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Running Head: ACADEMIC TRANSITION

The Transition to University:
Academic Experiences in the First Semester

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Abstract

This descriptive case study was an investigation of the transition to university, with a focus on academic experiences in the first semester of the 1992-93 academic year at a Canadian research university. To guide the study, a conceptual framework of the transition to university was created by combining elements of relevant theoretical models in the counseling and higher education literature. A purposive sample of eight first year students was selected, equally distributed in terms of gender, entry status (high school vs. college), and actual or contemplated program of study (English vs. Physics). Data were collected by means of semi-structured interviews conducted at four points in the academic year. These were supplemented by class schedules, university documents, and classroom visits. Analysis of the interview data was conducted using the NUD•IST software package.

The results of the study suggest that students are strangers in a strange land during their first semester at university. As they encounter successive sets of academic challenges throughout the semester, they are "learning the ropes" of functioning in this unfamiliar territory. In so doing, students are acquiring the experiential knowledge base that will allow them to survive in university. The results support the study's conceptualization of the transition to university, but also suggest that future research in this area requires a more fine-grained and comprehensive model of the academic environment as experienced by students. Towards this end, the basic elements of an ecological perspective on the academic world of university students are presented. Areas of needed research related to the academic transition experiences of first year students are identified, and recommendations are made for improving orientation and academic advising, as well as course design and instructional practices.

Résumé

Cette étude de cas descriptive fait suite à une enquête sur la transition vers l'université—centrée sur les expériences scolaires lors du premier semestre de l'année universitaire 1992-93—dans une université canadienne axée sur la recherche. Pour structurer l'étude, un cadre conceptuel a été élaboré à partir de modèles théoriques pertinents disponibles dans les écrits relatifs aux domaines du counselling et de l'enseignement supérieur. Un échantillon de huit étudiants de première année a été choisi. Les participants étaient uniformément répartis suivant des critères de sexe, de provenance (secondaire ou collégial) de même que de programme d'études (anglais ou physique) et ce qu'il soit en cours ou envisagé. La cueillette des données a été effectuée par le biais d'entrevues semi-dirigées réalisées à quatre temps différents de l'année universitaire. Les horaires de cours, les documents de l'université ainsi que les rapports d'observation dans les classes viennent compléter cette cueillette. L'analyse des données recueillies a été facilitée par l'utilisation du logiciel NUD•IST.

Les résultats de l'étude suggèrent que les étudiants se sentent en terre étrangère lors de leur premier semestre universitaire. Tout en relevant une série de défis successifs au cours du semestre, ils doivent également apprendre les principes de fonctionnement inhérents à ce nouvel environnement. Ce faisant, les étudiants acquièrent à partir de leurs expériences les connaissances de base essentielles à leur survie en contexte universitaire. Les résultats tendent à soutenir le modèle conceptuel (de transition vers l'université) utilisé dans cette étude. Ils suggèrent aussi que la recherche relative à ce domaine nécessite le développement d'un modèle plus détaillé et plus global de l'environnement universitaire tel que perçu par les étudiants. À cet effet, les éléments constituants d'une perspective écologique du monde scolaire universitaire des étudiants de premier cycle sont présentés. Des pistes de recherches sont identifiées, en lien avec les expériences de transition vers l'université des étudiants de première année. Enfin, des recommandations visant l'amélioration de l'environnement universitaire sont proposées telles que: (a) des mesures

de familiarisation avec le milieu universitaire, (b) l'aide à l'orientation scolaire, (c) le développement des programmes et des cours et (d) le choix des pratiques pédagogiques.

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I want to thank my supervisor, Dr. Janet Donald, for the tremendous support and guidance she has provided me throughout my doctoral program. Certainly this thesis would never have been completed without her patience and encouragement. Throughout my years at McGill, she has actively included me in a wide range of higher education research projects and faculty development activities. In addition, she has made a point of introducing me to other members of the Canadian higher education research community. Participation in these activities has greatly expanded my perspective on the world of higher education. I am indebted to her for the mentorship she has so willingly given me.

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CHAPTER I

INTRODUCTION

Interest in enhancing the experience that first year students have in university and in facilitating their successful transition to university studies has surged during the past two decades. This is evident in educational policy statements, efforts to develop and implement first year programs, and in research efforts. As part of a program of research on student experience and conceptions of learning conducted at McGill University's Centre for University Teaching and Learning, this study was undertaken to investigate the transition of students to university with a focus on academic life in the first semester. Academic life was selected as a focal point for the study both because it is a common domain for all students making the transition to university and because it is the area of student life most directly influenced by the actions of university professors. Repeated findings in the student attrition research that withdrawal rates are highest during the first semester of university study (Tinto, 1993) indicate this is a crucial period in the lives of students and therefore merits particular attention.

Roots of Interest in the First Year Experience

Increased attention to the experience of first year postsecondary students arises from the convergence of numerous educational, political, and economic factors. Two key factors are changing views of what constitutes quality in higher education and concern about student attrition. Quality and excellence in postsecondary education are issues of central concern to institutions, governments, industry, and the wider society. Illustrative of this interest is a multi-year, nation-wide study investigating criteria and indicators of quality and excellence in Canadian colleges and universities (Nadeau, Donald, Konrad & Tremblay, 1990). Quality in higher education, whether one is speaking of institutions or academic departments and programs, has most frequently been studied from either a reputational or a resource perspective (Astin, 1985). When a reputational perspective is

taken, quality is assessed by knowledgeable experts who give a global rating indicating the status of the institution, for example, relative to others of its type. Thus, presidents of research universities may be asked to rank other research universities for excellence (Cave & Hanney, 1992). When a resource perspective is taken, the quality of the institution, department or program is based on its configuration of several kinds of resources. Chief among these is faculty quality, measured by indices such as the proportion with doctorates or publication rates (Donald & Denison, 1997a). Other important indices are of student quality (average entering grade or standardized test scores), physical resources (quality of classrooms, library resources), and fiscal resources (endowments, per-student expenditures). Most discussions of student quality fall within the resource perspective (for example, Solmon & LaPorte, 1986). In the resource approach, the most frequently used measure of student quality is the academic ability of students at entry to college or university.

Quality in postsecondary education has also been defined in terms of the quality of the curriculum or of educational outcomes (Astin, 1985). In the case of curricular quality in undergraduate education, attention is typically directed to student exposure to the liberal arts and sciences; hence, core curricula and distribution requirements are reviewed and debated (Conrad & Duren, 1997; Gaff & Ratcliff, 1997). Outcome measures such as student attrition or persistence rates, the proportion of graduates winning fellowships or admitted to graduate or professional school, or alumni satisfaction ratings are commonly used as evidence of program or institutional quality. Such measures, however, may say more about the quality of the students at entry than about the quality of the education they receive.

Arguing that adherence to these traditional notions of quality and excellence may be counterproductive, particularly when considering educational mission, Astin (1985) calls instead for the adoption of what he terms a "talent development" perspective. Within this perspective, quality and excellence in postsecondary education are defined in terms of the institution's ability to "affect its students and faculty favorably, to enhance

their intellectual and scholarly development, to make a positive difference in their lives" (Astin, 1991a, pp. 6-7). This perspective also includes a recognition of the importance of students' personal development in such areas as emotional maturity, tolerance, empathy, and leadership ability (Astin, 1985). Additionally, the talent development perspective holds that no system of outcomes assessment is adequate unless it includes an assessment of outcomes derived from students' own goals for pursuing higher education (Astin, 1991a). Thus, this perspective on quality in postsecondary education results in an increased focus on the experience of students while they are enrolled, in particular the extent to which that experience contributes to the realization of desired outcomes as defined by students, institutions, governments and the larger society.

Research on the impact of college or university on student outcomes tends to support the aptness of the talent development perspective. In a comprehensive review of research conducted over the past twenty years, Pascarella and Terenzini (1991, p. 637) reached the conclusion that "after holding constant students' entering characteristics, where students attend college appears to matter much less than what happens to them after they enroll." Research investigating undergraduate students' perceptions of criteria of student quality at entry, during studies, and upon graduation has found students' views to be more consistent with the talent development perspective than with the resource perspective; that is, most criteria of student quality increased in importance from entry to graduation (Donald & Denison, 1997a).

Student attrition or withdrawal from an institution prior to degree completion is a source of concern for institutions of higher education and for governments. It has been an ongoing topic of research interest in Canada and the United States for more than two decades. However, in both nations, systematic research efforts have been hampered by the absence of any central or common procedures and data concerning degree non-completion. Particularly problematic is a lack of consensus in operationally defining attrition: reviewers of the attrition research literature (for example, Gilbert, 1991; Tinto, 1987, 1993) emphasize the need to make distinctions in the reasons for student

withdrawal (academic dismissal versus voluntary withdrawal) and in the form of withdrawal (withdrawal from one institution in order to transfer to another versus leaving the postsecondary system altogether). Notwithstanding these potential shortcomings, attrition rates in the United States are typically reported as being between 30 and 50 percent (Pantages & Creedon, 1978; Tinto, 1987, 1993). In a review of the research on student attrition for the Commission of Inquiry on Canadian University Education, Gilbert (1991) found that Canadian attrition rates are comparable to those in the United States. For example, of first year full-time undergraduate students who enrolled in Canadian universities in 1985, 42% had not completed their degrees at the same university by 1990. Across institutions, these non-completion rates ranged from a low of 15% to a high of 68% (Gilbert, 1991). Repeatedly, research has found that attrition is at its highest in the first year of university (Gilbert, 1991; Noel, 1985; Tinto, 1987, 1993). With each subsequent year of study, the attrition rates decrease by approximately 50% (Noel, 1985). Faced with such findings, many educators have concluded that the first year of study constitutes a particularly vulnerable period in a student's postsecondary education and therefore merits special attention (Gardner, 1986; Noel, Levitz & Saluri, 1985; Terenzini et al., 1996; Tinto, 1993; Upcraft & Gardner, 1989).

Echoing the educational excellence and student attrition literature, a number of Canadian and American reports have issued calls for institutions to focus more attention on first year undergraduates. For example, the Commission of Inquiry on Canadian University Education (Smith, 1991, p. 107) recommends that "programs to improve the first year experience should be adopted at all universities." Similar recommendations have been made in the United States. The National Institute of Education's (1984) report, Involvement in Learning: Realizing the Potential of American Higher Education, called for the 'front-loading' of the university curriculum by "providing more resources in the first year than in the next three, assigning high quality teachers to introductory courses, and redesigning classes for first-year students to promote intense intellectual interaction between students and instructors" (Upcraft & Gardner, 1989, p. xiii). Some have gone so

far as to argue that the implementation of such programs is an institutional obligation. For example, the report, College: The Undergraduate Experience in America, issued by the Carnegie Foundation for the Advancement of Teaching, asserts that "colleges should be as committed and creative in helping students adjust to college life as they are in getting them to the campus in the first place" (Boyer, 1987, p. 76).

Research on First Year Students and the Transition to University

In his report to the Commission of Inquiry on Canadian University Education, Smith (1991, p. 105) observed that "institutions and governments do not have a clear idea of what happens to each entering cohort of students." A recent investigation of the first year experience in Canadian postsecondary education (Gilbert, Chapman, Dietsche, Grayson & Gardner, 1997) found very much the same thing. Most Canadian universities, including the institution in which this study takes place, do not systematically collect background information on their entering students beyond that required on application forms, nor do they systematically collect information on student experiences and educational outcomes in the first year. In order to guide their efforts to understand and enhance the first year student experience, institutions must turn to a growing research literature which is rooted in a multitude of academic disciplines and research traditions: education and educational psychology (e.g., Cliff, 1995; Donald, 1993, 1995b; Meyer, Dunne & Sass, 1992; Willis, 1993), counseling psychology (e.g., Arthur, 1994; Baker & Siryk, 1989; Koplik & DeVito, 1986), developmental psychology (e.g., Baxter Magolda, 1990; Buczynski, 1991; Chickering, 1969; Perry, 1970), social psychology (e.g., Aspinwall & Taylor, 1992; Brower, 1992; Hays & Oxley, 1986), anthropology and sociology (e.g., Anderson & McClard, 1993; Benjamin, 1990; Moffatt, 1989; Tinto, 1993; Weidman, 1989), speech and communication (e.g., Johnson, Staton & Jorgensen-Earp, 1995; Jorgensen-Earp & Staton, 1993), and marketing (e.g., Church & Gillingham, 1985, 1988).

Nature of the Transition to University

A number of recurrent themes about the demands facing first year students emerge from this literature. The research shows that the commencement of college or university study precipitates a complex and multifaceted set of changes in students' lives (Benjamin, 1990; Terenzini et al., 1996). Entering students must familiarize themselves with and learn how to function competently within the physical and interpersonal dimensions of a new academic environment (Cornell et al., 1990; Erickson & Strommer, 1991; Holdaway & Kelloway, 1987; Moffatt, 1989) while dealing with the disruption of ties to former peers (Benjamin, 1990; Tinto, 1993). They must contend with the challenges of differing academic tasks in their various courses which may present intellectual demands different than those previously encountered (Donald, 1988; Entwistle & Tait, 1990; Ramsden, 1979; Thomas, Bol & Warkentin, 1991). Beyond these demands, students between the ages of 17 and 22 must deal concurrently with the developmental tasks inherent in the transition from late adolescence to young adulthood (Kitchener, 1982).

Research on postsecondary students and their experience throughout the undergraduate years has given rise to two major kinds of theories: **developmental** models and **college impact** models (Pascarella & Terenzini, 1991). Developmental theories focus on identifying the dimensions, structures and dynamics of intra-individual growth or change in postsecondary students. They include, for example, Chickering and Reisser's (1993) theory of psychosocial development and Baxter Magolda's (1992) theory of epistemological development. In contrast, college impact theories focus on identifying sets of environmental or sociological variables exerting an influence on one or more aspects of student change. Examples include Astin's (1984, 1993) student involvement theory, Tinto's (1987, 1993) model of voluntary student attrition, and Weidman's (1989) model of undergraduate socialization. In highlighting the importance of interactions between the student and the environmental characteristics of the institution in determining educational outcomes, these college impact theories are particularly useful in guiding efforts to facilitate the transition to university. For example, many university orientation

programs are designed to realize goals which correspond to Tinto's concepts of "academic integration" and "social integration." Although these theories are useful, we nonetheless lack conceptual frameworks which focus specifically on the transition to university and which are grounded in the perceptions and experiences of students. In our efforts to develop such models, we must ensure that they are flexible enough to accommodate the unique circumstances of any given institution in order to be truly useful.

Outcomes of the First Year Experience

The research on first year students has addressed a variety of outcomes, including: influences on withdrawal and persistence decisions (e.g., Metzner, 1989; Pascarella, Terenzini & Wolfle, 1986); psychological, social and academic adjustment (e.g., Baker, McNeil & Siryk, 1985; Brooks & DuBois, 1995); personal and cognitive development (e.g., Baxter Magolda, 1990; Pascarella, Duby, Terenzini & Iverson, 1983b); changes in goals and motivation (e.g., Stage & Williams, 1990); satisfaction (e.g., Sanders & Burton, 1996); and retention within specific academic programs (e.g., Donaldson & Dixon, 1993). Of particular relevance to this study is the work on academic outcomes of the first year experience, much of which has focused on cognitive and noncognitive predictors of academic success as measured by grade point average (e.g., Allan, Darling, Hughes & Rosenfeld, 1983; Boyer & Sedlacek, 1988; Cox, 1993; House, 1995; Tracey & Sedlacek, 1987). Often ignored in the process is attention to the quality of learning outcomes. Research on first year students has found that they come to us with a desire to learn and succeed academically (Donald, 1995b). They appear to be prepared in terms of subject matter background but not in their learning strategies. We expect them to be able to think logically, but they choose the familiar and specific as important in their courses and do not acquire a precise knowledge of the most important concepts in their courses. How students conceptualize learning and define their learning task is an important mediating variable in the amount and kind of learning that will occur (Marton, Dall'Alba & Beaty, 1993; Marton & Säljö, 1976).

Important to our growing understanding of these issues is the work on students' orientations to learning that has been conducted by European, South African and Australasian researchers (for example, Biggs, 1987, 1993; Entwistle, Meyer & Tait, 1991; Entwistle & Tait, 1995; Marton et al., 1993; Marton & Säljö, 1976; Meyer, 1995; Meyer, Parsons & Dunne, 1990; Ramsden, 1992). The term 'orientation' in this research indicates a combination of an approach to studying, style of learning, and motivation which is relatively stable across different educational tasks (Ramsden, 1992). Factor analyses of students' orientations to study have confirmed three approaches: deep or meaning, surface or reproducing, and achieving or strategic (Biggs, 1993; Donald, 1995b; Entwistle & Ramsden, 1983). A deep approach reflects a student's intention to seek personal understanding in an active way, while a surface approach reflects the intention to reproduce the content in order to cope with assessment requirements (Entwistle & Tait, 1995). In a strategic approach, the student's goal is to be alert to requirements in order to maximize grades. The results of the student orientation research suggest that students who adopt a deep approach to learning experience greater satisfaction in their learning, higher quality outcomes and better grades (Ramsden, 1992).

Indeed, the proportion of students adopting a deep approach declines over the course of university studies (Biggs, 1993). Students' approaches to learning and the resulting learning outcomes are influenced by the nature of the learning environment in academic courses, including instructional methods and assessment practices (Hagen & Weinstein, 1995; Ramsden, 1988; Trigwell & Prosser, 1991). The learning task is interpreted, at least in part, as we describe it: if we emphasize knowledge, students will approach the learning task as if it is one of acquiring knowledge; if thinking, students will interpret the task as learning to think; if memorization is emphasized, then students will focus on that rather than conceptual understanding. Thus, within broader efforts to enhance our conceptual understanding of the transition to university, there is a need for research which focuses specifically on the academic context encountered by first year students.

First Year Experience Practices in Canadian Universities

The design and implementation of programs and services for first year university students is not as highly developed in Canada as it is in the United States. Within American institutions of higher education, the interest of faculty, administrators and student affairs personnel in enhancing the first year experience and facilitating the transition to university has intensified to the point that some have indicated a "freshman year movement" is underway (Upcraft & Gardner, 1989). This movement represents a pervasive educational philosophy rather than adherence to one particular program or approach to enhancing learning and success in the first year. In essence:

> (I)t involves educators on a given campus developing a comprehensive definition of first-year student success and then taking deliberate and intentional steps to insure the responsibility, empowerment, and support necessary to achieve this definition of success for new students. (Gilbert et al., 1997, p. 4)

Although the majority of Canadian universities have established programs and services for first year students, a recent national survey concluded that efforts have been less intentional and systematic:

> To date, the Canadian First-Year Experience, in terms of a philosophy, a concrete approach, specific features, has been very different from the American experience. It has been a fledgling effort on the part of a few institutions . . . The Canadian experience . . . had no coherent focus or definition; was not systematic or structured; nor could it be characterized as a 'movement' with specific intentions, goals, objectives, or purposes. (Gilbert et al., 1997, p. 13)

The most common practices cited in recent studies include: pre-admission liaison services; orientation; academic advising; career and personal counseling; residence life programs; and seminars on such topics as learning and study skills, time management, assertiveness, library skills, and stress management (Chapman, 1993; Gilbert, 1991; Gilbert et al., 1997). Only a few universities offer specially designed academic courses in the form of University 101-type courses, course clusters, or Freshman Interest Groups.

The majority of programs and services for first year students in Canadian universities are provided by student affairs professionals and student volunteers rather

than faculty members, and thus remain "peripheral to mainstream academe" (Gilbert et al., 1997, p. 109). Although collaborative efforts are becoming more prevalent, many universities are still characterized by a bifurcated "two solitudes" relationship between academic units and student services: the faculty focus on the design and delivery of programs and courses intended to promote intellectual growth, relegating the "rest of the student" to student services. Complicating the situation,

> (T)here is still debate and tension over whether or not institutions will take responsibility for the effectiveness of their educational structures and processes. Within and across institutions, there is conflict between those who favor individual responsibility, survival competition, and sink or swim challenges, and those who favor institutional responsibility, co-operation and assistance, and value-added student development. (Gilbert et al., 1997, p. 110)

Reflecting this ongoing tension, programs and services for first year students tend to be offered in a passive rather than an active or intrusive mode. That is, programs are created based on the assessed or presumed "needs" of students, and space and staff allocated; students must then identify a need for themselves, ascertain the corresponding service, its location and hours, and then act on that information on a voluntary or "drop in" basis.

