did.

With regard to commercial surveys and rankings, student preference focused more on program choice than on institutional choice. The preference is more pronounced among students who decided to attend community college. A specific example can be found in the student survey. For students applying only to university, and for students who accepted a university offer of admission over a college offer, institutional reputation ranked very high, usually first or second. None of the students who applied only to a college or who accepted an offer of admission from a college over an offer from a university, ranked institutional reputation in the top ten factors that influenced their choices.

Also with regard to commercial surveys and rankings, student preference for university discriminated between institutional quality and institutional reputation. Applicants to university only ranked reputation higher than quality. Quality moved slightly ahead of reputation for multiple applicants, and was clearly the higher factor for students who favoured college. This poses a conundrum for marketing articulated programs and institutions: one audience will want to hear about quality and one audience will want to hear about reputation, usually expressed by serial survey rankings. Moreover, since universities and colleges are ranked separately (if colleges are ranked at all), prospective students will be looking for this information in different places.

Students were aware of differences in cost. It was the seventh most influential factor in the choices made by students who declined offers of admission from universities in favour of an offer from a college. It was more influential – fourth – for students who applied to colleges only, and less influential – thirteenth – for students who applied to universities only. What is perhaps more significant was the relative importance attached to the availability of financial aid. This was more important for students in all categories. In interviews almost all students indicated that they recognized the variations in cost, and,

contrary to some recent research (Usher, 2005), their knowledge about cost was quite accurate. There was, however, a general belief that financial aid was much less available in colleges than in universities. Whether or not this belief was accurate, it negatively affected interest in community colleges and transfer by articulation. This in turn is consistent with Grubb's (1991) finding that lack of financial aid drives down the rate of transfer even if the logistics of transfer are simplified and streamlined by articulation. That belief on the part of students who were interviewed applied as well to four-year applied baccalaureate degree programs offered by colleges. Some students – slightly more than one-third of those interviewed – were able to discuss the concept of net cost, that is to say the economic intersection of tuition fees and future income. Almost all of these students were willing to accept the proposition that future income would be sufficient to justify higher tuition fees. This assumption, however, for colleges was contrary to information from the Key Performance Indicators about rates of loan default, and from the Graduate Survey about future incomes. A frequently advanced argument in favour of transfer is that it is financially advantageous for low-income students (Kintzer, 1996; Floyd and Skolnik, 2005). As a matter of theoretical fact, the proposition is largely true for students who plan from the start to transfer, but, according to the results of this research, students either are unaware of the advantage or miscalculate it. The proposition often is not true for students whose decision to transfer is made later but still is miscalculated (Melguizo, Hagedorn, and Cypers, 2007).

The role and influence of guidance counselors varied from school to school, but were never higher than 10th place among factors that influenced students' choices. It was highest in smaller independent schools and lowest in large public schools. In no case did guidance counselors come even close to displacing the influence of parents. However, when surveyed and interviewed, guidance counselors were well informed about articulation and recognized opportunities that it offered. In terms of promoting transfer, steps do not need to be taken to educate guidance counselors about articulation. Schools could place greater emphasis on counseling. Ontario is like many other jurisdictions in which support for counseling has been sharply cutback. Nevertheless, it is difficult to imagine a public policy that would increase support for guidance counseling in schools for the express purpose of expanding the rate of either articulation or transfer.

Would an expansion of articulation make a difference? In terms of Floyd's (2005) taxonomy, Ontario has versions of the Articulation model, the University Center model, and the Concurrent-Use Campus model. Thus students who participated in the College Choice Project, and their parents and guidance counselors, had these options available to them, although they were unaware of the terminology. Of the three, students were most aware of the University Center model. Nearly 60 per cent of the multiple applicants applied at least to a college and a university that were part of what Floyd would categorize

as a University Center or Concurrent Campus. As a statistic, this suggests a strong interest in transfer when organized in this way. The interviews and the comparisons of perceived and actual academic strength, however, revealed some subtle but important differences. For some students the attraction was less an articulation and transfer opportunity per se and more an admissions strategy. The university partner was the first choice and the college was the “safety” choice, with the prospect of finally being admitted to the university by transfer. This point of view among college-only and multiple application students was much like the view expressed by some university-only students who selected a university on the basis of improving their prospects for admission to medical school or law school. It was the end result that counted most. To the extent that optimizing the fit between student interests and the availability of programs is a policy objective of public higher education, articulation along these lines appears to be an effective option because more students will ultimately end-up where they want to be. But for those applicants whose college choices were independent of their university choices and vice versa further articulation is not likely to improve the fit between interest and program, and in turn expand the rate of transfer.