When it comes to meeting the educational goals of the institution, this focus on students rather than academic and administrative structures can be problematic. On the one hand, first year students may not be adequately equipped to take advantage of existing programs and services. Thus, those who may be most in need may also be the least likely to access services. On the other hand, the likelihood of achieving desired educational outcomes for first year students is maximized when efforts are cooperative and campus-wide (Gilbert et al., 1997). Given the research evidence of the importance of the academic context in influencing the quality of learning outcomes, a lack of attention to the design and delivery of academic programs and courses for first year students is likely to prove counterproductive in the long term.

Purpose of the Study

While there exists a growing body of research and theory to inform our general understanding of the transition to university and the development of interventions for enhancing the first year student experience, individual institutions must tailor such efforts to their own realities (e.g., student populations, organizational structures, physical and fiscal resources). Most of the efforts at devising programs and services for first year students in Canada have focused on assisting students to function more effectively within organizational structures as they currently exist. Much less attention has been focused on investigating academic programs and courses to ascertain the extent to which they support or impede the education of first year students and making the necessary structural modifications. This study was an investigation of the first semester academic experiences of students at one particular institution as they made the transition to university. Through the use of in-depth interviews and other sources of information, the study attempted to uncover characteristics, dynamics, and patterns that comprise both the academic aspects of the transition to university and the context in which they occur The research questions that guided the study are the following:

1) What is the nature of the personal context against which students undertake the transition to university? What background characteristics do students bring with them as they enter university?

2) What are the characteristics of the academic contexts within which students operate as they engage in their first semester of study? Do these contexts change over the semester?

3) What issues or challenges are salient to students at various points in time over the first semester? Within which contexts do these arise?

4) What changes in student relationships, routines, assumptions or attitudes, and/or roles take place over the semester? Within which settings do these take place? What are the influences on these changes?

5) What patterns emerge in the academic experiences of individual students over the first semester? What patterns, if any, characterize the experience of these students collectively?

Outline of Succeeding Chapters

In the next chapter, I present a conceptualization of the transition to university which I developed in the course of planning this study. Combining theory and research from such areas as adult transitions, student attrition, psychosocial development, and student learning, this framework shaped decisions about the study's design and the collection of data. Chapter 3 describes the method of the study. In Chapters 4 and 5, I present the results of the study. Chapter 4 addresses the educational and personal backgrounds of the participants, the planning and decision-making which led them to McGill University, and the personal and structural influences that shaped the academic context within which participants experienced their first semester of university study. Chapter 5 then focuses on the actual experiences of the participants, the issues with which they had to deal, and the forces which shaped those experiences. In Chapter 6, I conclude by discussing the implications of these results and recommendations for research and practice. I argue for the application of an ecological perspective in future research on the academic experiences of students and describe how one ecological model might be applied for such purposes.

CHAPTER 2

CONCEPTUAL FRAMEWORK

This chapter presents a conceptual model of the transition to university used to focus and guide the study (Miles & Huberman, 1984). It was developed by drawing on Schlossberg's (1984) model of adults in transition, Tinto's (1987, 1993) theory of student attrition, and Chickering's (1969; Chickering & Reisser, 1993) theory of psychosocial development in postsecondary students. The Schlossberg model is comprehensive in its interpretation of what constitutes transition in adult development and therefore forms the core of the conceptual framework presented here; the Tinto and Chickering models add elements to fit the basic transition model to the higher education context and the particular student population.

The conceptual model assumes that a comprehensive view of the transition to university must incorporate two perspectives, the intrapersonal and the institutional. From the intrapersonal perspective, the transition to university is but one of many transitions that the individual will experience throughout his or her life and therefore occurs in a more general developmental context. Insight into this intrapersonal perspective is gained by drawing upon the Schlossberg and Chickering models. From the institutional perspective, the transition to university is more concerned with the individual becoming an effective member of a particular academic institution. Insight into this perspective is gained by drawing upon the Schlossberg and Tinto models.

The Intrapersonal Perspective

For purposes of conceptualizing the transition to university, key elements from the intrapersonal perspective are (1) the basic nature of transitions and how they are experienced by individuals, and (2) the nature of ongoing psychosocial development and its relationship to the transition to university.

The Nature of Transition

According to Schlossberg (1984), a transition takes place whenever any event or nonevent (i.e., the nonoccurrence of some anticipated event such as receiving a scholarship) in an individual's life results in a change in relationships, routines, assumptions, and/or roles within such life domains as self, work, family, health, or economics. Moreover, it is possible for one transition to precipitate other transitions, or for the individual to undergo several transitions concurrently. Three sets of factors influence the individual during the process of transition: variables characterizing the particular transition, variables characterizing the particular individual, and variables characterizing the particular environment (Schlossberg, 1984, pp. 67-68). These are discussed in detail later in the chapter. Schlossberg sees adults as continuously experiencing transitions, many of which entail a reworking of earlier transitions. For example, in today's economic climate, it is not uncommon that individuals have to seek out new employment on several occasions during their adult life. In this sense, transitions have no real end point: they entail a process over time which includes phases of assimilation and continuous appraisal as one transition blends into the next. Transition is thus "a process of continuing and changing reactions over time — for better or for worse — which are linked to the individual's continuous and changing appraisal of self-in-situation" (Schlossberg, 1984, p. 56).

For an individual student, the transition to university involves confronting a number of other transitions. These may include moving to a new city, having to establish new friendships, and developing new approaches to studying. In terms of the magnitude or complexity of the transitions involved, it is therefore useful to think of the transition to university itself as being a **macrotransition** and the resulting transitions which the student encounters as being **microtransitions** constituting that macrotransition.

Intrapersonal Phases of Transition

Transition entails a process of continuing and changing reactions over time (Schlossberg, 1984). The question thus arises of what form this process takes. Schlossberg sees the transition process as being comprised of three phases or stages: (a) pervasiveness, (b) disruption, and (c) integration. During the introductory phase of **pervasiveness**, the individual is very much aware of a need to respond to a critical event in his or her life, a response which will entail some form of change. In a sense, the individual is preoccupied with the transition and awareness of it permeates his or her attitudes and behavior. This is followed by a middle period of **disruption**, during which "the individual is a bit at sea as old norms and relationships are changing and new ones are in process" (Schlossberg, 1984, p. 61). Finally, the process enters a period of **integration**, during which a resolution (for better or for worse) is reached, and the transition experience is integrated into the ongoing experience of life. For example, the student graduating from high school moves from being totally aware of being a high school graduate to being aware of having graduated. Awareness of the transition moves from being a central feature of the individual's life to being but one of the many facets or dimensions of one's life.

Schlossberg's depiction of these three phases conveys a sense of qualitative shifts in the psychological saliency of the transition for the individual involved. One also senses a movement from becoming aware of some problematic situation or event to the arrival at some form of resolution. Schlossberg posits that the resolution arrived at in the integration phase can take several forms (e.g., renewal, acceptance, or deterioration). These forms capture the notion that the resolution to a transition exists along a continuum from relatively positive to relatively negative. The arrival at a resolution can thus be seen as one defining characteristic of the stage of integration. A significant decrease in the psychological saliency of the transition may well serve as a second defining characteristic.

Psychosocial Development and the Transition to University

For first year university students in the 17 to 22 age group, the transition to university takes place concurrently with ongoing psychosocial development, specifically the transition from late adolescence to young adulthood. This psychosocial development takes place through the resolution of a series of developmental tasks, a developmental task being "an interrelated set of behaviors and attitudes that one's culture specifies should be exhibited at approximately the same chronological time in life by a given age cohort in a designated environmental context such as the higher education setting" (Miller & Winston, 1990, p. 104). Chickering (1969; Chickering & Reisser, 1993) uses the term "developmental vector" in place of developmental task, believing it better conveys a sense of both direction (in the sense of movement toward more complex and sophisticated levels) and magnitude (in the sense of changes over time in the psychological saliency of these dimensions for the developing individual). Vectors, then, specify in psychological terms the nature and range of the tasks, defining what will be the central concerns and sources of worry and preoccupation for students (Widick, Parker & Knefelkamp, 1978). Chickering and Reisser (1993) see the research on psychosocial development during adolescence and early adulthood as illuminating seven major areas or dimensions of development: (a) developing competence (intellectual, physical, and interpersonal), (b) managing emotions, (c) moving through autonomy toward interdependence, (d) developing mature interpersonal relationships, (e) establishing identity, (f) developing purpose, and (g) developing integrity.

Developmental Sequence of the Vectors

Chickering's seven developmental vectors are not hierarchical in the same sense as developmental stage theories such as those of Kohlberg (1984), Loevinger (1976), or Perry (1970). Nor are they as sequential as the psychosocial stages formulated by Erikson (1968). Rather, Chickering sees the issues defining a vector as having existed all along in a person's life, ascending into prominence at a particular time and in a particular

environment. As the vector ascends into prominence through the challenges presented in a given environment such as the university, the individual is faced with the need to resolve that vector's constituent issues or tasks. In this sense, the developmental vectors may be seen as overlapping or existing in parallel. Chickering does, however, see the vectors as being developmentally sequential to the extent that resolution of later vectors is dependent upon at least partial resolution of the preceding vectors. More specifically, the development of identity is seen as depending upon the preceding vectors of competence, managing emotions, autonomy, and mature interpersonal relationships. Similarly, the development of a sense of purpose, and the development of integrity are seen by Chickering as dependent upon the development of identity.

Several recent studies on the psychosocial development of women (Straub, 1987; Straub & Rodgers, 1986; Taub, 1997; Taub & McEwen, 1991) have indicated that there may be gender differences in this developmental sequence, particularly in regard to autonomy, intimacy, and interpersonal relationship issues. Chickering is also clear about the need to acknowledge individual differences: he asserts that, within any given group of students, different students may be dealing with different developmental issues, may have difficulties in resolving particular developmental issues and, indeed, may be more concerned with some developmental areas and less with others. These individual differences arise, in part, because "entering students bring different frames of reference and different functional considerations" (Chickering, 1969, p. 284): they differ in their values, intellectual abilities, personalities, and reasons for attending university.

Development Within the Vectors

Development within each of the vectors occurs through cycles of differentiation and integration. Within each of the seven vectors, the student develops an increasingly differentiated and complex awareness of self-attributes and skills. The "fine-tuned" perceptions are then integrated and organized so as to establish a coherent and comprehensive picture of self. Chickering asserts that developmental change along the

vectors is not simply a matter of maturational unfolding but results from environmental challenges or stimulation which encourages new responses to new demands. He suggests that the direction of development is more accurately expressed as a spiral or steps rather than as a linear progression. The utility of the spiral image is reinforced by Chickering and Havighurst's (1981, p. 30) assertion that most complex developmental tasks are never completely resolved: "shifting circumstances and new challenges may require tackling them again at other levels of complexity and sophistication." This is similar to Schlossberg's view that adults often find themselves having to rework earlier transitions.

Concurrent Macrotransitions

For university students in the 17-22 age group, psychosocial development associated with the transition from adolescence to young adulthood can thus be considered as a form of **concurrent macrotransition**, aspects of which may also constitute microtransitions associated with becoming a university student. At the same time, the extent to which particular developmental vectors have been resolved by the entering student and the nature of those resolutions may influence how the student deals with the transition to university.

Schlossberg's stages of pervasiveness, disruption, and integration are consistent with Chickering's (1969; Chickering & Reisser, 1993) concepts of differentiation and integration as the cycles through which development along his psychosocial vectors occurs. Chickering speaks of the vectors as ascending into psychological prominence in response to environmental challenges. In this sense, both developmental vectors and transitions begin with the individual's increased awareness of their presence. Movement through the transition phases of pervasiveness and disruption can be likened to a differentiation process. From Schlossberg's (1984) definition of the pervasiveness stage, one senses that the individual first becomes aware of a problematic situation, then becomes involved in exploring its nature or definition. During the stage of disruption, the individual clarifies that definition and begins trying out various ways of responding. The

concept of integration in both models is similar: the individual arrives at some form of resolution (for better or for worse) and incorporates that resolution as one more element in the evolving self or life experience.

The potential for individual and gender differences in the sequence with which developmental vectors ascend into prominence is an important consideration for the current study. It raises the possibility that there will also be individual and gender differences in how students experience the transition to university. More important, however, is Chickering's assertion that the resolution of any given vector can be relatively positive or relatively negative. Whether positive or negative, this resolution will influence the manner in which subsequent vectors are resolved. This is consistent with Schlossberg's comments on positive and negative reactions to transition experiences.

The Institutional Perspective

The transition to university occurs not only within a particular life domain, education, but within a particular type of academic institution, the university. Moreover, each student experiences the transition in connection with a specific institution. From the institutional perspective, a successful transition to university is clearly indicated by the student's persistence in studies until degree completion. Theories of student persistence and attrition, such as that of Tinto (1987, 1993), contribute to our understanding of the transition to university by (a) providing a framework for conceptualizing the university environment, and (b) emphasizing the importance of the interactions between the student and that environment.

Transition, Persistence and the Institutional Environment

Tinto's (1987, 1993) theoretical work addresses the problem of students who leave postsecondary institutions prior to degree completion for voluntary reasons rather than failure to meet academic standards. He argues that individual persistence or attrition arises out of a longitudinal series of interactions between the entering student (with his or

her given attributes, skills, personal goals, and intentions and commitments with respect to the pursuit of postsecondary education) and the faculty, staff and students who form the various communities of the institution.

The Academic and Social Systems of the University

Tinto posits that postsecondary institutions are made up of both academic and social systems and subsystems, each with its own characteristic formal and informal structure (Figure 1). The **academic system** concerns itself almost entirely with the academic affairs of the institution, particularly the formal education of students. Activities within this system center around the institution's classrooms and laboratories and involve the various faculty and staff whose primary responsibilities focus on the training of students and the conduct of research. The academic system is likely to incorporate a number of **subsystems** corresponding to departmental or disciplinary differences in culture and curriculum.

The **social system** of the institution centers about the daily life and personal needs of the institution's members. Its activities consist of the recurring sets of social and intellectual interactions among students, faculty, and staff which take place primarily outside the academic domain of the institution. The character of these activities, particularly the social activities of students, may or may not be consistent with the academic demands of the institution. It must also be acknowledged that the structure of the academic and social systems varies with type of institution. Thus, for example, those institutions with a minimal or nonexistent population of students living in campus residence halls are less likely to have strong social systems at the institutional level.

Although the **formal** and **informal** academic and social systems overlap, their constituent activities and potential effects can be quite distinct. Within the academic system, for example, forms of integration which occur within the formal settings of the classroom or laboratory may or may not result in similar forms of integration within the informal academic realm (e.g., the formation of study groups, establishing personal

relationships with instructors). Similarly, one can distinguish between experiences within the formal social system, such as organized extracurricular activities, and those arising out of the informal day-to-day interactions among members of the institution (e.g., getting together for a drink at the student pub).

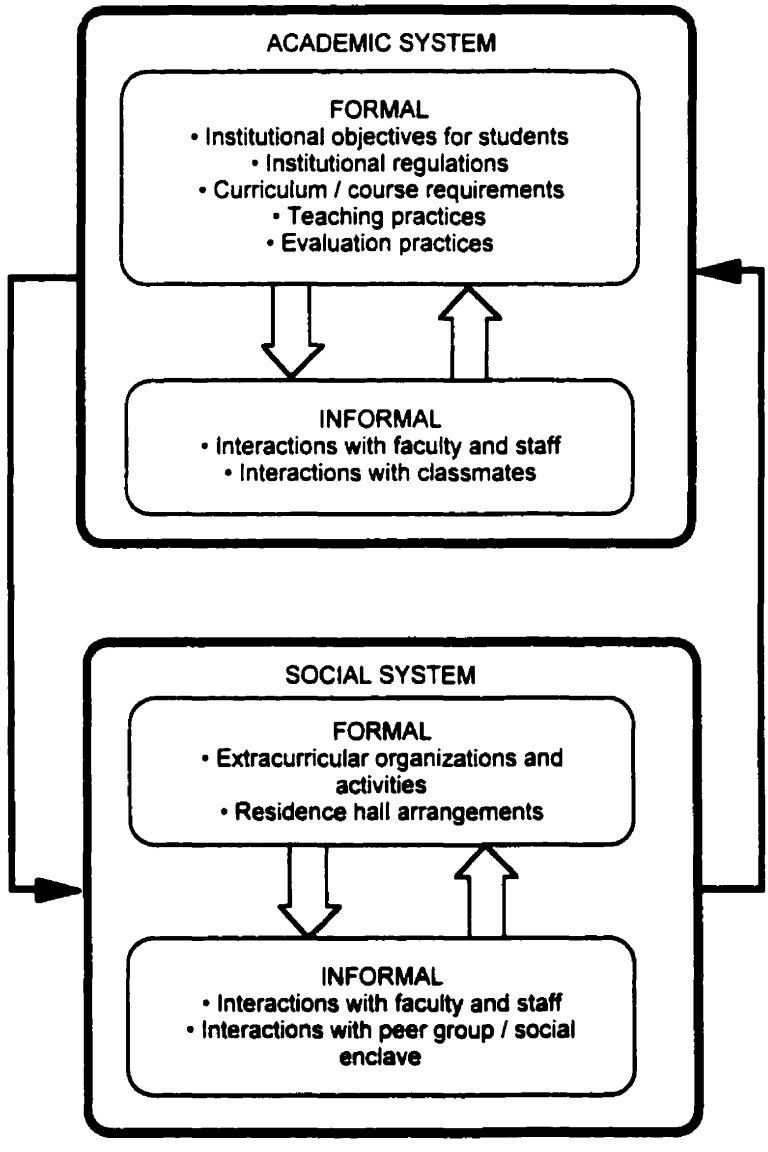

Figure 1. Tinto's model of the environment in postsecondary institutions

The student's experiences within these systems, as reflected by his or her **academic and social integration**, serve to continually modify and refine initial intentions and commitments. Integrative or positive experiences, as perceived by the student, reinforce persistence through their impact on heightened intentions as well as goal and institutional commitments. Negative or malintegrative experiences, on the other hand, attenuate the student's intentions and commitments and thereby increase the likelihood of leaving prior to program completion. While full integration into the academic and social systems of the institution is not necessary for persistence, some degree of integration (varying with each individual) is a prerequisite condition for student persistence.

Institutional Phases of Transition

If Schlossberg's (1984) and Chickering's (1969; Chickering & Reisser, 1993) models characterize intrapersonal aspects of the longitudinal nature of the microtransitions involved in the transition to university, then Tinto's (1987, 1993) model captures the stages of the macrotransition at the interpersonal and person-environment levels (i.e., from the institutional perspective) through his incorporation of ideas from Van Gennep's (1909/1960) study of rites of passage in tribal societies. Van Gennep asserted that the concept of rites of passage was applicable to a variety of situations in which an individual or group moves from one place to another, and that such changes could be extremely stressful. Tinto views Van Gennep's work as providing a framework for thinking about the longitudinal process of student persistence in postsecondary education. First, it is possible to envision the process of student persistence (of which adjustment is a constituent process) as being functionally similar to that of becoming incorporated into the life of human communities generally. Second, this process is marked by stages similar to those outlined by Van Gennep: separation, transition, and incorporation. Each of these stages is characterized by a change in the patterns of interaction between the individual and other members of society. Finally, the process of

student departure reflects the difficulties individuals face in seeking to successfully navigate these passages.

The stage of **separation** involves students disassociating themselves, in varying degrees, from past patterns of association and interaction with members of the former community or communities. For the majority of entering students, these communities are most typically associated with the family, the high school, and the local area of residence. Membership in the new postsecondary community requires that students distance themselves to some extent psychologically and socially from past communities. This necessity for distancing arises from differences in composition, values, norms, and behavioral and intellectual styles characterizing daily life between the postsecondary and prior communities. Tinto (1993, p. 95) posits that "the process leading to the adoption of behaviors and norms appropriate to the life of the college necessarily requires some degree of transformation and perhaps rejection of the norms of past communities." These are very similar to the aspects of a person's life which Schlossberg (1984) suggests are likely to be affected by a transition and, thus, Tinto's stage of separation parallels Schlossberg's stage of pervasiveness.

The geographic proximity of the two sets of communities serves to attenuate or accentuate the stress associated with the phase of separation (Tinto, 1993). For example, the physical separation experienced by students who move away from home to attend college or university tends to amplify psychological and social separation and often brings with it an attendant increase in stress. In contrast, students who remain at home need not disassociate themselves from past affiliations to the same extent. By being able to draw upon existing social support systems, these students may experience less stress (Barling, MacEwen & Pratt, 1988; Brown, Brady, Lent, Wolfert & Hall, 1987; Chataway & Berry, 1989; Cohen & Wills, 1985; Mallinckrodt, 1988; Reifman & Dunkel-Schetter, 1990).

During the stage of **transition**, which commences during and continues after the stage of separation, students begin to interact in new ways with members of the new community into which they seek membership. Entering students have begun the process

of putting aside previous norms and patterns of behavior and must now begin to acquire the knowledge, skills, and normative behaviors required for competent membership in the new communities of the college or university. In the interim, many students find themselves in an anomic situation in which they are no longer bound to the past but are not yet firmly tied to the future. This characterization of the stage of transition corresponds closely to Schlossberg's (1984) depiction of the individual in the stage of disruption.

The scope of the transition stage, in terms of the degree of change it entails, depends on a number of factors (Tinto, 1993). Among these are the degree of difference between past norms and patterns of behavior and those required for competent membership in the life of the college or university, and the degree to which individuals have already begun the process of transition prior to formal entry. The stage of transition is such that virtually all students will experience some difficulty and stress, although individual responses to that stress will vary with differences in individual goals and intentions. Generally, the first two stages occur very early in the student career.

During the final stage of **incorporation**, the student must establish competent membership in the communities of the university or college: he or she must become integrated into the institution's academic and social systems. From the institution's perspective, competent membership is defined primarily by the student maintaining adequate levels of academic performance: failure to maintain these standards is likely to result in academic dismissal from the institution. Tinto's main concern, however, is with understanding the processes which lead to the voluntary departure of students who are eligible to continue their programs of study. Thus, academic performance can be viewed as representing a necessary but not sufficient condition for student persistence in that it pertains only to the formal academic system. A sufficient degree of integration in this system need not imply a comparable level of integration into the informal academic system or the social system. It is quite possible for a student to achieve satisfactory integration into the academic system but fail to attain membership in a meaningful peer

group, or vice versa. Tinto suggests that students in either of these two situations are more likely to withdraw from the institution than are students who achieve integration in both academic and social systems.

Tinto argues that student persistence in college or university is dependent on establishing a degree of integration into the formal and informal aspects of both the academic and social systems of the institution. Beyond the institution's standards for academic performance, which have been identified above as a necessary but not sufficient form of integration, Tinto asserts that what constitutes a sufficient degree of this additional form of integration is defined by the individual student:

> The model takes seriously the ethnomethodological proposition that what one thinks is real, has real consequences. As regards integration, the mere occurrence of interactions between the individual and others within the institution need not ensure that integration occurs — that depends on the character of those interactions and the manner in which the individual comes to perceive them as rewarding or unrewarding. Thus the term membership may be taken as connoting the perception on the part of the individual of having become a competent member of an academic or social community within the college. (Tinto, 1993, p. 136)

Tinto suggests that the sequence in which these stages are encountered and the psychological saliency with which they are experienced will not necessarily be the same for all students:

> There is no doubt, for instance, that some students are hardly aware of the transition required in becoming integrated into the life of the college. Others may not experience separation, transition, and incorporation in the same sequence or at the same time. For some, each stage may occur only partially and then be repeated as they move further along in their college careers. For many, the stages may not be separate but may significantly overlap. Various elements of the process of incorporation may occur at the same time that other elements of separation and transition are being experienced. Moreover, the differing forms of adjustment they entail are often intertwined in such a way that experiences at one stage affect adjustments in another stage. (Tinto, 1993, p. 95)

Tinto's model thus provides the study with an initial framework for differentiating systems and subsystems within the larger university environment. He further acknowledges that students are also members of communities outside the

university and that events within these communities may influence the student's experiences. The nature of students' educational and career goals, and of students' commitments both to those goals and the institution are highlighted as important factors. These both shape and are shaped by students' interactions in the academic and social systems of the university. In addition, while professors may view students' academic integration as being of central importance, Tinto (1993) acknowledges that social integration may be viewed as more important during the initial weeks of the first year by students who have moved away from home to attend university.

Key Factors in the Transition to University

Schlossberg (1984) identifies three sets of factors which influence the individual in the process of transition: variables characterizing the transition, variables characterizing the individual, and variables characterizing the environment. These factors will be discussed in terms of how they apply specifically to the transition to university. Where appropriate, references to the Chickering and Tinto models and to the broader higher education research literature will be made.

Dimensions of Transition

Transitions are seen by Schlossberg as having three dimensions — type, context, and impact — each of which needs to be examined in order to understand the nature of a transition and the meaning it has for an individual. The study's conceptual model of the transition to university adds a fourth dimension of theme or issue.

Types of Transition

Schlossberg's (1984) framework posits four types of transition: (a) anticipated transitions consisting of normative or expected gains, losses, or role alterations such as leaving home or starting a job; (b) unanticipated transitions involving unscheduled or unpredicted events such as becoming ill or being dismissed from a position; (c) chronic hassles such as a personality conflict with coworkers which are characterized by their

continuous and pervasive presence; and (d) nonevents, which, as previously noted, entail the nonoccurrence of some anticipated event. For purposes of the current study, the transition to university can thus be conceptualized as an anticipated macrotransition. The microtransitions experienced by any given first year student while undergoing this macrotransition may include any or all of these four types.

Context of Transition

The context of a transition, according to Schlossberg (1984), is jointly defined by the **source** of the transition (i.e., whether the transition's primary or triggering event begins with the individual, in some interpersonal relationship, or in the larger community) and by the **life domain** in which it occurs. Schlossberg uses the term **setting** instead of life domain, but the latter term seems more effective in both capturing her intended meaning and avoiding confusion when talking about specific environmental settings (e.g., a course, a library). Schlossberg identifies six life domains in which a transition may occur: (a) self, (b) family, (c) friends, (d) work, (e) health, and (f) economics. Given the focus of this study on the transition to university, the domain of "academics" is added to the list. Initially (prior to data collection and analysis) this was further differentiated into four sub-settings corresponding to Tinto's notions of the formal and informal academic systems and the formal and informal social systems.

Schlossberg contends that a transition may not be confined to a single context: what starts out in one context may spread into other contexts and precipitate further transitions. Indeed, this is a fundamental assumption underlying the current study: the macrotransition represented by a student's decision to pursue a particular program of study at a particular university (i.e., person + formal academic) will precipitate a series of microtransitions in this and other contexts. The task of identifying these microtransitions thus entails determining both their sources and the settings in which they take place.

Impact of Transition

The Schlossberg model suggests that, for a person undergoing a transition, the most important aspect is not the transition event itself but the extent to which it affects his or her daily life. Among the aspects of life likely to be affected by a transition are relationships, routines, assumptions about self, assumptions about the world, and roles. For example, in making the transition to university, the entering student is immediately involved in assuming a new role — that of an undergraduate university student. At its most immediate level, Schlossberg's discussion of the impact of transition focuses on what aspects of one's life are affected by the transition. One of the tasks is the identification of what changes and the nature of that change. This can be termed the **descriptive** dimension of impact. However, there is also a question of the **magnitude** of the impact in terms of the degree to which a given transition affects an individual's life. The greater the degree to which a transition results in changes in the various aspects of one's life, the more demanding the transition is likely to be for the individual, and the longer it will take to reach a stage of assimilation or adaptation (i.e., resolution). Given that the transition to university is conceptualized as a macrotransition consisting of multiple microtransitions, there is a need to distinguish between magnitude of impact at the level of the individual microtransition and magnitude of impact across microtransitions (i.e., at the level of the macrotransition).

Both Schlossberg (1984) and Tinto (1987, 1993) indicate that the scope or impact of a transition, in terms of the degree of change it entails, can be assessed by examining the degree of difference between the pretransition environment and the posttransition environment. Among the factors influencing impact is the degree of difference between the norms and patterns of behavior associated with the prior environment and those associated with attaining membership in the life of the university (Tinto, 1987, 1993).

Themes of Transition

Given that the vectors of psychosocial development are characterized by particular sets of issues and that persistence in postsecondary studies involves issues of academic and social integration, the conceptual model posits that the microtransitions associated with the transition to university will entail a variety of issues which can be grouped in terms of common themes. A pilot study conducted in October 1990, and a subsequent survey in September 1992 asked students in introductory courses to rate their level of concern for a variety of academic, career development and personal issues commonly encountered by university students. Factor analysis in each study resulted in the identification of nine factors: (a) social integration, (b) academic integration, (c) academic competence, (d) career development, (e) educational plans, (f) physical well-being, (g) self-awareness, (h) self-confidence, and (i) interpersonal relationships (Denison, 1993). These are incorporated in the conceptual framework to characterize the microtransitions experienced by students in the transition to university (i.e., the themes of transition).

Variables Characterizing the Individual Student at Entry to University

Schlossberg (1984) identifies three sets of variables for characterizing individuals undergoing a transition: (a) personal and demographic characteristics (socioeconomic status, sex role, age and stage of life, state of health); (b) psychological resources (ego development, personality, outlook, commitments and values); and (c) coping responses (characterized in terms of the functions of those responses and the strategies used to fulfill those functions). The current study places more emphasis on understanding the nature of the transition to university than on how students cope with it. In looking at the individual, it is therefore necessary to incorporate a broader set of variables which may have bearing on what microtransitions will be precipitated. The conceptual model therefore utilizes a set of background factors characterizing the individual student which fall into three interacting (and overlapping) clusters: (a) variables pertaining to the

environment from which the student enters university — the pretransition environment; (b) variables pertaining to personal and psychological characteristics of the student; and (c) variables pertaining to student choices and expectations of the university environment (Figure 2). Collectively, these background factors are seen as influencing the nature and

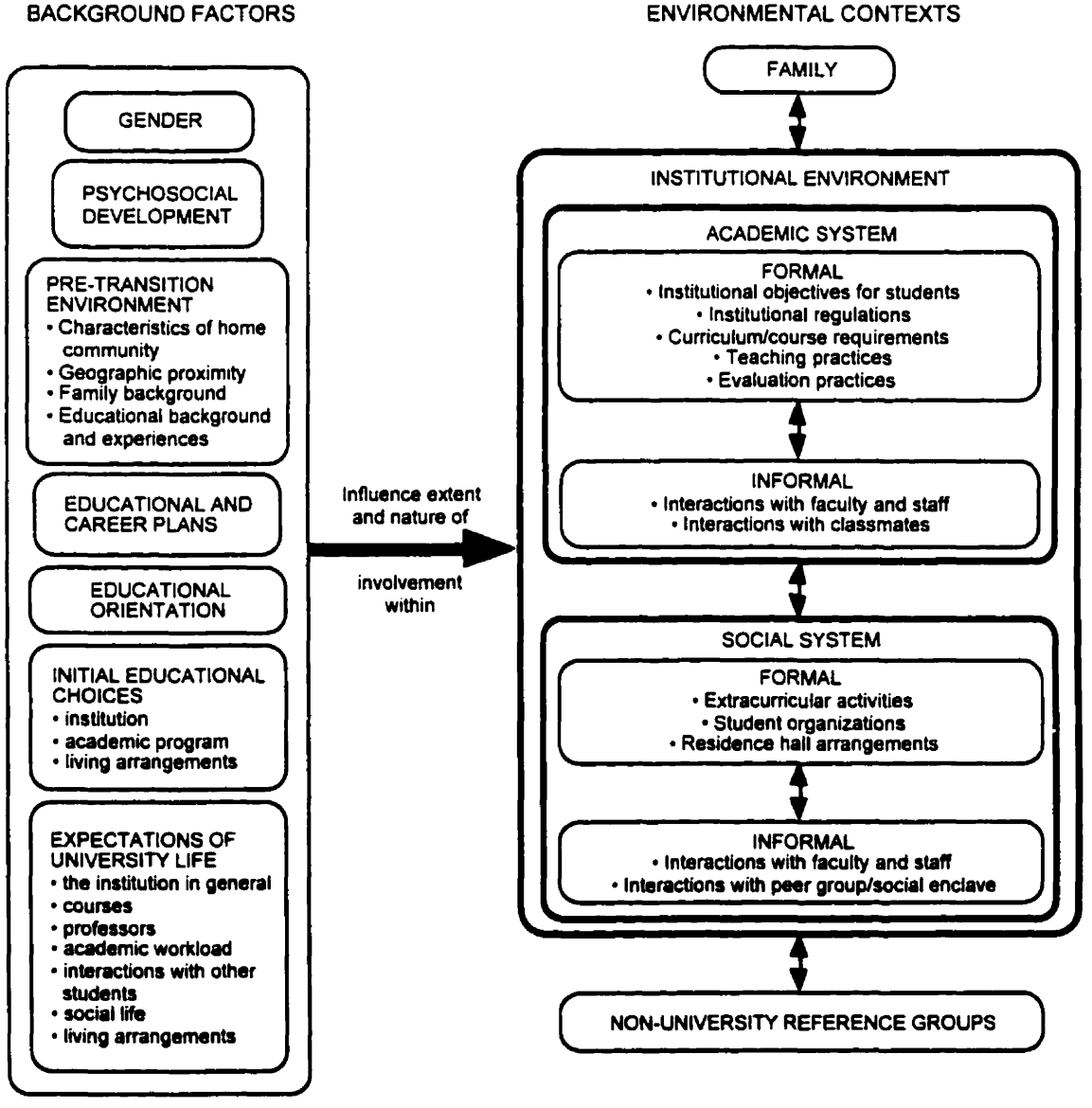

Figure 2. Background factors influencing students' subsequent experiences

extent of student involvement or interaction with the environmental contexts of the university. The specification of these particular background factors does not, however, preclude a return to Schlossberg's variables (particularly those pertaining to coping responses) if they prove useful for analyzing data on students' transition experiences.

The impetus for the approach taken in this study is drawn from Tinto's (1987, 1993) assertion that the student's background characteristics, initial intentions and commitments, along with any external commitments (e.g., employment or family obligations) serve to establish the initial conditions for subsequent interactions between him or herself and other members of the postsecondary institution. Individual students enter postsecondary institutions with a variety of family and community backgrounds (e.g., socioeconomic status, intact or separated family, size of community), personal attributes (e.g., sex, race, physical disabilities), intellectual and social skills, value orientations, and prior academic experiences and achievements (e.g., high school grade point average, prior attendance at a postsecondary educational institution). Tinto posits that each of these has a direct impact upon subsequent departure from the institution (for example, through their influence on academic performance). However, their indirect effects on the formulation of individual intentions and commitments regarding postsecondary education are held to be more important. This is understandable given his concern with voluntary rather than involuntary student withdrawal from higher education.

An individual student's intentions pertain both to his or her participation in postsecondary education generally, to attendance at a specific institution, and to career or occupational plans (Tinto, 1987, 1993). While typically phrased in terms of educational or occupational goals, these intentions may not identify specific degrees or occupations. Instead, they may encompass such aims as the completion of a specific course or courses, or the pursuit of a period of study in preparation for transfer to another institution. Commitments (levels of motivation), on the other hand, represent the degree to which the individual student is committed both to the attainment of those goals (goal commitment)

and to the particular institution into which he or she gains entry (institutional commitment).

Pre-transition Environment

The first cluster includes such variables as family background, nature of home community, geographic proximity, and educational background and experiences. Together, these variables provide a picture of both the environment to which the entering student is accustomed and of influences on a student's participation in higher education. For example, family background (in terms of parental educational attainment) has been found to interact with student gender in influencing students' educational aspirations. In a secondary analysis of national data on Canadian postsecondary students, female graduate students were significantly more likely than their male counterparts to come from highly educated families (Guppy & Pendakur, 1989). Along similar lines, another study found that undergraduate female science students were much more likely than their male counterparts to have fathers in scientific and technological occupations (Nevitte, Gibbins & Codding, 1988).

Educational background and experiences are important both in terms of the way they shape students' admissions status and as a reflection of prior experience with major educational transitions. In the setting chosen for this study, students come from two types of pre-transition academic environments: (a) the CEGEP (Collège d'enseignement général et professionnel) in Quebec, or (b) the high school in other provinces or countries. The CEGEP environment is more like that of the university environment than the high school: for example, increased institutional size, less supervision by instructors, more reliance on lectures as an instructional method, more freedom as well as responsibility given to students (Conseil des collèges, 1988; Cornell et al., 1990). With prior experience of a postsecondary educational environment obtained during two or more years of CEGEP study, the adjustment experiences of young adult Quebec students entering a university in Quebec may be considerably different from that of young adult students entering the

same institution from other provinces or countries. Indeed, Schlossberg (1984) indicates that individuals having successful prior experience with a transition will experience less difficulty in dealing with similar transitions in the future. Student entry status, insofar as it reflects prior experiences in making a successful transition to a postsecondary environment, thus becomes an important variable. In addition, both Schlossberg (1984) and Tinto (1987, 1993) indicate that one determinant of the scope of a transition's impact, in terms of the degree of change required of the student, is the degree of difference between the pretransition environment and the environment into which the student enters. Thus, it is important to capture a picture of what the student's pretransition environment was like in order to assess the degree of difference between the pre-university and the university environments.

Personal and Psychological Characteristics

The second set of factors pertaining to the individual includes such variables as gender, psychosocial development, educational and career plans, and educational orientation. Tinto (1987, 1993) sees a student's background characteristics, initial intentions, and commitments as setting the initial conditions for subsequent interactions in the university environment. Underlying this perspective is a fundamental conception of the individual as an active agent in his or her own development.

Research on students' goals and motivations. Research on students' goals and motivation for a university education has a long history in the higher education literature. Much of this research, however, has focused on the relative importance of various reasons for attending college or university; e.g., whether academic goals are more important than vocational goals. Students are typically presented with a list of presumably discrete goal statements and asked to either rank them in order of importance or rate the importance of each goal . Analysis then focuses on identifying the most and least important goals for various groups of students defined on the basis of such variables as sex or age (for example, Astin, 1991b; Constantinople, 1967; Douvan & Kaye, 1962; Feldman &

Newcomb, 1969). Little attention is paid to the particular combination of goals that a student might have. Other research, particularly that dealing with student attrition, has focused on educational aspirations (for example, Pascarella, 1985; Pascarella & Chapman, 1983; Pascarella, Duby & Iverson, 1983a; Terenzini, Pascarella, Theophilides & Lorang, 1985). In essence, this latter research has tended to focus on what Tinto would term students' commitments rather than their intentions: higher degree aspirations are equated with greater levels of commitment. In conducting such research, the issue is one of trying to discern how motivated students are rather than to what ends they are motivated and what implications that might have for students' educational experiences and outcomes. The lack of attention to the latter has recently been identified as a weakness in the higher education literature (Stage, 1988, 1989; Stage & Williams, 1990; Stark, Shaw & Lowther, 1989).