Another argument in favour of articulation and transfer is that initial enrolment in a college, in addition to being less expensive and more convenient, allows unfocused or “slow starting” students to “find themselves” and decide finally what they want to do. Grubb (1991) aptly called these students “experimenters.” Although several guidance counselors who participated in the College Choice Project agreed with that view, very few students did. This is not to say that there were no student “experimenters” who participated in this research. Just over ten per cent of the students who applied to a college and to a university saw transfer as a deliberate means of keeping their options open. Most of these students planned to begin in a college and possibly relocate to a university. A few – literally a handful – were aware of the possibility of “reverse transfer” but none of them opted for it.

Here we have to be cautious about drawing conclusions. With the exception of two or three large urban colleges, colleges in Ontario offer virtually no general arts and science programs; almost all their programs are highly specialized and career-oriented. In 2006, only 2.3 per cent of all college students in Ontario were registered in General Arts and Science diploma programs. Even at the college with the largest General Arts and Science program, the percentage was only 4.4. (Seneca, 2007). This is the reverse of the situation in most American community colleges and in some Canadian provinces. General arts and science programs are available to any significant extent only in universities. Thus the lack of interest in colleges as an opportunity to find educational focus may be simply an artifact of a particular post-secondary system. If, however, these findings are generally applicable, the conclusion would be that more than articulation is needed to expand transfer; curricula would have to change too. That coincides with an observation made by Prager

(1993) that declines in rates of transfer could be reversed by strengthening the “general education core.” Seen in this light, articulation as a means of raising rates of transfer will have to entail more than legislative coordination among and between institutions. It will also have to entail changes within institutions. Ultimately it suggests that integration or system re-structuring might more apt terms than articulation. This may also elucidate some of the findings of researchers like Grubb (1991) and Anderson, Sun, and Alfonso (2006) about the weak casual effect between articulation and rates of transfer. The actual causal effect may have more to do with institutional roles and curricula than with the formalities of articulation. In Ontario, for example, where there is little formal articulation, rates of transfer from like college programs to like university programs are as high as American rates, where there is more articulation. Integration in turn suggests that a sub-institutional or program structure for collaboration comes closer to the causal effect than articulation.

Discussion and implications for policy and practice

The first thought to which one comes in attempting to digest the results of this research is that the observations made by Anderson, Sun, and Alfonso (2006) about the mixed effects of articulation on transfer should not be surprising. There are few empirical reasons to presume that an expansion of articulation will lead to a large scale or across-the-board expansion of transfer. The degree of articulation appears to be relatively unimportant to students who make choices between multiple offers of admission to college and university. However, the form of articulation is important to some students. For students to whom form made at least some difference, there was a preference for what Floyd (2005) called the University Center model and the Concurrent Campus model. To locate these models and preferences in broader and more generic terms of inter-institutional cooperation, the preference was for federation (Lang, 2002). There also was a preference for articulation that functioned more at the program level than the institutional level. A more generic idiom -- affiliation or consortium -- might be more apt than articulation, which is usually discussed in terms of system structure. Therein might be an important lesson: while systems might wish promote transfer as a matter of public policy, it does not necessarily follow that the most effective means of promotion is system-wide articulation, or that articulation is even the right paradigm. It might make more practical as well as theoretical sense to think in terms of broader forms of inter-institutional cooperation. Thus an alternative, at least from the point of view students, might be a regime that creates conditions -- structural, regulatory, and financial -- that encourage individual institutions to collaborate in the planning and delivery of programs that can be usefully articulated. Because universities are not identical in their program offerings to begin with, system-wide articulation per se is not likely to change the rate of transfer.

Like the key clue in Arthur Conan Doyle’s mystery, “The Silver

Blaze,” there is a dog that “did not bark in the night.” Do students see college-university articulation as an economic means of optimizing cost and benefit? Carnevale et al (1997) posed this rhetorically as “Why Stay in College?” The answer to that question according to them and subsequently to others was that the cost may be lower but the benefits in terms of future income are the same. This is the sort of market evidence that the Government of Ontario believed, when conveyed to students by the Key Performance Indicators based on the Ontario Graduate Survey, would influence student choice. It was conveyed; slightly more than half the students reported that they knew about the indicators. But none of them reported that the cost-benefit equation affected his or her final choice. Guidance counselors were aware of the information, and reported that they encouraged students to take it into account. This could be a matter of limited economic literacy, as Usher (2005) or Walstad and Rebeck (2001) might say, or it could be an accurate reflection of how students actually think about the relative importance of cost and benefit as represented by articulation. What might make economic sense to a minister of finance or a head of a provincial or state system of post-secondary education might make less sense to a student who is choosing between articulated transfer and direct entry. So, to some extent, the economic value of articulation is in the eye of the beholder.