Consequences of educational orientation. A small body of research has begun to addresses the ends toward which students are motivated. Terms such as benefit segments (Church & Gillingham, 1988), academic orientations (Katchadourian & Boli, 1985), motivational orientations (Boshier, 1976; Stage, 1988, 1989; Stage & Williams, 1990), and educational orientations (Gibbs, Morgan & Taylor, 1984) are used to describe students' patterns of goals and reasons for attending university. This research has found that students' intentions or goals influence the relative importance of the criteria they use in selecting a university (Church & Gillingham, 1988), the academic majors or programs of study they select (Church & Gillingham, 1988; Gordon, 1982; Katchadourian & Boli, 1985), the concerns experienced (Gibbs et al., 1984), and the patterns of experiences which lead to persistence or withdrawal decisions (Stage, 1989). Sex differences in orientation and interactions between sex and orientation in choice of program have also been reported (Katchadourian & Boli, 1985). These differences led to the study's focus on students intending to pursue degree programs in either English or Physics, the latter representing a program where women constitute a minority among students (Thomas, 1990).

The concept of **educational orientation** (Gibbs et al., 1984) most closely approximates both the interpretation of the phenomena taken in this thesis and Tinto's (1987, 1993) discussion of the role played by students' intentions. It is described as the constellation of attitudes and aims which express the student's individual relationship with a course of study and the university. This collection of purposes forms the **personal context** for an individual student's learning. Among the characteristics of educational orientation are the following: it assumes that students have an active relationship with their study; success and failure is defined in terms of the extent to which students fulfill their aims; and it is a quality of the ongoing relationship between the student and the postsecondary environment rather than a stable quality or trait inherent in the student. Thus, a student's educational orientation may change over time. In order to determine such change, students' educational orientations would need to be assessed at several points in time during a specified period such as the academic year.

Four distinct educational orientations have been identified by Gibbs et al (1984): (a) academic (students' goals focus on the academic side of university life), (b) vocational (goals focus on getting a job after university), (c) personal (focus is on personal development), and (d) social (focus is on the social side of university life). In addition, the first three orientations may be further divided into two sub-types (intrinsic and extrinsic) depending on whether students are focused on those goals as an end in themselves or as a means to an end. These four major orientations represent theoretical extremes, and any individual student's educational orientation will often be a mix of two or more of these "pure" orientations. Procedures such as cluster analysis would therefore be needed to differentiate students with particular combinations of orientations.

Changes in educational orientations over time. Many entering students are uncertain about their long-term goals, either educational or occupational, largely as a consequence of their age and limited life experience. One study at Stanford University found that only 15 percent of entering students had concrete career plans and that, at best, about the same proportion had clear educational objectives (Katchadourian & Boli,

1985). In other words, student uncertainty is to be expected given that most entering students have not yet resolved the developmental vectors which are prerequisites for a clear sense of purpose (Gordon, 1981, 1985; Tinto, 1987, 1993).

Given the uncertain intentions of many entering students, it is not surprising that many students will experience changes in their intentions over the course of their academic careers: undecided students will clarify their future goals, initially decided students will alter their plans in light of subsequent experience. A study of changes in students' motivations during the first year of university found that by the end of the academic year 65 percent of students identified different reasons for re-enrolling in university for a second year (Stage & Williams, 1990). If, as the literature suggests, educational orientation influences choice of program, these reported changes may help to explain Gordon's (1985) observation that up to 75 percent of students will change their program of study at least once during their stay in university. Thus, this conceptual model views both educational orientation and educational and career plans as variables subject to change during the academic year, and therefore as potential areas of impact arising from the transition to university.

Gender. Research on postsecondary students contains many examples of gender differences in such areas as: the college or university selection process (Hanson & Litten, 1982); attraction to particular academic disciplines (Ethington & Wolfle, 1988; Feather, 1988); classroom experience and retention in particular academic programs (Donaldson & Dixon, 1993; Hall & Sandler, 1982; Williams, 1990); self-regulated learning and approaches to learning (Bouffard, Boisvert, Vezeau & Larouche, 1995; Meyer, Dunne & Richardson, 1994); personal and academic self-concept (Fleming & Whalen, 1990); friendship relationship patterns (Benjamin, 1990); epistemological development (Baxter Magolda, 1992; Belenky, Clinchy, Goldberger & Tarule, 1986; Clinchy & Zimmerman, 1982); and psychosocial development (Greeley, 1991; Straub, 1987; Taub & McEwen, 1991). The cumulative impact of this literature is that the transition to university may also be different for female and male students.

Psychosocial development. The psychosocial development of young adults is conceptualized in this study as representing a concurrent and overlapping macrotransition for students. It is important in other ways as well. The extent to which students have resolved particular developmental vectors will likely influence their ability to deal with the microtransitions associated with the transition to university. For example, students who have successfully resolved the vector of managing emotions will likely find it easier to cope with the stresses they encounter. In addition, the extent to which students are more concerned with some areas of development than with others may influence the transition to university. This possibility is supported by research on the effects of "life task" predominance on university student persistence (Brower, 1992) and daily life activities (Cantor et al., 1991; Zirkel & Cantor, 1990).

Student Choices and Expectations

The final set of factors pertains to student choices of and expectations for the university environment. It includes the reasons for a student's choice of university, program of study, and living arrangements. The latter two are particularly important in that these choices serve to define or place limits upon the environmental contexts within which the student will be interacting. In exploring the nature of these choices and students' reasons for them, the role of variables in the first set of factors (e.g., family background) can be illuminated. Moreover, students' reasons for their educational choices will contribute to an understanding of their educational orientations.

This set of variables also includes the student's expectations of what various aspects of these contexts will be like (i.e., courses, academic workload, relations with professors, interactions with other students, etc.). Research has indicated that unrealistic (including overly idealistic) expectations of university life can have a negative effect on student adjustment to university (Baker et al., 1985). Exploring students' expectations provides baseline data for understanding their subsequent experiences of university life, particularly in terms of revealing discrepancies between the anticipated and the actual.

This information, in turn, is useful for understanding the impetus for some of the microtransitions that students might undergo as part of the macrotransition to university.

Variables Characterizing the Environment

The third set of factors identified by Schlossberg (1984) as influencing the individual in transition are variables which characterize the environment (i.e., the conditions surrounding the individual). The university environment presents the student with both challenges and supports which can either stimulate and facilitate development or impede it (Chickering, 1969; Chickering & Reisser, 1993; Rodgers, 1980, 1989; Sanford, 1962). While challenge is seen as essential for developmental change, excessive challenge is counter-productive: it may retard growth or even cause a regression to more secure and comfortable levels of functioning. The amount of challenge a student can tolerate is a function of the support available within the environment (Rodgers, 1980). At the same time, too much support in the environment serves to retard growth by providing no incentive for change. Thus, it becomes necessary to think in terms of the balance between challenge and support.

Chickering and Reisser (1993) identify a number of specific components of the postsecondary institutional environment which exert an influence on student development either positively or negatively: clarity and consistency of the institution's educational objectives; size of the institution in terms of the extent to which it enhances or restricts opportunities for student participation in campus life; the quality of student-faculty relationships (as well as relationships with administrative and support staff); the nature of the undergraduate curriculum; institutional and departmental approaches to teaching and the evaluation of student learning; friendships and student communities; and student development programs and services (including admissions and registration). There is a high degree of overlap between these components and the defining elements of the formal and informal academic and social systems described by Tinto. It must also be recognized that students operate in "multiple worlds," of which education is but one (Phelan,

Davidson & Cao, 1991). Events in one domain or setting can influence experiences in another. For example, the serious illness of a family member may interfere with a student's ability to concentrate on his or her studies. The idea that students' experiences in life domains external to the university can significantly influence their educational experiences is increasingly being acknowledged in higher education research (for example, Bean, 1980; Bean & Metzner, 1985; Benjamin, 1986; Christie & Dinham, 1991; Tinto, 1993).

Whatever the specific environmental context for the transition, Schlossberg (1984) identifies two sets of conditions that are particularly important for the individual: social support and options. According to Schlossberg, social support can be of several types, including intimate relationships, family units, networks of friends, and institutional or community support services. It can also serve multiple functions: affect or emotional support (liking, admiration, respect, love), affirmation (acknowledgment of the appropriateness or rightness of some act or statement of the individual), aid (monetary, information, etc.), and honest feedback. The importance of this set of conditions is supported by research findings that differences in the social support available to and utilized by students influence the extent to which they are successful in adjusting to university (Brooks & DuBois, 1995; Hays & Oxley, 1986; Kenny & Stryker, 1996; Mallinckrodt, 1988; Reifman & Dunkel-Schetter, 1990). In addition, the function of affirmation closely resembles the concept of validation, which has been identified as a particularly important variable in successful transition to university (Terenzini et al., 1994). Schlossberg indicates that the structural options available to the individual, both those that currently exist and those that can be created, are an important aspect of the environment. She also emphasizes the importance of psychological options, which relate to the individual's skills or abilities in perceiving and utilizing alternatives.

Student choices and environmental consequences

Educational choices, particularly those pertaining to living arrangements and program of study, determine the specific environmental contexts within which the student will make the transition to university. Each of these contexts is expected to present its own particular combination of challenges and supports — as perceived by the student. Moreover, it is anticipated that the choice of these contexts, particularly living arrangements, serves to enhance or attenuate opportunities for the student to participate in the informal academic system and the formal social system (e.g., organized extracurricular activities).

Living arrangements. Living on campus in a university residence hall rather than commuting from home or an apartment can have a significant impact on educational and developmental experiences and outcomes. In a review of research conducted during the past twenty years on the effects of university on students, Pascarella and Terenzini (1991, p. 611) conclude that:

> Living on campus (versus commuting to college) is perhaps the single most consistent within-college determinant of impact... This is not particularly surprising because residential living creates a social-psychological context for students that is markedly different from that experienced by those who live at home or elsewhere off campus and commute to college. Simply put, living on campus maximizes opportunities for social, cultural, and extracurricular involvement; and it is this involvement that largely accounts for residential living's impact on student change. To be sure, those who live on campus may, as a group, be psychologically more open to many of the impacts of college to begin with than are their commuting counterparts. Even with this initial difference held constant, however, residential living is positively, if modestly, linked to increases in aesthetic, cultural, and intellectual values; a liberalizing of social, political, and religious values and attitudes; increases in self-concept, intellectual orientation, autonomy, and independence; gains in tolerance, empathy, and ability to relate to others; persistence in college; and bachelor's degree attainment.

However, not all residence halls have the same psychosocial environments, a factor likely to influence student outcomes. For example, students living in residence halls with a strong emphasis on academics are more likely than those living in residences with more of

a social emphasis to achieve academically (Blimling, 1993; Pascarella, Terenzini & Blimling, 1994; Strange, 1993).

The benefits of living on campus should not be taken as suggesting that living at home with one's parents while attending university is without its own advantages. For example, Tinto (1987, 1993) suggests that the stages of separation and transition may actually be navigated with less stress by this group of students. Not only do these students have fewer changes to make, they are more likely to be able to draw upon existing and ongoing support systems to help them in dealing with the stresses of the transition to university. Such advantages are denied to the many students who move away from home in order to attend university. The perspective taken in this conceptual framework is that each living arrangement has its own advantages and disadvantages.

Academic disciplines and programs of study. Over the past decade, increasing attention has been focused on differences in faculty and disciplinary cultures within postsecondary institutions (Austin, 1990; Becher, 1989; Cameron & Ettington, 1988; Peterson & Spencer, 1990; Rhoads & Tierney, 1990; Tierney, 1988, 1991). More specific to students' academic lives, research has focused on how academic disciplines differ in terms of knowledge structures (Donald, 1983, 1986, 1987), validation processes and truth criteria (Donald, 1990, 1995), and professors' expectations of students' intellectual skills (Donald, 1988). Emerging from such research is a recognition that the nature of the learning context encountered by students, in terms of concepts, knowledge structures, required intellectual skills, and instructional goals and activities differs significantly across disciplines (Cashin & Downey, 1995; Donald, 1988; Entwistle & Tait, 1990; Franklin & Theall, 1992; Murray & Renaud, 1995; Ramsden, 1979; Smart & Ethington, 1995).

Research addressing student approaches to learning emphasizes the importance of the learning context, noting that students may adopt one approach to learning in one course or subject and another in a different course according to their personal goals and their perception of the instructor's expectations and evaluation of learning in the course (Entwistle & Tait, 1990, 1995; Ramsden, 1988, 1992, 1997). Students' predispositions

interact with the learning context, affecting their perception of the learning task and the approach they take toward it. For example, students may prefer a meaning approach, but when overloaded with course content or when evaluated on their knowledge of facts, may adopt either a surface or achieving approach. Other research points to disciplinary differences in the extent to which students find themselves having to adjust to both the amount and difficulty of academic work in their courses (Holdaway & Kelloway, 1987).

As intimated in the discussion of students' educational orientations, the research literature on postsecondary education has also acknowledged that different types of students are attracted to different academic disciplines (Bereiter & Freedman, 1962; Church & Gillingham, 1988; Feldman & Newcomb, 1969; Gordon, 1982; Katchadourian & Boli, 1985). For example, a study in which the Allport-Vernon-Lindzey Study of Values was administered to students in business administration programs at five Canadian universities found that these students placed significantly greater importance on Economic, Political and Theoretical values than did the general student population as measured by the instrument's American norms (Hurka, 1980). Academic disciplines also differ in terms of the gender distribution of students which are attracted to them. The relatively low numbers of female students in the sciences and engineering has been the impetus for much research activity (Donaldson & Dixon, 1993, 1995; Ethington & Wolfle, 1988; Greenfield, Holloway & Remus, 1982; Hearn & Olzak, 1982; Holland & Eisenhart, 1988, 1990; Maple & Stage, 1991; McDade, 1988; Thomas, 1990). On the basis of such research, one can posit that students intending to pursue a bachelor's degree in the humanities will encounter an informal academic system (Tinto, 1987, 1993) quite different from that encountered by students intending to pursue a degree in the physical sciences. Among the dimensions along which these environmental contexts will differ are students' educational orientations, instructional practices, and gender distribution in students' courses.

This conceptualization of the transition to university takes the perspective that differences in entering students' choices of academic program expose those students to

different constellations of formal and informal academic contexts as a function of the courses they take in their first year of university study. In so doing, it is important to recognize limitations on the extent to which differences in the transition experiences of students in specific academic disciplines can be delineated. First, there is a high probability of change in students' choice of academic program, particularly during the first year. Such change, if it occurs, then becomes one more component of the transition to university. Second, in terms of disciplinary effects on students' psychosocial development, Pascarella and Terenzini (1991, p. 189) caution that "academic discipline may be less influential than the environment of and the attitudes and values of students and faculty within a department regardless of discipline." Departments at different universities, although associated with the same academic discipline, may have very different effects on student development. Third, at the university in which this study is set, not all first year students are actually in a specific academic program. For example, in the Faculties of Arts and Science, only students entering from CEGEP are admitted into specific academic programs. Although they must specify an intended program of study, their counterparts entering from high school are only admitted to the respective Faculty. The academic requirements for this latter group of first year students are such that only a minority of their courses will be from among the prospective department's offerings. Thus, students entering from high school will have less engagement in the formal academic environment of a particular department than students entering from CEGEP. Despite these potential limitations, the contrasts in academic contexts between first year course requirements for students in the two Faculties are such that they provide a useful means of exploring the impact of environmental differences on students' experiences of the transition to university. Such information will prove useful in ascertaining the challenges and supports (Chickering, 1969; Rodgers, 1980; Sanford, 1962) inherent in students' academic environments. In turn, this provides a context for interpreting students' microtransitions.

The Idiosyncratic Nature of Transition Experiences

In order to understand the individual student in the transition to university, his or her perceptions and appraisals must be examined:

> This means we need also to think about what perspective the individual brings to life — a perspective unique to the individual and formed by the variables which characterize the transition itself, the individual, and the environment which focus and filter the world differently and individually... It also means that the reality of the world is not at issue. Rather what is at issue is the perception of reality, the way each individual views his or her reality. (Schlossberg, 1984, p. 62)

This echoes Tinto's (1993) emphasis on the critical role of students' perceptions in determining whether or not academic and social integration have occurred. On the one hand, then, close attention must be paid to individual students' perceptions of their experiences. On the other hand, both Chickering (1969; Chickering & Reisser, 1993) and Tinto (1987, 1988) point to the need for acknowledging the likelihood of individual differences in terms of sequence. In the discussion of developmental vectors, it was pointed out that individual students do not necessarily encounter the vectors in the same sequence as the theory describes. The same situation presents itself in Tinto's discussion of the stages of separation, transition, and incorporation.

Taken together, these emphases on acknowledging individual differences suggest that the transition to university is highly idiosyncratic and involves the complex interactions of a number of personal and environmental factors. One immediate implication is that a case study approach is highly appropriate for investigating this phenomenon: it is extremely difficult to separate the phenomenon of transition from the personal and environmental contexts within which it takes place (Yin, 1994). The potentially idiosyncratic nature of the transition to university does not, however, rule out the possibility of identifying general characteristics or patterns of the transition. If, in making comparisons across individual cases, common patterns, sets of variables, or themes emerge, one can develop a general conceptual framework. This same combination

of individuality and commonality may well hold true for the transition to university as well.

Summary

As a means of focusing and guiding the study, a conceptual framework was constructed which combines elements of Schlossberg's (1984) model of adult transition, Tinto's (1987, 1993) model of voluntary student withdrawal from postsecondary institutions, and Chickering's (1969; Chickering & Reisser, 1993) model of psychosocial development among university students (Figure 3). This framework posits that the transition to university can be thought of as a macrotransition, and that the types of adjustments required of students are constituent microtransitions. It further posits that university students operate in multiple environmental contexts, both within the university and externally. A combination of demographic, experiential, developmental, and volitional background factors are seen as influencing the extent and nature of a student's involvement within those contexts. It is within these contexts that the transition to university takes place. The ongoing interactions between the student and the structures and members of these environmental contexts present the student with various challenges which precipitate a series of changes or microtransitions. These microtransitions have four dimensions: (a) type, (b) context, (c) impact, and (d) theme. At the intrapersonal level, these transitions progress through three stages: (a) pervasiveness, (b) disruption, and (c) integration. Parallel stages exist at the level of person-environment interaction: (a) separation, (b) transition, and (c) incorporation. Psychosocial development associated with the transition from late adolescence to young adulthood is conceptualized as a concurrent macrotransition, aspects of which may also constitute microtransitions in the transition to university. The importance of individual differences and the need to consider the individual's perceptions point to a qualitative case study approach requiring data collection at various points in time during the semester.

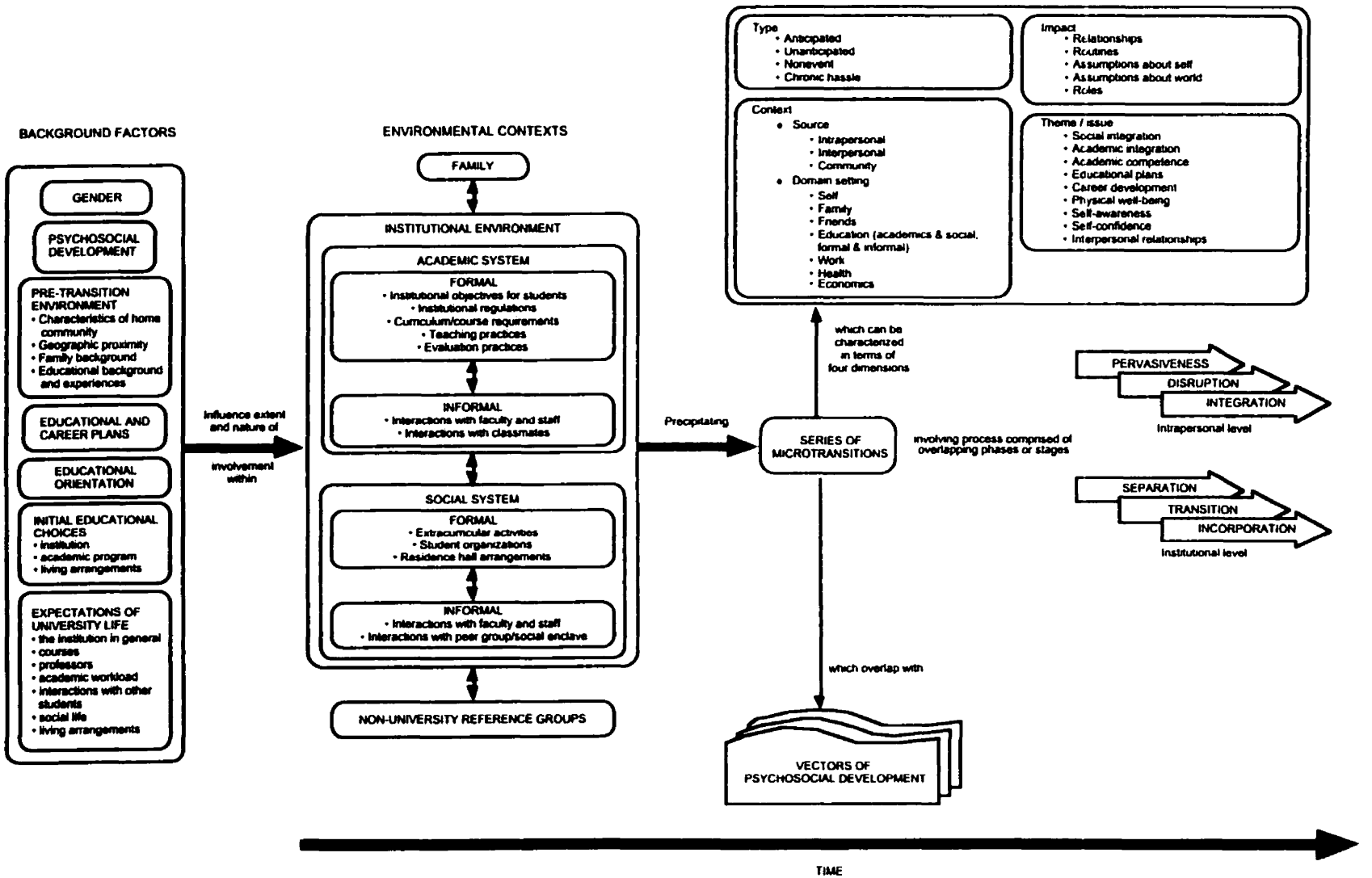

Figure 3. Conceptual model of the transition to university

CHAPTER 3

METHOD

Design

This descriptive case study (Merriam, 1988; Yin, 1994) utilized a longitudinal, embedded single-case design (Yin, 1994) entailing semi-structured interviews at four points in the academic year in order to gain in-depth understanding of the experiences of eight individual students (the embedded units of analysis) at one particular Canadian university (the single case). Yin indicates that a case study design is appropriate when (a) one investigates a contemporary phenomenon within its real-life context, (b) the boundaries between phenomenon and context are neither clearly evident nor easily controlled, and (c) multiple sources of evidence are used. The study sought to understand the transition experience of students as it unfolds, thereby meeting the first criterion. The phenomenon of transition is a process intertwined with the contexts in which it takes place, thereby satisfying the second criterion. Finally, the study makes use of multiple interviews from eight students, in addition to questionnaires and other sources of information, thereby meeting the third of Yin's criteria. The eight students were selected through purposive sampling (Goetz & LeCompte, 1984; Johnson, 1990; Merriam, 1988; Patton, 1990) based on criteria suggested by the conceptual framework developed in the previous chapter and by the nature of the setting in which the study was conducted. The perspective taken in this study was that the students were the experts on their own experience of transition to university and that I, as the researcher, was drawing on their assistance to understand what that experience was like at various points during the first semester.

Setting

In practice, students make the transition to university in the context of a specific institution and its place in a particular postsecondary system. Admissions requirements

for Canadian universities are influenced by the nature of the public education system in the province in which they are located. Thus, interprovincial differences in the structure of the public education system result in different admissions and matriculation requirements for students from different educational backgrounds. Such differences are important in this study in that they lead to two different types of entering students: (a) those entering the university from within the province of Quebec, and (b) those entering from other provinces or countries. Within a given institution, the particular academic context in which first year students experience the transition to university is shaped by the academic courses and requirements of the specific academic Faculty in which they are admitted.

The Postsecondary System in Quebec

The presence of the CEGEP (Collège d'enseignement général et professionnel) college system as a mandatory step between secondary and university studies makes the postsecondary system in Quebec unique in North America (Conseil supérieur de l'éducation, 1988). Implemented in the late 1960s, the CEGEPs replaced the system of French-language classical colleges, technical schools and institutes in order to both increase postsecondary participation rates and place French and English students in Quebec on an equal footing in pursuing higher education (Donald, 1997). They were comprehensive in nature, bringing together pre-university and professional programs in the same institution; attendance was free to full-time students.

Thus, the current Quebec education system is structured so that students pursue secondary studies to Grade 11, upon completion of which the student is awarded a DES (Diplôme d'études secondaires). The student then enters either a two-year general program or a three-year vocational program at one of the province's CEGEPs and, upon completion of studies, is awarded a DEC (Diplôme d'études collégials). However, it is not uncommon for students to require an additional one or two semesters to complete the requirements for their CEGEP programs. Upon graduation from one of the five pre-

university programs (Science, Social Science, Languages and Literature, Music, and Creative Arts), the student is theoretically eligible for admission to university. In practice, however, admission to some academic programs (particularly in the sciences and engineering) requires the successful completion of a particular CEGEP program or specific courses. The prototypical undergraduate degree program at a Quebec university is designed to be completed in three years. Students entering Quebec universities from other provinces in Canada or from other countries must normally complete an additional year of studies in order to acquire an academic foundation comparable to what their Quebec counterparts obtained through their CEGEP studies.

The University Setting

McGill University is a research university whose main campus is located in downtown Montreal. During the 1991-92 academic year, McGill University had a total student population of almost 30,000 students from over 120 countries; approximately 20,000 were enrolled on a full-time basis and 10,000 on a part-time basis (based on Fall registration statistics). Approximately 20% of the student population had French as their first language. The undergraduate student population consisted of 14,181 full-time and 8,232 part-time students, with women constituting a higher proportion than men (56% vs. 44%).

The university is composed of 13 Faculties, two of which (Arts and Science) were selected in this study. There were 4,908 undergraduates enrolled full-time in the Faculty of Arts during the 1991-92 academic year, and 2,212 undergraduates enrolled full-time in the Faculty of Science. Within the Faculty of Arts, 1,430 full-time undergraduates were in their first year of a B.A. degree program, 66% of whom were women. Within the Faculty of Science, there were 795 undergraduates in the first year of a B.Sc. degree program, 51% of whom were men. In terms of geographic origins for Canadian students (both full- and part-time), 53% of the undergraduates in the Faculties of Arts and Science were residents

of Quebec. The most common provinces of origin for non-Quebec students in both Faculties were Ontario and British Columbia.

The Faculty/Program Setting

Academic programs at McGill are organized around a credit hour system such that the prototypical undergraduate program in the Faculties of Arts and Sciences for residents of Quebec requires the completion of 90 credits (three years), while that for non-residents of Quebec requires the completion of 120 credits (four years). The majority of courses in the two Faculties are of one semester in duration and carry a weight of 3 credit hours, although a small number of one-semester basic science courses are weighted at 4 credit hours. During the academic year in which data were collected for this study, two-semester courses carrying a weight of 6 credit hours were more prevalent in the Faculty of Arts than in the Faculty of Science and were becoming less and less common.

Thus, applicants to the Faculties of Arts and Science from Quebec who have obtained the appropriate DEC in their CEGEP studies are typically admitted to a course of study requiring the completion of a minimum of 90 credits or six or seven semesters (3 years). These students are admitted to both the Faculty and to a specific program. They are commonly designated as "U1" students (signifying first year of a 3-year undergraduate program). Applicants from other provinces in Canada and from other countries are typically admitted to a course of study requiring the completion of a minimum of 120 credits or eight semesters (4 years). Although these students must indicate the area of intended study, they are admitted only to the Faculty of Arts or the Faculty of Science rather than to a specific program. They then register in either the Freshman Program in Arts or the Freshman Program in Science, both of which are intended to prepare students for the subsequent three-year degree program in the area of their choice. The Freshman Programs consist of 24-30 credits, including any advanced credits or exemptions that might be granted on the basis of equivalent work in the individual's academic background (e.g., International Baccalaureate, Advanced Placement

courses taken in high school). Students in this group are commonly referred to as "U0" students (the "0" indicating that, although undergraduate students, they are not yet in a 3-year degree program). These labels for distinguishing the two types of first year students ("U0" and "U1") will be used throughout this study.

While actual course registration is made by telephone using the McGill Automated Registration System (MARS), students must first meet with an academic advisor to discuss their course options and to have their course selections approved. Students entering 90-credit programs have already been admitted to a specific departmental program and are assigned a Departmental academic advisor. Course selection for "U1" students is largely dictated by the specific course requirements of their particular program. Some programs (e.g., the Honours program in Physics) are highly structured and afford students very little choice; specific courses must be taken in each successive year of study. Other programs (e.g., English Literature) offer considerable flexibility; aside from one or two required courses, students are told only that they must take a particular number of credits in particular content areas (e.g., American literature).

In contrast, students entering 120-credit programs are not assigned a specific academic advisor. Rather, they must meet with a Faculty academic advisor in the Student Affairs Office run jointly by the Faculties of Arts and Science. Course selection for "U0" students is largely dictated by the specific course requirements of the particular Freshman Program. The Freshman Program in Arts (FPA) is based around four academic course categories: (a) Social Sciences, (b) Humanities, (c) Languages (courses taken specifically for the purpose of acquiring or improving competence in a particular language), and (d) Mathematics and Science. Students are provided with a list of the courses within each category which have been approved as fulfilling the FPA requirements. The FPA has an 18-credit core which requires students to take 6 credits in each of three of the four academic categories. In selecting electives to make up the balance of the 24-30 credits required, students have a further restriction that they take no more than 12 credits in any

one category. The normal course load for students in the FPA is five per semester (15 credits).

Although it serves the same basic function (preparation for the three-year degree program) as the FPA, the Freshman Program in Science (FPS) is much more structured than its counterpart. As the academic calendar explains,

> The degree programs in the Faculty of Science are designed for students who have completed a general and basic science program. This basic science requirement consists of two semesters of calculus, chemistry, physics, and one semester of biology . . . Students entering from outside the Province of Québec generally enter a 120-credit (four-year) program and complete the basic science requirement at McGill. This training in the basic sciences has two objectives. The first is to ensure that the student has an adequate background as preparation for the specialized departmental program; the second is to ensure that the student has a general scientific knowledge which is essential for every scientist. (McGill University, 1992, p. A-5)

In order to meet the basic science requirements of the FPS, students must choose from a very limited pool of course options in each subject area where the alternatives in any given pair of options (e.g., "Introductory Physics — Mechanics" versus "Mechanics and Waves") essentially boil down to making a choice between a course intended for students going on to programs in the biological sciences and a course intended for students going to program in the physical sciences. Students who are undecided about the area of science they wish to pursue are strongly urged to take the physical science stream of basic science courses. Any electives needed to make up the 24-30 credits of the FPS must be selected from among the approved course options in the Social Science, Humanities, and Language categories mentioned in relation to the FPA. The maximum course load for students in the FPS is five courses per semester. However, because many of the basic science courses carry a weight of 4 credits rather than the 3 credits typical of Arts courses, students may often take only four courses per semester in order to avoid being overloaded.

Sample

The purposive sample for this study was drawn from the population of young adult students in the 17 to 22 age group who entered their first year of study in the Faculties of Arts and Science at McGill University in the Fall of 1992. To control for cultural factors, only students who were Canadian citizens or landed immigrants were considered for inclusion in the study.

Criteria for Purposive Sampling

The conceptual framework for this study portrays the individual in transition as being influenced by three sets of factors: (a) variables characterizing the transition, (b) variables characterizing the individual, and (c) variables characterizing the environment. For purposes of this study, potential participants were deemed equivalent in terms of variables characterizing the transition under investigation, particularly **type** (anticipated) and **setting** (academic). Consequently, differences in terms of variables characterizing the individual and the environment were used as the basis for the purposive sampling of participants. By selecting participants that differed on these two sets of variables, the study sought to maximize the theoretical likelihood of obtaining information from students whose experiences of the transition to university were different while keeping the total number of participants to a minimum.

The conceptual framework posits that variables characterizing the individual student fall into three interacting and overlapping clusters: (a) variables pertaining to the student's pretransition environment (e.g., geographic origin, educational background), (b) variables pertaining to the student's personal and psychological characteristics (e.g., gender, educational orientation, certainty about educational plans), and (c) variables pertaining to the individual's choices and expectations (e.g., intended program of study, choice of living arrangements). Each of these variables is viewed as potentially influencing a student's experience of the transition to university. The student's educational background in terms of having attended either high school or CEGEP is particularly

important in that it not only reflects prior experience of a postsecondary educational environment but also determines the student's admission status. As indicated in the above discussion of the setting for this study, admission status influences the type of academic environment which the student will encounter (i.e., degree program vs. Freshman Program).

The conceptual framework also posits that the environment will differ for students in different programs of study and in different types of living arrangements; they are exposed to different aspects of the academic and social systems of the university environment. Consequently, their experience of the transition to university may also be quite different. The Faculties of Arts and Science were selected with an eye to comparing the experiences of students in contrasting formal academic systems (Tinto, 1993). More specifically, the sample consisted of students registered in four introductory courses characteristic of the types of courses taken by first year students from the two levels of admission status (U0 and U1) in the disciplines of English and Physics. These two disciplines were selected as prototypical exemplars of the arts and sciences to maximize the contrast in the academic environments encountered by these students.

The objective of the participant selection process, then, was to identify a total of eight students between the ages of 17 and 22, who were Canadian citizens, in their first year of study at McGill, who represented unique combinations of entry status (U0, U1), gender (male, female), and actual or contemplated program of study (English, Physics). Each of the four courses had been selected as a typical course for students in a particular program with a particular entry status. I therefore operated under the assumption that, in large part, each course already controlled for program and entry status. Beyond these core criteria, I wanted to select a set of participants who had a mixture of different geographic backgrounds, levels of certainty about program choice, domestic arrangements (residence, apartment, family home), and reasons for coming to university (educational orientation).

Instrumentation

The first step in the purposive sampling of potential participants was to collect information on student background characteristics, academic plans, and educational orientations (reasons for attending university) by means of an instrument developed for the study: the **Student Background and Perceptions Questionnaire** (Appendix A). A review of the literature on students' goals or reasons for attending university suggested that most of these goals or reasons could be subsumed under four general categories (intellectual or academic, vocational or personal advancement, personal development, and social involvement or pressure) which parallel the four core types of educational orientation identified in the research on students' approaches to learning (Gibbs et al., 1984). Sample items deemed reflective of the four educational orientations were selected from the literature to create an initial version of the instrument tested in a pilot study in September 1990. The final selection of items was made on the basis of a factor analysis of the pilot instrument and a re-examination of the literature on students' goals in attending university.

The instrument required students to record their responses on a computer scored optical scanning answer sheet. It consisted of two sections: background information, and reasons for attending university. The first section was composed of items asking students for information on age, gender, geographical origin, citizenship status, type of educational institution attended prior to entering McGill, type of residence during the academic year, intended program of study, and degree of certainty about program choice. Students were also asked to indicate the course in which they completed the questionnaire.

The second section consisted of 20 items representing various reasons or goals that students might have in attending university and was used to assess the student's educational orientation. For each of these items, students were asked to indicate its importance in their own initial decision to attend university using a five-point scale ranging from 1 (of no importance) to 5 (of very high importance). The items were combined to form four 5-item motivational or educational orientation scales: academic

(e.g., "To gain exposure to new areas of knowledge"); vocational (e.g., "To obtain specialized preparation for a particular career"); personal development (e.g., "To develop my creative abilities"); and social (e.g., "To meet new and interesting people").

Survey Administration and Solicitation of Volunteers

As part of the research program of the Centre for University Teaching and Learning, the cooperation of four instructors in selected English and Physics courses was solicited. They allowed access to their classes during the second or third week of classes in September 1992 and utilization of approximately 30-40 minutes at the end of one class period. Three of the four professors permitted access during regularly scheduled class periods; the fourth, one of the Physics professors, arranged access during a tutorial period. In each instance, the nature of the study was briefly explained, the survey instruments were distributed, and instructions for their completion were explained. All students present who had no objection to doing so were then asked to complete the instruments, and volunteers for the multiple case studies were solicited. A written invitation to participate in the study accompanied the survey instruments and provided a brief description of what participation would entail (Appendix B). Students interested in being considered were requested to provide their name, student number, local mailing address and telephone number, and times during the week when they would normally be available.

Selection of Case Study Participants

The process leading to the selection of specific participants was a series of nested steps beginning with the entire set of respondents to the baseline assessment instrument, then becoming increasingly restrictive. A total of 411 sets of survey instruments were completed and returned in the baseline assessment process. The responses to the **Student Background and Perceptions Questionnaire** were entered into a computer database along with an additional variable identifying volunteer status (1 = nonvolunteer, 2 = volunteer). Scale scores for each of the four educational orientations (intellectual,

vocational, personal development, social) were calculated by averaging the values of the five constituent items. As a first step, frequency counts for each of the demographic and academic status variables were conducted on a course by course basis. To facilitate the selection process, two grouping variables were created: year group (YRGRP) and program group (PRGRP). Students who were in their first year of study and had entered McGill from high school were assigned a year group value of 0 (corresponding to the "U0" nomenclature commonly applied to such students), while those in their first year of study who had entered from CEGEP were assigned a year group value of 1 (corresponding to "U1"). All other combinations of year of study and prior education were assigned a value of 2. Similarly, students who had indicated their actual or intended program of study as either "English" or "other humanities or social science" were assigned a program group value of 1 (arts), those who indicated their program of study as either "Physics" or "other science" and who were not registered in the Faculty of Engineering were assigned a program group value of 2 (science), and all other combinations assigned a program group value of 3 (other).

There were a total of 189 respondents who met the target sample criteria in terms of age, citizenship, year group, and program group; of these, 48 respondents had volunteered to participate. On the basis of year group, gender, and program group (e.g., U0 + male + Arts), these volunteers were assigned to one of eight subgroups (VOLGRP). One student from each volunteer subgroup was then selected to obtain a mixture overall in terms of age group, geographic origin, current place of residence, level of certainty about program choice, and educational orientation scores. Within each subgroup, priority for selection was given to students who indicated their actual or probable program of study in terms of the originally specified English or Physics programs. Each of the selected students was then contacted by telephone to confirm his or her willingness to participate and to arrange a time for the initial context interview. This took place during the last week of September 1992 (the fourth week of classes).

The participant selection process culminated in a group of eight participants, four of whom had entered university from high school and four from CEGEP. Within these two groups, one female and one male participant were selected from within each of the two academic program areas: Arts (English) and Science (Physics). Thus, each participant represented a unique combination of characteristics in terms of gender, entry status, and program area. Collectively, the eight participants varied in terms of geographic origins, educational orientations, ages, level of certainty about program choice, and living arrangements for the academic year. Over the course of the interviews, each participant and I devised a pseudonym by which they could be referred to in transcripts and reports of the study. These pseudonyms, along with each participant's characteristics in terms of the criteria used for purposive sampling are presented in Table 1.

Procedure

Data Collection

Data collection for this case study occurred at four points in time over the course of 1992-93 academic year (mid-October, early November, late November, and late January) and consisted of semi-structured face-to-face individual interviews, each lasting from 90 to 120 minutes. All interviews were recorded on audiotape for subsequent transcription. The interview dates for each participant are provided in Appendix C. To enhance my awareness of the classroom contexts experienced by the participants, I made observational visits to many of their classes in mid-November. Participants also provided a copy of their weekly class schedule. In addition to these primary data sources, I also obtained copies of the undergraduate academic calendar and the Freshman Student Handbook prepared by the Faculties of Arts and Science.