Moreover, those students and counselors who understood the cost-benefit equation, whether or not it influenced their decisions, did not conceptualize it the way that governments typically do. Governments tend to presume that transfer is cost-efficient because a portion of the units of instruction that lead to a baccalaureate degree are earned and, more to the point, funded at lower college rates. Thus a four-year degree earned partly at a college and partly at a university appears to be less expensive than the same four-year degree earned at a university. And in terms of public subsidies it might be. But we know that students who transfer, even in highly articulated systems, do not transfer all credits, and take some remedial courses that do not generate credit at all. This means that students who transfer forego more income than students who do not. Foregone income is in all cases far more expensive than direct costs, like tuition fees. They may also incur debt for some courses that in the end do not lead to the four-year degree. Thus, to the student, transfer is almost always more expensive than direct entry to university (Meguizo, Hagedorn, and Cypers, 2007) even if it seems less expensive to the government. This is sometimes called the “diversion effect” of transfer. It is real, and students and counselors understand it.

What about cost-benefit from the institutional point of view? Most transfer partnerships follow a vertical model, which is the basis for most formal articulation. For example, students start at a college and finish at a university. This is assumed to be efficient, and revenue is shared on that basis, which in turn explains why fiscally most partnerships are predicated on revenue, and particularly on the maximization of revenue. The also explains why the sharing of revenue and the factors that determine revenue (for example,

enrolment targets) are the most contentious in inter-institutional collaborations (Lang, 2002; Thompson, 2007). But in terms of cost-benefit, net revenue and comparative advantage should count more than gross revenue. In other words, collaborative programs logically should be structured as much on unit costs as on unit revenue, in which case a horizontal model would make more sense than the more conventional vertical model. The result would be that in any academic session a student might be enrolled in a college-offered course and a university-offered course, depending on where the comparative advantage was located.

What does this research have to say about this? First, although the University Center model as it exists in Ontario is more vertical than horizontal, students and some guidance counselors perceived it as horizontal, and were attracted to it for that reason. Second, surveys of students in the first year of college indicate relatively high aspirations to earn a university degree (ACAATO, 2005; Seneca College, 2007). These rates of aspiration are higher than the rates indicated by this research based on application, admission, and acceptance. The rates indicated by this research are very close to the actual rate of college graduates who subsequently attend university (ACAATO, 2005). The rates are also higher than the logistics of transfer would allow. Some college students who say that they want to earn a university degree are in programs for which there is no articulation or other arrangement for transfer. In other words there is a "barrier" to the fulfillment of their aspirations. But most of them are in programs for which there are no university counterparts, in which case removing a notional barrier would not change the rate of transfer. Thus when one examines the distribution among programs and universities of college graduates who attend university (which is possible using data from the Graduate Student Survey) one sees a median rate of transfer that is much higher than the mean rate, which in turn indicates a very "lumpy" distribution. This is further evidence of transfer as more a coincidental behaviour than a planned behaviour, at least at the time of application and admission from secondary school.

Finally, it is not possible to over-emphasize the degree to which students who were considering transfer and who chose college over university in anticipation of transfer were thinking in terms of program choice as opposed to institutional choice. It may be that this was a function of the particular jurisdiction in which this research was conducted. General arts and science programs are found almost exclusively in universities in Ontario. Nevertheless, in students' minds articulation is a concept that has a different force at the program level than at the institutional level. Taking Ontario as an example, this could be a matter of supply-side economics. The reason that 70 per cent of transfers in Ontario are in a single program might be a matter of opportunity: that is, it is a program in which transfer is possible. Even if it seems implausible, as it does, that large numbers of students would invest five years or more in earning a degree that they did not really want except for the fact that it was a university degree, it nevertheless demonstrates the logistical immensity of program re-

structuring, mainly at the college level, that would be necessary to realize a major expansion of the rate of transfer. The implication of this ineluctable fact for universities that want to expand their intake of students by transfer from college is that their opportunities are defined as well as limited by their arrays of direct-entry undergraduate programs and the degree to which those arrays align with the college arrays. The reverse is of course true, but either way articulation alone will not produce significant results unless program offerings also change.

A final note

This study was about decisions made by students who actually had choices. In other words, all the students whom the study examined were admissible to university as well as to college. Many students who attend community colleges do so because they either are inadmissible or perceive themselves to be inadmissible to university. Some are inadmissible because their academic performances in secondary school were deficient. Some are inadmissible because they did not take the necessary preparatory courses. These students constitute a different population that will be the subject of a separate study.

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