Context Interview

The initial interviews were intended to gather background information which would provide a context for interpreting subsequent information about the students'

Table 1. Participants' characteristics on criteria used for purposive sampling

	Participant							
Criterion	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Gender *	Female	Male	Female	Male	Female	Male	Female	Male
Geographic Origin	West	East	East	Quebec	Quebec	Quebec	Quebec	Quebec
Previous Education / Entry Status *	HS / U0	HS / U0	HS / U0	HS / U0	CEGEP / U1	CEGEP / U1	CEGEP / U1	CEGEP / U1
Age	17	18	18	18	19	19	19	19
Educational Orientation								
Personal **	5.0	3.0	3.6	3.8	4.0	3.8	3.4	3.8
Vocational **	3.0	5.0	4.2	4.6	2.6	3.4	2.6	4.6
Intellectual **	4.2	3.6	2.8	4.6	5.0	4.2	4.8	4.0
Social **	2.4	4.2	1.8	1.4	1.6	1.8	2.6	2.4
Program Area *	Arts	Arts	Science	Science	Arts	Arts	Science	Science
Certainty of Program Choice	Somewhat certain	Undecided	Somewhat certain	Somewhat certain	Somewhat certain	Somewhat certain	Somewhat uncertain	Somewhat certain
Domicile for First Year	University residence	University residence	University residence	Family home	Family home	Family home	Family home	Own apartment
Pseudonym	Susan	Adam	Ruth	Jason	Eva	Mark	Sarah	Pierre

NOTES: * Primary criteria for purposive sampling; HS = High school; ** Average of five items, each rated on a five-point scale (1 = "of no importance", 5 = "of very high importance")

experiences (Seidman, 1991). These context interviews took place between 9 October and 21 October (the fifth to seventh week of classes). The interview session began with a discussion of the purpose and structure of the study, as well as issues of confidentiality and withdrawal from the study. Participants were then asked to read and sign the written consent form (Appendix D). Contact and demographic information from the baseline assessment was confirmed with the participant. In addition, participants were asked to list the courses they were currently taking and to outline their weekly academic schedule.

The tape recorder was then turned on and the formal interview began. As illustrated in the interview guide for this session (Appendix E), participants were asked to talk about a variety of background and experiential issues: home community; family background; educational background and experiences; educational plans, aspirations, and motivations; nature of and reasons for choices of university, program, and living arrangements; expectations of university life; initial experiences; and anticipated changes or challenges. Participants were also given an opportunity to raise and discuss any other issues which they felt were pertinent. The interview guide was used as a checklist of topics to be covered rather than as a rigid script: each interview developed a pace and sequence of its own in response to the nature of the information provided by participants and the manner in which they expressed themselves. At the conclusion of the interview, the participant was thanked and we arranged a tentative date and time for the next interview session.

Experience Interview #1

In contrast to the context or background interviews, these interviews were designed to explore the details of participants' experiences and their appraisals of those experiences. The original plan was that these first experience interviews would take place within two weeks of the context interviews. However, the need to accommodate academic demands on the participants (e.g., outstanding mid-term exams) meant that the interviews took place between 29 October and 6 November (the eighth and ninth weeks of the

semester). As illustrated in the interview guide for this session (Appendix F), participants were asked to talk about their routines, experiences and challenges in various settings (e.g., what they were studying or working on in particular courses), evaluations of those experiences (e.g., what it was like actually writing their mid-term exams), and anticipated changes or challenges. In addition, students were given an opportunity to raise any other issues they felt were pertinent. As in the initial context interview, the interview guide served as a checklist of topics to be covered, and the flow of conversation varied in response to participants' experiences. At the conclusion of the interview, tentative arrangements were made for the final interview of the semester. The issue of my visiting their courses was also discussed at this time.

Classroom Observations

The purpose of these classroom observations was to further sensitize myself to the routines of student academic life and the characteristics of participants' courses. To minimize the disruption my presence might cause, I decided in advance to exclude language courses as well as the tutorial or conference sessions and laboratories associated with non-language courses. With these restrictions, I arranged with the participants and the professors concerned to sit in on one lecture session in most of the students' courses (e.g., 3 or 4 courses for each participant) in mid-November (see Appendix G). During my visits, I was interested in a variety of issues, including: physical characteristics of classrooms (size, furnishings, lighting, sound quality, etc.); degree of crowding; extent to which students appeared to attend to the professor; and instructional styles of the professors. This exposure to participants' academic contexts facilitated interpretation of the interview data (e.g., when a participant was talking about trying to take notes in class). In addition, it provided a common frame of reference for myself and the participant and visible evidence of my interest in the student's experiences. A sample of the notes taken during one of these class visits is provided in Appendix H.

Experience Interview #2

These interviews were scheduled to take place as close as possible to the end of the semester (i.e., last day of classes) without interfering in the participants' ability to complete final assignments (e.g., term papers) and preparations for exams. In practice, this meant that the interviews were spread out over the final two weeks of the semester (24 November to 3 December). Much of the interview consisted of examining the same topics as those covered in the previous interview, using the interview guide as a general checklist. In addition, we touched on preparations for final exams, talked about how the participants saw themselves as having changed over the course of the semester, as well as plans and expectations for the second semester. Upon its conclusion, tentative arrangements were made for the assessment and interview sessions scheduled for late January 1993.

Experience Interview #3

Toward the end of January 1993, the participants were interviewed for a fourth time to determine, among other experiences, what it had been like writing the final exams and how the participants had fared in their courses.

Data Analysis

The data collection process resulted in four interviews (1 context, 3 experience) with each of the eight participants, approximately 48 hours of audiotape in total. Commencing at the end of the 1992-93 academic year, each interview was first transcribed verbatim. A basic notation system was incorporated, utilizing an ellipsis (...) to indicate false starts and brief pauses of less than 30 seconds in duration, a "P" to indicate pauses longer than 30 seconds, and parentheses "()" to enclose unclear words or phrases. Based on Seidman (1991), it was estimated that transcription of each interview would require five to six hours. In practice, each hour of interview required an average of six hours to transcribe. Given the focus of this study on participants' academic experiences rather

than all aspects of their transition to university, an edited version of each transcript was created in order to facilitate reading and analysis. This entailed going through each transcript and removing all sound notations that were not meaningful (e.g., "mmh mmh's" in the transcript that were vocal indicators of attention by either myself or the participant rather than a form of positive response to a question). The transcripts were then segmented to break the text into meaningful paragraphs. Finally, those sections of the transcripts dealing with nonacademic experiences were identified and deleted. A comparison of the verbatim and edited versions of a sample transcript is provided in Appendix I.

The NUD•IST (Non-numerical, Unstructured Data Indexing, Searching, and Theorizing) qualitative analysis software package (Qualitative Solutions and Research, 1997) was used to assist in analyzing the interview data. The software package allows researchers to use either individual lines of text or entire paragraphs as the basic unit for analysis; for this study, individual lines were used. This was accomplished by inserting a carriage return at the end of every line in each of the word processor transcript files prior to importing them into NUD•IST. Hard copies of the transcripts were printed out in the same format as they appeared within the NUD•IST application in order to permit examination of the transcripts both on- and off-screen.

Analysis of the data proceeded along two streams, each with a different focus. The first stream of analysis focused on developing a profile of each participant that would provide a sense of who he or she was, where they came from, how they got to McGill, and their circumstances at the beginning of the academic year. The second stream of analysis focused on illuminating commonalities and differences in participants' academic experiences over the course of the first semester. These differing analytic foci necessitated the use of several different types of analytic strategies. The participant profiles are essentially narratives. As such, they entailed the use of **contextualizing strategies** which, according to Maxwell (1996, p.79), operate in the following manner:

> Instead of fracturing the initial text into discrete elements and re-sorting it into categories, contextualizing analysis attempts to understand the data (usually, but not necessarily, an interview transcript or other textual material) in context, using various methods to identify the relationships among the different elements of the text . . . What all of these {contextualizing} strategies have in common is that they do not focus primarily on relationships of similarity that can be used to sort the data into categories independently of context but instead look for relationships that connect statements and events within a context into a coherent whole.

In contrast, the second stream of analysis relied more heavily on **categorizing strategies**. To ensure that the results pertaining to actual academic experiences would be grounded in the data, no a priori coding scheme was created. Rather, one was constructed through an iterative process of reviewing the transcripts and re-evaluating emergent descriptive and analytic codes in light of the conceptual framework which guided the study. Descriptive codes were used primarily to differentiate "structural" elements of participants' experiences; for example, to identify and distinguish experiences in one course from those in another. Analytic codes, on the other hand, sought to capture "qualitative" elements in participants' experiences; for example, "roller-coaster" as a description of fluctuations in a participant's emotional state over the semester.

A variety of approaches were used for developing and applying the codes, the most common being variations on reviewing the transcripts line by line and noting things of interest or using the document search capabilities of the NUD•IST software. For example, in order to quickly identify sections of the transcripts in which the participants discussed their instructors (both past and present, in particular or in general), I used the document search facility to identify all lines of text containing one or more variations of any of the words "teacher," "instructor," "professor," or "teaching assistant." The software reviewed all of the transcript files and automatically assigned a temporary code to each line of text meeting the search criteria. I then used the software to automatically assign the same temporary code to three lines of text on either side. All passages of text to which this code had been assigned were then retrieved and examined more closely in order to assign more specific codes as needed.

Given the vast amount of data generated by the interviews, such searches greatly facilitated coding and analysis by allowing me to quickly focus on specific and potentially relevant text passages without having to review each transcript on a line-by-line basis for all eight participants. I conceptualized this process as "top down" coding: first developing a broad, inclusive code and then, through review and reflection, developing more specific codes as appropriate. Thus, continuing the example in which participants used a variety of terms to refer to their instructors (e.g., "professor," "prof," "teacher," "TA"). I began with an inclusive code of "instructor" and then developed more specific codes (e.g., "professors in general," "professor for Course X"). In contrast, "bottom up" coding entailed starting with a series of specific codes and developing more general codes under which these might be subsumed. For example, in coding participants' statements that reflected a particular emotion or affective state, I began with very specific codes (e.g., "like," "enjoy," "unhappy"). This quickly proved cumbersome and, drawing on the distinctions made by Folkman and Lazarus (1985) between positive and negative types of anticipatory and outcome emotions, I was able to develop more inclusive codes (e.g., "positive anticipatory affect," "negative outcome affect"). Both approaches to developing codes were used in this study. To facilitate coding and analysis, I made use of the Inspiration software package (Inspiration Software, 1997) to graphically explore various ways of conceptualizing the relationships among codes and ideas. Monthly calendars were used to record the actual or approximate dates of significant events (e.g., date of a particular exam, due date for a term paper). Because participants often made reference to these events as temporal markers in describing their experiences and perceptions, the calendars proved useful in interpreting their comments. These data analysis procedures gave rise to results describing the participants' personal contexts in coming to university, the academic contexts in which they operated during the first semester, and their experiences within those contexts.

Ethical Considerations

In accordance with the university's ethical guidelines for research with human subjects, a Certificate of Ethical Practice was first obtained from the Faculty of Education (Appendix J). Potential participants were informed in advance of the study's purpose, what participation would entail, and how the data would be used. This information is provided in the instructions accompanying the initial assessment instrument (Appendix A) and in the letter inviting students to participate in the case studies (Appendix B). In addition, participants were asked to sign, and received a copy of, a consent form (Appendix D) reiterating the above information.

Participation in the study was voluntary. Given the personal nature of the information being requested of the participants, they had a right to be concerned about the confidentiality of the data. To address this issue, only I and my thesis supervisor had access to the full data. Furthermore, pseudonyms were developed in consultation with the participants and used in all transcripts and subsequent written or oral use of material from either the interviews or the assessment sessions. Participation in the study presented no risk of physical harm or danger to students, nor was any psychological harm anticipated. It was, however, anticipated that some of the situations experienced by participants during the year would be very personal in nature and that discussion of these in an interview might be a source of discomfort. Participants were informed they were under no obligation to discuss such concerns. They were also informed that they had the right to withdraw consent for the use of specific excerpts of the interviews, or to withdraw from the study at any time.

Interviews of the type conducted in this case study bear some resemblance to the open-ended exploration that takes place in nondirective counseling relationships (Patton, 1990; Seidman, 1991), even though this was not a therapeutic intervention. No prior restrictions were placed on the types of issues that students chose to discuss. The possibility existed, therefore, that emotionally charged issues might arise during the course of discussion. Although I have training and experience as a counselor acquired

through seven years of professional work with university and community college students, primarily first year students, I am not a licensed professional. Contingency plans were drawn up so that if, in the course of an interview, an issue emerged which caused a participant emotional discomfort to the point that he or she felt the need for assistance, there were several alternatives. First, the interview could be terminated and the participant and I could focus on the issue at hand, rescheduling the interview for a later time. Second, the interview could be continued and, upon its conclusion, discussion could then focus on the problematic issue. In both of the above alternatives, my role was simply that of an objective listener, not a therapist. Third, participants could choose to terminate the interview at that point, without further discussion of the issue, and reschedule it for a later time. Fourth, the participant could choose to continue with the interview without further discussion of the particular issue. Finally, participants could decide that they wished to speak with a professional counselor from Student Services. To facilitate such an eventuality, I contacted the director of counseling services in advance, outlined the nature of the study, and arranged that any referrals would be accommodated.

Measures to Reduce Participant Attrition

Subject or participant attrition is always a concern in longitudinal studies in that it constitutes a threat to internal validity. A number of measures were undertaken in order to minimize the likelihood of such attrition occurring. First, in soliciting volunteers during the baseline assessment, I was "up front" about what participation in the study would entail. Second, I impressed on potential participants that this was an important study which relied heavily on follow-up. Third, appointments for succeeding interview sessions were made at the end of each session and participants were contacted by telephone several days in advance of the session in order to confirm the appointment and reschedule if necessary. Fourth, interview sessions were conducted on a one-to-one basis and were scheduled to take place at times and in locations convenient for participants. Finally, case study participants were reimbursed for their time at the rate of $10.00 per hour. In

practice, this meant that participants were paid $20.00 at the conclusion of each interview session.

Methodological Limitations of this Study

Restriction of Analysis to the Academic Realm

Although data were collected on the domestic, extracurricular and social aspects of participants' experiences, analysis focused on the academic lives of the participants. This results in a limited view of the transition to university and students' experiences during the first semester. For many of the participants, the most significant experiences and greatest areas of change and development were not directly related to academics. Relationships with boyfriends, for example, were one of the greatest sources of stress for both Susan and Eva. For Adam, the most positive experiences during the first semester lay in his athletic activities. Nonetheless, the academic realm was central to the study of first year student experience.

Exclusion of Students Entering Professional Programs

Not having included any students from professional programs (e.g., business, engineering, nursing) as participants, the study cannot draw any conclusions about how first semester experiences in these programs are different from or similar to those of students in the arts and sciences. Would Pierre's first semester experiences as a U1 student have been noticeably different if he were already in the engineering program? His comments suggest that such may very well have been the case.

No Review of Conclusions by Participants

Under ideal circumstances, the results of this study should have been reviewed by the participants themselves in order to verify my interpretation of their experiences. Unfortunately, by the time this study was completed, all of the participants had graduated and were no longer available for consultation. The potential consequences of

this shortcoming are mitigated, however, by the fact that this study focuses more on trying to capture similarities and dissimilarities in their experiences than on trying to present comprehensive portraits of their individual experiences.

Summary

Data were collected through a series of four semi-structured interviews with each of the eight participants in the study. The participants were in their first semester of university study and were selected from introductory English and Physics courses to reflect different combinations of entry status (high school versus CEGEP), gender, age, geographic origins, intended program of study, certainty about program choice, educational orientation towards university, and living arrangements. The interview transcripts were analyzed inductively, utilizing both "top down" and "bottom up" procedures, to ensure that analysis was grounded in the data. This data analysis procedure gave rise to results describing the participants' personal contexts in coming to university, the academic contexts in which they operated during the first semester, and their experiences within those contexts.

CHAPTER 4

PERSONAL AND ACADEMIC CONTEXTS: SETTING THE STAGE FOR THE TRANSITION TO UNIVERSITY

This chapter provides insight into the participants' **personal contexts** (Beaty, Gibbs & Morgan, 1997; Gibbs et al., 1984) for university study through a description of the family and educational backgrounds of each of the eight participants in this study, and the goals and planning that led them to McGill. These two sets of issues correspond to the background factors identified in the conceptual framework. It then describes the academic contexts in which participants operated during the first semester (as defined primarily by academic programs and courses) and some of the influences on their choice of courses.

Family and Educational Backgrounds

Susan (U0 Arts)

Susan was 17 years of age when she arrived at McGill from a major city in Western Canada. She spent much of her childhood prior to high school in a more rural community in the same province and, while still an infant, had lived with her family in Africa for several years. Both of Susan's parents were immigrants to Canada; born in different countries in Europe, they met while working in East Africa. Her father had worked primarily as a high school science teacher (although he had also worked in a number of other types of occupation) and was now retired. Susan's mother still worked as a high school French teacher. Susan had one older brother who was living at home and studying Chemistry at a nearby university.

When it came time to start high school, Susan left home to attend a private institution located in a major city in her home province. As she explained it, school to that point had been quite easy for her and she was looking for greater academic challenge.

Susan lived in the school's boarding facilities for her Grade 10 year and thus had prior experience both in living away from home and in living in a residence hall. Her family moved to the city the following year and she lived at home for the remaining two years of high school. Susan reported her high school experience as being very positive, due in large part to her extensive extracurricular experiences: debating, drama, school jazz band, personal jazz band, environmental group, anti-drinking-and-driving group, and the cycling group. The only academic subject areas specifically identified in the course of discussing her high school experiences were English and Geology, both of which she enjoyed. She reported close personal relationships with several teachers, which were significantly enhanced as a consequence of mutual participation in extracurricular activities (e.g., Debating club, environmental club).

Adam (U0 Arts)

The first in his family to pursue a university education, Adam was 18 years of age when he arrived at McGill from a small community in Atlantic Canada where he had lived all of his life. Both of his parents were from the same part of the province in which the family lived. His father was a tradesman who owned his own business, and his mother worked as a secretary at the local hospital. Adam had one older sister who worked in a nearby retail store. He indicated that, although she had initially applied to university upon graduating from high school, his sister had decided not to follow through on it. This he attributed to a sense of personal insecurity on her part, even though her grades were as good as his own.

Adam attended public high school in his hometown, a school which he described as being academically quite competitive. One measure cited by Adam of the school's caliber was the fact that it offered International Baccalaureate courses. He described himself as doing quite well academically throughout his high school years, consistently placing on the Honor Roll. With the exception of Grade 12 Biology, Adam stayed away from Science courses in high school, stating, "I just don't like them, they're not my

strength." Math, however, was perceived as one of his areas of academic strength. He reported a heavy involvement in athletics (particularly gymnastics, tennis and badminton) throughout his junior and senior high school years. Adam's commitment to athletics sometimes meant that his academic performance suffered. This was particularly true in Grade 11, when his participation in the Canada Winter Games gymnastics competition resulted in the lowest grades, relatively speaking, of his high school career. Nonetheless, Adam still managed to maintain his status on the school's Honor Roll with an 86 % grade average.

In Grade 12, Adam reduced his active participation in gymnastics to concentrate more on his studies. This was a critical year in terms of shaping Adam's academic interests. On the one hand, he reported a negative experience in Math, blamed largely on the teacher, which resulted in reduced interest in that subject area. In describing this experience, Adam acknowledged his own limitations as contributing to the situation:

> I mean, I had good marks. But, I don't know, she just went really fast. And, you know, I'm sort of slow in getting work done and stuff like that. And sort of slow in general, you know. Like, I can't listen and take notes at the same time. . . . So I missed a lot of, you know, what she was saying in the lectures.

This "slowness" in being able to digest academic material also carried over to reading, and would prove to be one of his primary academic concerns during the first semester at McGill. At the same time, English, which had always been one of his worst subjects, proved to be an extremely positive experience. In large part, Adam attributed this to the caliber and enthusiasm of his English teacher.

Ruth (U0 Science)

Ruth was 18 years of age when she arrived at McGill. The only child in her family, Ruth came from a small community in Atlantic Canada where she had lived all her life. Ruth's father was an immigrant to Canada from Asia, initially employed as a university researcher in chemistry. At the time of her arrival at McGill, he was a high school chemistry and mathematics teacher. Her mother was from the region in which the

family resided and was a full-time homemaker. Ruth reported that her parents met while her father was at Memorial University.

Ruth had attended the public high school in her hometown, a school which she described as having good resources insofar as science courses and science teachers were concerned, but more limited resources when it came to courses addressing the fine and performing arts. Although Ruth was very much interested in the arts, she found herself being pushed toward sciences because of the exigencies of both limited course options and scheduling conflicts.

> (A)s for arts and drama and things like that, it's sort of ignored in our high school as a frivolous detail. And so I found myself being more pushed into science because . . . when we had to make our schedules up at the beginning of the year, usually the science seemed to conflict with the arts things. And it was like I had to make a choice then, too.

Luckily, Ruth was both interested in and enjoyed her science subjects, if not the actual classroom experiences in those subjects. Academically, Ruth found high school quite easy and never found herself having to study that hard. Combined with her interest in the subject matter, this frequently put her in the minority among her peers and feeling bored with in math and science classes:

> There's a lot of people who had absolutely no interest in the subjects like Physics, Chemistry, and stuff like that. They were taking the course because they had to take the course. You know, that was their only reason. And, like, they didn't have much comprehension, nor did they want much comprehension. So the teacher had to somewhat cater to them. But there were also people like me, who were interested in the course and wanted to know more about it. It tended to be there was more of them than there was of me, so I was sort of bored all the time.

Ruth indicated that she had been involved in a variety of extracurricular clubs and activities throughout high school, specifically mentioning her participation in the drama club. It was through these extracurricular activities that Ruth was able to satisfy her artistic interests. The small size of the high school and the community meant that Ruth knew where all of her teachers lived. She reported having close personal relationships with several teachers, primarily as a consequence of mutual participation in extracurricular

activities. For example, she and her friends would frequently visit and socialize at the home of the teacher who served as their drama coach.

Jason (U0 Science)

Jason was 18 years of age when he came to McGill. Although Jason was born in Montreal and started school here, he lived with his grandparents in the US throughout his junior and senior high school years. During this period, Jason's family continued to live just outside Montreal. Both his parents were immigrants to Canada from Asia. Jason knew that his father had some university-level education, obtained prior to coming to Canada, but was not clear as to whether this amounted to a formal university degree. Although Jason's father worked full-time in a service job in the hotel industry, he had been trained as an electronics technician and pursued those interests in his free time. Jason's mother was a full-time homemaker whose educational attainment was not clear to him. He had one younger sister, who was in her final year at a local CEGEP.

Jason described his elementary school experience as being quite negative. In response to what had become a very difficult situation, his parents decided that a major change was needed. Upon completion of Grade 5, Jason was sent to live with his grandparents in New York City in the hope that he would fare better in a completely new academic environment. This course of action proved successful and Jason went on to attend a public high school in New York City with a very good academic reputation. Although he indicated getting along well with both peers and teachers, Jason did not seem to have an active life outside of school; he described himself as having lived a very sheltered life under the watchful eyes of his grandparents.

He performed quite well academically in high school and intentionally pursued extra advanced courses in math and science in anticipation of university. As Jason described it, these courses were undertaken with an eye to eventually enrolling at McGill; in essence, he sought to mirror the academic preparation his peers at home in Quebec would be receiving in CEGEP in order to ensure his acceptance into any undergraduate

program he eventually selected. These courses led to the development of a keen interest in both the physical and biological sciences, an interest which Jason further satisfied by spending a lot of time browsing in libraries. He particularly enjoyed his final year of high school because, "I finally saw how so many things inter-related, and how important they were in all their relationships."

Eva (U1 Arts)

Eva was 19 years of age when she came to McGill from a private Montreal-area CEGEP. Both her parents were from the United States. Eva's father had a graduate degree and was employed at McGill; her mother was a full-time homemaker who had started university but was unable to complete her degree because of family circumstances. Eva had one brother, a year older, who was also attending McGill but studying in the sciences; she also had an older sister who had obtained an undergraduate degree from McGill before going to graduate studies and subsequent employment in Ontario.

Having attended a private high school, Eva also chose to attend a private CEGEP primarily because of its academic reputation and smaller size relative to other CEGEPs in the local area. She completed a DEC in Social Sciences, concentrating her courses in the areas of Language and Literature, Philosophy, and Psychology. As reflected in academic accomplishments which included being placed on the Dean's List and the Honour Roll, Eva thrived on the CEGEP's competitive environment and the challenges presented by demanding instructors. She got along very well with her instructors, becoming good friends with a number of them. Eva also thought quite highly of the teaching abilities of many of her instructors. She cited one particular English instructor as having had a significant and positive impact on her approach to studying English.

Mark (U1 Arts)

Mark was 19 years of age when he came to McGill and was the first in his family to pursue a university education. Born in Montreal, he had lived here all of his life.

Mark's father had not attended university, but had nonetheless been able to advance to a senior position in the insurance industry. His mother was an immigrant to Canada who, trained as a nurse, worked as an instructor in a program for nursing assistants. Mark had one younger brother, still in high school.

Although he had done quite well in science courses during high school, and felt that he was being pushed in that direction, Mark decided that he wanted to "do the arts thing" when he went on to CEGEP as this was an academic area that he had thus far been unable to explore in any great depth:

> I wanted to take communications and film courses because you sort of don't do that thing in high school. And sort of the idea of actually watching a film was — like, to study them — was interesting to me. So I decided to do that.

Mark chose a public CEGEP in Montreal that many of his friends were also attending. He went on to complete his DEC in Creative Arts, taking all the available courses dealing with film and communication. Mark also mentioned taking courses in musical theory, literature and philosophy, most of which he enjoyed. Although satisfied with the overall academic experience, he indicated that the need to choose between the Creative Arts and Social Science streams was "the one thing I don't like about CEGEP" as it restricted his ability to explore academic areas of interest. In terms of academic performance, Mark managed to keep up an average of 81 percent through his first three semesters in CEGEP. During his final semester, however, he found himself in more difficult courses and his grades dropped somewhat. Mark did not describe any involvement in extracurricular activities associated with his CEGEP. However, throughout most of this period, he was heavily involved in a band with a number of his friends.

Sarah (U1 Science)

Sarah was 19 years of age when she came to McGill and had lived in Montreal all her life. Her father was from the Montreal area and had obtained an undergraduate degree from another university in the city; he worked as a manager for a local stationary

company. Her mother was from a small town in the nearby Laurentians and had a CEGEP education; she worked as a medical secretary at a local hospital. Sarah had one younger brother who was still in high school.

Although she lived within the city of Montreal, Sarah attended a public CEGEP on the outskirts of Montreal rather than one closer to home. She pursued and completed her DEC in Social Sciences. Sarah indicated that she had done well in her courses, but never reported specific grade point averages. As one of her electives, she took a physics course in astronomy and really enjoyed it. This experience would prove significant in shaping her later plans for university. Sarah also described having very positive relationships with many of her instructors.

Interestingly, Sarah made a distinction between the academic experience of pursuing CEGEP studies, particularly in the Social Sciences program, and the institutional experience of attending a particular CEGEP: she enjoyed the former and disliked the latter. Sarah described the academic experience as providing opportunities for personal and intellectual development:

> Well, it was more finding out who I was. I mean, in high school, it's such a structured education system that you learn what the government wants you to learn. It's not necessarily what interests you the most. Whereas, at CEGEP, I took courses that I'd always been curious about. Even though I'm in sciences, the fact that I studied arts and I learned about philosophy, or the study of literature — anything like that — political science, has given me a basis for what I enjoy doing in my own free time and for my own personal development. Like, I read a lot, and I'm very interested in things that are based on what I learned in CEGEP. And even though I'm not applying it right now {academically}, I'm applying it for myself. And so it helped me a lot that way . . . Like, there're always things that I've been wanting to read, and that stems from the courses I took at CEGEP. As opposed to just being at a loss with anything to do with the arts.

In contrast, it was the logistical and social aspects of that particular CEGEP that Sarah disliked:

> And the reason I didn't like {CEGEP} was 'cause it was so far away. I live in the city, and it took me over an hour to get there and back. And I really didn't like it: I didn't like the people {students} there; I didn't like the attitude in the school. And things like that.

Because of such feelings, Sarah was not involved in extracurricular activities at CEGEP. She was, however, an avid skier and spent a great deal of her free time skiing and socializing with friends in the Laurentians. Throughout her studies, Sarah also worked part-time at a café near her home.

Pierre (U1 Science)

Pierre was 19 years of age when he arrived at McGill. He came from a region of Quebec outside the Montreal area and had lived there all his life. Both of Pierre's parents were high school teachers; his father in the physical sciences, and his mother in mathematics. Originally from North Africa, Pierre's father had immigrated to Canada after completing his university education in France. His mother was from the same region of Quebec in which the family lived. Rather than a university education, she obtained her professional training while the normal school system still existed in Quebec. Pierre had one younger brother who was pursuing a DEC in Science at the same CEGEP he attended.

Pierre attended a public French-language CEGEP located in a town near his family home, completing his DEC in Sciences. He did well in all his courses and, for the most part, enjoyed his educational experience. There were, however, several aspects of his CEGEP experience which Pierre found disappointing. The most significant of these was a mismatch between the restrictions of the learning environment in his courses on the one hand and the combination of his academic abilities and preferred ways of learning on the other:

> Actually, I liked it {CEGEP} for the school. But, physically, I am a self-learning student. Does it make sense, that? I mean, I learned by myself, by reading a book, and all this stuff. So usually I have had little difficulties following a class. Because I know that at {my CEGEP} we were about two or three students that . . . didn't have to work really hard to follow the rhythm of study. So we didn't really enjoy the class because we had to be there and most of the time we already knew what they were teaching us . . . We were not losing {wasting} our time, because it's always good to hear another view point or somebody else talking about something you already knew about . . . but after a time, you get bored. So this was something I didn't like. This had been the same thing in secondary school. But the point is, I

> thought that it will be different in CEGEP. For example, I thought that the teacher would tell us on the first day, "Well, during today, we will be seeing this, this, this, and this, and we will have some exams on Tuesdays." But it was never like that. So we had to be in class everyday just to know what was happening and when were the exams going to take place.

To some extent, then, Pierre's CEGEP experience was characterized by a sense of frustration and boredom that carried over from high school. Also disappointing was the fact that he was interested in all aspects of science; although courses in both the physical and biological sciences were available, scheduling pressures precluded an in-depth exploration of both by essentially forcing students to choose one or other.

Summary

The participants had diverse personal, family and educational backgrounds, key features of which are summarized in Table 2. They came from a variety of geographic locations in Canada, some from major urban communities and others from more rural communities. They varied significantly in terms of the educational attainment levels of their families. With the exception of Adam (U0 Arts), who was the first in his family to pursue a university education, all of the other participants had parents and/or siblings who had completed or were currently pursuing postsecondary studies.

The participants came from both public and private institutions. As expected, given McGill University's selective admissions, all of them had performed well in their previous academic environments and had, for the most part, enjoyed their experiences. Of the eight, only Adam (U0 Arts) reported that he sometimes had to struggle in order to keep up with academic demands, particularly in the areas of note-taking and reading. All participants reported that they got along well with their former instructors, and several reported having close personal relationships or friendships with one or more teachers. Several participants, particularly Susan (U0 Arts), Adam (U0 Arts), and Eva (U1 Arts), spoke of being profoundly influenced by a former teacher in terms of the way they approached their studies or their educational plans. In terms of the consistency between

prior academic studies and intended field of university study, only Sarah (U1 Science), with the shift from social sciences to sciences, would be entering a new field.

Table 2. Key characteristics of participants' family and educational backgrounds

Participant	Geographic Origins	Family Members with some Postsecondary Education	Prior Education	Previous Separations from Family
Susan (U0 Arts)	Western Canada, major city	Both parents; brother currently in university	Private high school	Lived in residence during first year of high school
Adam (U0 Arts)	Atlantic Canada, small town	None	Public high school	None
Ruth (U0 Science)	Atlantic Canada, small town	Both parents	Public high school	None
Jason (U0 Science)	Montreal area	Father (unclear); sister currently in CEGEP	Public high school	Lived with grandparents in New York for Grades 6-12
Eva (U1 Arts)	Montreal area	Both parents (mother never completed); sister; brother currently in university	Private CEGEP (Social Science)	None
Mark (U1 Arts)	Montreal area	Both parents	Public CEGEP (Creative Arts)	None
Sarah (U1 Science)	Montreal area	Both parents	Public CEGEP (Social Science)	None
Pierre (U1 Science)	Quebec, small town	Both parents; brother currently in CEGEP	Public CEGEP (Science)	None

Goals and Planning in Getting to McGill

Susan (U0 Arts)

For Susan, the idea of going to university had been a constant: "I always knew I was going to go to university; there was never anything different in my mind." She attributed this sense of inevitability, in part, to having parents whom she described as intellectuals and having been raised in a family atmosphere where learning was very important. Susan described herself as really enjoying learning things, and as feeling very comfortable in an academic environment. Certainly, her most recent educational experiences reinforced the idea of going to university: a central feature of her high school's mission was university preparation and the vast majority of its students go on to university studies.

Although Susan perceived that a university education was necessary "if you're going to accomplish anything," vocational advancement or training was a secondary issue for her. Far more important was the opportunity to continue learning about things in which she was interested.

> A lot of people would say that they want to get a job and make lots of money. That's not really what I'm in it for . . . I think I'm more interested in learning things . . . There are things that interest me and I enjoy learning about them. And if I'm going to end up having a profession, it's going to be something I enjoy, not something that makes a lot of money . . . Obviously it's {vocational training} important; you have to have it in mind. But I think what... the most important thing a person can do is develop what they like and then . . . try to use your brain to find a way to make money out of it. You know? Otherwise, you're caught doing something that isn't fulfilling in any way. I guess making money is fulfilling to some people, but . . . not to me, really.

This intrinsic interest in learning carried over to her degree aspirations. Susan could not see herself terminating her education with just a Bachelors degree: although she had yet to formulate distinct educational plans, Susan saw continuing on to graduate studies as a definite possibility.

The availability of a particular academic program did not play a significant role in Susan's consideration of which universities she might wish to attend. Although she would have liked to stay in her home province, none of the universities appealed to her. Attending the university in her city would mean having to live at home, something Susan very much wanted to avoid because of a negative relationship with her older brother. The other institution in the province was seen as being "really big and impersonal" without sufficient compensatory benefits. As Susan put it, "I figured if I was leaving, I might as well LEAVE." Not wanting to go to the United States, she focused her attention eastward. In addition to McGill, Susan applied to and was accepted at three universities in Ontario (Queen's University, Carleton University, and the University of Ottawa) and one in Nova Scotia (Dalhousie University).

All of these universities have good academic reputations, so the deciding factors came down to the opportunities available in the immediate vicinity of each university. In explaining why she chose McGill, Susan commented that she was interested in French and saw the prospect of living in a bilingual community as quite interesting. As she put it, "I just wanted to try something completely different." Susan perceived Montreal as being much bigger and more exciting than the largest city in her home province. Of particular interest to her was the music scene in Montreal, especially in terms of jazz, and its general reputation for cultural and artistic activities. In essence, then, Susan was looking for a well-rounded educational experience and saw McGill as the place that best provided what she was looking for. Her decision to attend a university so far from home had one immediate consequence that would influence her experiences at McGill during the first few months especially: separation from her boyfriend of three years. The prospect of being separated from her family was of much less concern. On the one hand, she had already dealt with a similar separation during her boarding experience in the first year of high school; on the other, she was looking forward to being away from her brother.

In terms of prospective program of study, Susan had initially presented herself as strongly considering English literature and had categorized her degree of certainty in mid-

September as "somewhat certain" (4 on a 5-point scale). She was, however, also toying with the idea of switching to the Faculty of Science and pursuing a degree in geology. This dilemma of being drawn toward two very different educational paths (English literature versus geology) and being unable to come to a firm decision one way or the other had its roots in a history of reacting against the perceived educational mainstream.

> I went to a private high school, and everyone took sciences; sciences was the big, big thing. So just because of that, I got, you know, turned off: "I want to do arts!" So I did arts. And that was sort of different in my school. And then, when I come here, it's, like, kind of the opposite. All the other schools, everyone did arts . . . I think if I went to a public school, I'd be in science right now . . . Just the fact that it was being pushed at me so much, it turned me off. You know?

Susan's interest in the subject matter of English literature was more deep-rooted and intrinsic than simply a reaction against the sciences. As she explained it,

> People have preferences to what they like. Like, I'm really interested in English literature, and I can do it. You know? Also, my mother is heavily into literature and we always have really good conversations. And just the whole thing I've been through. My teacher at {high school} was the most amazing man; like, he really inspired me. And he was also my debating coach. And being in debating, they're kind of connected; you have to deal with words, put it that way. With drama, you have to deal with words. And I like poetry a lot. And it's just something that I like. I guess you can put it that way . . . I guess, long-term, I want to be a teacher and just . . . I'm interested in conveying those words. You know?

Even though she had resisted her high school's apparent emphasis on the sciences, Susan had not completely ignored them; she had studied geology and really enjoyed the subject. Through the course and their mutual involvement in the school environmental group, she had also established a close friendship with her geology teacher. In addition, she had come to know and like a number of geologists who were friends of her father. For these reasons, the idea of pursuing a degree in geology was appealing. Susan's application to the Faculty of Arts at McGill can thus be seen, in part, as following a pattern of resistance to the sciences. Having made that initial step, however, Susan's awareness of this tendency in herself left some room for doubt. This uncertainty about program of

study did not particularly bother her: she saw the first year of university as being the time and place in which she was supposed to figure out what she wanted to do.

Based in large part on her positive experience of boarding during her first year of high school and the consequent belief that living on campus would facilitate an easier transition to university, Susan decided to live in one of the university's co-educational residence halls during her first year at McGill. She saw the alternative, living off campus, as being something that would "take too much time and organization," and, because she had never been to Montreal before, as being something she "wouldn't be able to pull off that easily."

Adam (U0 Arts)

Even as far back as junior high school, Adam had known that he would go to university, seeing a university education as almost an economic necessity "if I'm ever going to have a successful career." Beyond the vocational relevance of a university degree, Adam saw university as an environment in which he could further his development in the realm of athletics, an important aspect of his life for many years. Indeed, Adam placed as much priority on athletics as on academics. The other thing that he wanted out of the university experience was what might best be described as social development. Initially, he described this in terms of wanting a better "social life" than he had experienced in high school. Over time, I came to discover that Adam meant much more than the surface meaning of a social life. Coming from a small rural town with a fairly homogeneous population, he wanted to experience life in the "big city," to broaden his "social horizons," and "see a different part of the country." Another aspect of an improved social life was greater opportunity for individual self-expression than he had experienced thus far. Finally, going to university meant entering a social environment in which he had no history: it would allow him to start with a clean slate in developing his relationships with others.

In thinking about which universities he might attend, Adam had largely focused his attentions on institutions in Atlantic Canada. The idea of applying to McGill only occurred when a close friend who was planning to come here encouraged him to do so, the idea being that they would come together. In late June, however, Adam's friend was offered a scholarship to the University of Guelph and decided to go there rather than McGill. With this change in plans, Adam was left up in the air, so to speak. Eventually, he narrowed his choices down to McGill or Mount Allison. Both universities had excellent academic reputations, so other criteria came into play. Mount Allison had the attraction of being a much smaller institution as well as being closer to home, the latter factor being a positive point as far as his family was concerned. Costs were another important consideration: Mount Allison would be cheaper in terms of transportation costs, but the tuition fees were much higher than those of McGill — even with the offer of a scholarship. McGill had the added bonus of being located in a large, cosmopolitan city, something which certainly appealed to Adam. In addition, he perceived there would be access to much better athletic facilities in Montreal, particularly for gymnastics, than would be the case if he went to Mount Allison. It was the combination of these three factors — lower overall costs, the appeal of the big city, and potential access to athletic facilities — that finally led to Adam's decision to attend McGill.

The availability of a particular program of study was not a significant factor in choosing a university. In fact, over the course of his last year of high school, Adam significantly changed his academic plans. Originally, he had intended to pursue a business degree, with a probable concentration in accounting. This seemed a likely prospect given his perceived strengths in mathematics and was strongly encouraged by his parents. In fact, Adam's original acceptance at McGill was to the Faculty of Management. However, his highly positive experience in Grade 12 English opened up so many new areas that it caused Adam to turn away from those initial academic plans. Adam successfully obtained admission to the Faculty of Arts, even though he remained unsure as to what he eventually wanted to study. Certainly, though, English literature was now a definite

possibility, as were some of the other academic areas to which he had been exposed in that Grade 12 English experience, areas such as psychology and Greek mythology. Thus, although Adam indicated English as his likely program of study when initially surveyed, he also categorized his degree of certainty about choice of program as "undecided" (1 on a 5-point scale). This uncertainty about what he wanted to study carried over to being cautious about his degree aspirations. Rather than definitely ruling one way or the other as to whether he would pursue his education beyond the undergraduate level, Adam expressed a desire to just take one step at a time; decisions about further education could wait until he was much closer to actually completing an undergraduate degree.

Adam had chosen to live in one of the university's co-educational residence halls. This decision was reached after reading that the university encouraged first year students from out of province to live on campus and determining that, although he wanted to become more independent, he was not yet ready to cope with the greater degree of independence associated with living off-campus.

Ruth (U0 Science)

Ruth had known she was going to go to university ever since she was young, largely because she saw it as necessary if she was going to get a meaningful job. At the same time, she enjoyed learning and could see herself continuing her studies to the doctoral level. Beyond the academic and vocational benefits of a university education, Ruth was mainly looking for "education in life," which she explained as:

> Well, just the ability to relate to other people because I'm, especially in my town, sort of having to relate to one or two types of people. There's a lot more variety here {at McGill}. So, like, I can learn from them and they can learn from me.

In essence, then, Ruth's desire for "education in life" bears a resemblance to Adam's desire to broaden his social horizons, to experience life beyond the confines of the small town environment to which she was accustomed. Program availability was not a real factor when it came to selecting a university. Ruth reported that most of the students in

her high school were planning to attend the only university in her home province. She felt that were she to do so as well, it would severely restrict the extent to which she could realize the "education in life" that she wanted. McGill was the only university which Ruth seemed to have seriously considered: she wanted an institution that would provide a good education and McGill had one of the best academic reputations in the country. Beyond the "academic" credentials of the university, it was McGill's campus and its location in Montreal that proved particularly appealing:

> Well, I wanted to meet different people; to see different things. And the French — I wanted to see the French-Canadian atmosphere, to understand it . . . I was looking for a city with a lot of culture because, even though I'm personally in the sciences, I'm very interested in culture. The arts, museums, ballet, the symphony — everything is here. That was a bonus. And the campus in general — I'd seen the campus last year and I just fell in love with it the first time I saw it. It seemed beautiful, so majestic. And, well, the atmosphere — the atmosphere seemed rather studious . . . Other universities, some of them tend to be rowdy. {My local university} is rowdy!

Beyond being fairly sure that she wanted to pursue a degree in the sciences, Ruth was still undecided as to just what she wanted to study. Of the limited number of response options available to her on the initial questionnaire, Ruth had selected both "Physics" and "other Science" as her likely academic program. She categorized her degree of certainty about program choice as "somewhat certain" (4 on a 5-point scale). In discussing this with her during the first interview, Ruth indicated that she was interested in physics, chemistry and biology, and that she had not yet narrowed it down (although her initial leaning was toward chemistry).

For her first year at McGill, Ruth decided to live in the university's only single-sex women's residence hall. The notion of living in residence was based in large part on her belief that she was not yet ready to cope with the demands of living off-campus; the choice of the women's residence was essentially acquiescence to her parents' misgivings about co-educational residences.

Jason (U0 Science)

Jason indicated that going to university was something that was expected of him by his parents and grandparents. It was also something he wanted to do; he saw it as almost a necessity for obtaining meaningful employment, even though it would not necessarily guarantee a high income. In essence, a university education would provide the "gateway or building block" to whatever he eventually decided to do. Aware that his parents and grandparents wanted him to enter a profession such as medicine or law, Jason was still uncertain about his occupational plans. Whatever career he might eventually decide upon, the one thing he could envisage was pursuing his education beyond the undergraduate level.

Although Jason had planned his high school courses on the assumption that he would go to McGill, he felt the need to hedge his bets, so to speak, in applying for university just in case he was not accepted at McGill. One of the biggest challenges facing Jason in this application process was the need to specify, if not a particular academic program, then at least a program area: on the one hand, he was interested in both the physical and biological sciences; on the other, he saw attractions in both pure and applied programs of study. To further complicate matters, Jason characterized himself as self-doubting and reluctant to commit to any one academic area because of apprehension and uncertainty about how he might feel several years down the road. Intended or not, Jason managed to implement a strategy for dealing with these conflicting interests:

> I said to myself, "All these universities have all these great degrees, and all these great programs. What am I gonna choose? What am I gonna choose?" Like I said, I didn't want to take engineering because it's that particular engineering; that's why I put engineering for McGill second choice. And the schools which I thought . . . going to that school — you know, maybe it's too far, or it costs too much — I put engineering after that school. I noticed that, that the schools which I believed I would probably end up going to, that I can really see myself in that type of environment, I put down the subjects which I really wanted to do.

Thus, for example, Jason applied to Queen's University for studies in physics, and to the University of Toronto for studies in biological sciences.

In the process of exploring program options at various universities, Jason came across a program which only McGill seemed to offer, the joint program in physiology and physics, and which confirmed McGill as his first choice. Jason explained what it was about the program that appealed to him:

> Well, the fact that it is a joint program. And it was two fields that were basically not inter-related directly, and yet they were the two fields which I possibly could use as a foundation and could continue on. Like, with physics, I could go into engineering, physical sciences; biology, to medicine, biological sciences.

When initially surveyed in mid-September, Jason categorized his degree of certainty about his choice of the joint program as "somewhat certain" (4 on a 5-point scale). Among the institutions to which Jason was accepted, McGill seemed to stand out for a variety of reasons including the offer of an entrance scholarship, the joint physiology and physics program, the university's academic reputation in the sciences, its geographic proximity and location in an urban area, and his familiarity with the campus from early childhood visits. As Jason put it, "all the factors fell into place." Accepting the offer of admission from McGill was therefore an easy decision to make.

Jason had given serious thought to the idea of living in an apartment closer to the university campus, but ultimately came to agree with his father's belief that, all things considered, it would be better for him to live at home. In terms of family circumstances and living arrangements, Jason represents a unique case among the participants in this study in that, although he was entering from high school rather than CEGEP, he was still living at home with his parents. Unlike the other high school entrants, Jason was in a situation where, rather than being separated from his family, he was faced with the challenge of having to become fundamentally reacquainted with his parents and sister.

Eva (U1 Arts)

Going to university was something that Eva had always seemed to know she would do, primarily because of a deep, intrinsic enjoyment of learning that she attributed in large part to the example set by her parents. As she put it, "I've always loved school.

If I had my way, I'd stay in school for the rest of my life and never get a job, and just learn, and keep learning." Eva's intrinsic interest in learning was further reflected in what she wanted to get out of a university education:

> Sort of filling the gaps in the mind, sort of thing. You know how there're certain things that you always wished you knew about; I always wished I knew more about this and that. And that's really what I wanted to get out of it. I didn't come to university to get, you know, training for a job or a career; just to learn things for my own personal benefit . . . And just, you know, cultural relevance. You know, things that people make reference to, and it would be a good idea if you knew about what the whole world's talking about in relation to certain things.

When asked about her degree aspirations, Eva expressed a desire to go on and do at least a Masters. She was, however, reluctant to commit herself any further "because a lot of things could happen between now and then."

It was in exploring the potential subject area for graduate studies that the issue of the vocational relevance of a university degree first manifested itself. For Eva, it was a problematic issue which she had yet to resolve: "see, that's one of my problems — I lack direction." When asked whether it was really a question of lacking direction or more one of being interested in too many things, she responded:

> Well, sort of both. Both. I mean, it's all very well and good to say that you want to study things for the rest of your life, but there is the problem of having to support yourself too. And that's one thing that worries me tremendously.

Notwithstanding this "lack of direction," the vocational consequences of various alternatives did play a role in Eva's contemplations about what she might study during her undergraduate degree. Her first impulse was to think of English literature.

> Well, I've always sort of loved reading, and language, and the way people use it to interpret their different views of things, and that sort of thing. And that was always — it wasn't my best subject in school, but it was the one I liked the most; it was the one I enjoyed the most. And I did very well in it.

She also considered some of the other subject areas she had studied at CEGEP, such as psychology and philosophy, which she found both interesting and enjoyable. However, no matter how interesting the prospect of further study in these areas, Eva found the

prospect of working in these fields unappealing. The outcome of her deliberations was the conclusion that English was "just something I really enjoy, so I figured that's what I wanted to do." What she would do with that degree later on and how it might be used to support herself remained an unresolved question. Eva categorized her degree of certainty about her choice of English as a program of study as "somewhat certain" (4 on a 5-point scale) when initially surveyed in mid-September.

In discussing Eva's reasons for deciding to come to McGill, no specific mention was ever made of any other institution: McGill had always been her first choice. As Eva explained it:

> Well, McGill has a better reputation. And I really want to go away for a year, or a term, and I thought it would be easier to go if you have... if you come from a school that people have heard of. For one thing. And also because, you know, my father works here, so I don't have to pay very much. You know? And after having... supporting three kids through private school, and putting me through {CEGEP}, and then at McGill, I thought it would be easier on my parents to go to a place that would cost them less.

The fact that her older sister had already graduated from McGill and her brother was currently attending did not really play a role. From Eva's perspective, they were in areas of study which she would never have considered and were therefore not in a place to convey any useful information about what it was like to study English at McGill.

Eva had decided to live at home with her family while attending McGill. She had given some thought to the idea of living in an apartment but came to the conclusion that the financial and emotional costs outweighed the benefits. Eva felt that she would have to take on a part-time job in order to finance an apartment; at this point in her life, this was something Eva believed she could not undertake and still devote sufficient attention to her studies. Moreover, her close relationship with her family was an important factor in her life, something she was very reluctant to give up.

Mark (U1 Arts)

Mark had grown up with the expectation that he would go to university, an expectation fostered and encouraged by his parents, particularly his father. As he put it, "I don't think my dad ever sort of assumed that I'd have the choice not to go to university." Half way through his first year of CEGEP, Mark had briefly considered and then rejected the idea of transferring to an out-of-province university rather than completing his CEGEP studies. A year later, when thinking about which universities he might attend, Mark did not really look beyond the two anglophone institutions in Montreal (McGill and Concordia). When asked why he had not reconsidered going away to a university outside Quebec, Mark talked about his perception that many students who study out-of-province get caught up in "school spirit" and find their whole lives focused around the campus and its activities. At this point in time, he was very happy here in Montreal and had other interests that he did not want to give up, including a romantic relationship that was becoming more serious. Mark was very reluctant to put himself in a situation where school was such a dominant focus in his life that he would be unable to maintain a satisfactory level of involvement with nonacademic activities and personal relationships that he held to be important. Not surprisingly, then, Mark had already decided to live at home with his family while attending university.

Mark wrestled with two questions in trying to choose between McGill and Concordia. First, of the programs offered by these two institutions, which appealed to him the most? Second, as an institution, which of the universities would he rather attend? Based on his experiences in film courses at CEGEP and his discussions with various people, Mark's first choice was to enter the Communications program at Concordia. As a second choice of program at Concordia, Mark selected English. The only program at McGill which appealed to him was the Film and Communications program offered by the English department. While it addressed similar subjects, the McGill program was much less applied in nature than the program at Concordia. Indeed, the academic rather than applied

nature of the program has since been reinforced by restructuring it as a Cultural Studies program.

The Communications program at Concordia required the submission of a portfolio and an interview with a panel of two professors and a third-year student. Mark did not do well in this interview and was well aware of it. This is how he explained his thinking at the time:

> At first, I was like, "Oh, no; I'm not gonna get in." Whatever. "I could go into English at Concordia and then reapply, and hopefully I'll get in. Or I can go to McGill, and . . . reapply, and hope to get in. Or I can continue at McGill. If I went to Concordia, I think I'd just be trying to get back in. But if I go to McGill, maybe I'll do that instead and see what that's like. And then, in three years or whatever, you know, get a degree, and then you can do stuff faster, and whatever. And do something else, maybe — you know, maybe that's not what I'm interested in.

Mark's impression that he would not be accepted into Concordia's Communications program proved correct, although he was offered admission to their English program. He was, however, offered admission to the Film and Communications program at McGill. The sequence of events which led to Mark accepting his admission at McGill rather than that offered by Concordia is best conveyed in Mark's own words:

> What I didn't like about Concordia is they never sent me a letter saying, you know, "Sorry, but you didn't get..." They said, "Congratulations; you got admitted to the English program." Which was my second choice on my thing. But they didn't mention sort of Communications at all. And I was just like, "Well, what? Does this mean I didn't get in? Or does this mean... Is this my general acceptance?" 'Cause you have to apply separately to the department as well as the university. "So, is this one from the university, and I haven't heard from the department yet? Or what?" You know? And then I had to mail in these things by a certain date, and say I accept my, you know, my admission. And so I'm like, "What do I do? What do I do?" . . . I really thought about it. And going to Concordia, in that program, it's not sort of — like, not getting into it is not the end of my life, and it's not actually that big a deal. And I said, you know, "Well, going to McGill is sort of a prestigious thing. And there's nothing wrong with that at all. And I could probably get a better education for what it's worth . . . I'll go to McGill." And so I sort of like just mailed in my thing to McGill.

Having ended up at McGill as much by default as by deliberation, Mark was looking at a university education primarily as a means to help him clarify his longer-term

educational and career plans. He hoped that his studies would illuminate "the obvious thing that I really want to do" and thereby provide him with a sense of direction. As did a number of the other participants in this study who had unclear long-term plans, Mark decided in the short-term that the best place to start was in a program that at least dealt with subject matter in which he was interested (i.e., film). Whether that would prove to be the best course of action was something that only time and experience would tell. Mark categorized his degree of certainty about choice of academic program as "somewhat certain" (4 on a 5-point scale) when he was initially surveyed in mid-September.

Sarah (U1 Science)

For Sarah, university was the next logical step after CEGEP and was not something she had ever considered not doing. Of the eight participants, Sarah's plans for university appear to have undergone the greatest revision between initial application and the ultimate decision to attend McGill. As a consequence of four courses taken in CEGEP, Sarah developed an interest in political science which led to her identification of this field as her intended program of study in her initial application to McGill. These early decisions were not explored in depth in our discussions and it remains unclear whether Sarah seriously considered attending any other universities at this stage. Two experiences contributed to a fundamental revision of these initial plans. First, Sarah's developing interest in political science led to her getting involved in the political riding in her neighborhood. This proved to be a negative experience that caused her to have serious doubts about pursuing this area of study. Second, Sarah's parents were not particularly pleased with her plans to study political science and actually tried to dissuade her. At the same time, they wanted her to make an informed decision for herself. With this in mind, they arranged for her to talk with a political science professor about the merits and drawbacks of studying political science. According to Sarah, the professor encouraged her to pursue the sciences rather than political science. It was this meeting which ultimately caused her to reject political science and fundamentally re-examine her educational plans.

Sarah had a long-standing interest in astronomy, a field which appealed to her from both the arts and science perspectives:

> I find it appeals to me on both sides — both the science side and the arts side. So I'm very much interested in, "Why is that working? Why is it that the planets are just suspended there?" You know? "What are the physics that are going on? What's the chemistry that's going on up there?" But at the same time, I'm also interested in the whole, like, big philosophical question about everything that's going on. And so, in that respect, it really appeals to me on both levels. And they always say poets are the biggest fans of astronomy. And I understand that; I can relate to that.

Having rejected political science, and having had a positive academic experience in her CEGEP astronomy course, Sarah began to give serious thought to pursuing studies in astronomy. As she investigated her educational prospects in this new field, several factors played a significant role. First, in thinking more generally about the idea of going to university, Sarah very much wanted what she termed the "whole university experience":

> Just where university becomes the center of your life for the next three or four years. And living away from home, and meeting new people, and getting into the whole spirit of the school, and getting involved in everything.

Because the proximity of the university to her home would significantly limit such an all-encompassing experience, the idea of attending McGill was not appealing. Rather, she cast her eyes toward universities in the United States and in other areas of Canada. Second, Sarah's research suggested that undergraduate programs in astronomy were relatively rare and that most people entered the field at the graduate level having completed an undergraduate degree in physics or some other field of science. Third, she was very much aware of her lack of an adequate background in science — she had not taken science courses since Grade 10 — and recognized that she would somehow have to make this up, even if it meant an additional year of study. Finally, while Sarah was very confident about her academic abilities in what she termed "the arts," she was much less sure about the extent to which pursuing studies in the sciences would "fit" her personality.

As she explored the offerings of various institutions, Sarah found herself attracted to Queen's University: not only was there an undergraduate program in astrophysics, but she would be in a situation where she could have that "total experience" she desired. However, she was concerned that "living away" and making the academic transition to studying sciences might be more than she could handle all at once. Sarah consulted several professors at Queen's about her educational plans and came to the conclusion that her best course of action, in the short term, would be to do a year of science at McGill and then, if she so desired and had performed adequately, transfer to Queen's the following year. As she put it:

> I didn't actually want to go to McGill . . . Going to McGill was just out of convenience; it was just the logical thing to do

Having established a plan of action, Sarah approached the Admissions Office at McGill in order to arrange a transfer from the Faculty of Arts to the Faculty of Science. However, she was informed that she did not have the necessary academic background for admission to the Faculty of Science and would have to return to CEGEP in order to take the necessary courses. Sarah was adamant about not wanting to go back to CEGEP and opted instead to apply for admission to the mathematics program in the Faculty of Arts, mathematics being one of several academic disciplines at McGill (including geography and psychology) which students can pursue either as an Arts degree or a Science degree. This would allow her to pursue the requisite academic background for formal transfer to the Faculty of Science while remaining in university.

Sarah was well-aware that this route would require an additional year of university study. She was also aware that not having taken science for several years meant she might find her first year science courses more difficult than if she had pursued the Science program in CEGEP. Nonetheless, she did not regret her choice. Indeed, Sarah felt that the breadth of her Social Science program in CEGEP had allowed her to make a more informed decision than either students who were entering McGill from high school or many of her

peers who had studied Science in CEGEP. She illustrated this by contrasting her own situation with that of a close friend who was entering a science program at McGill:

> One of my closest friends has gone through the whole Science system . . . But she has nothing to fall back on; she has no other alternatives. I at least know that, yes, I am interested in education, I'm interested in philosophy, writing, all these things that I took at CEGEP. Whereas all she knows is that she likes biology, but she doesn't know if — you know, she's never tried anything else. So, in the same respect, she might as well just have come out of high school. It doesn't really matter she's had more knowledge, you know, about the subject; as far as being more well-rounded and knowing what she wants to do, I don't think CEGEP helped that much.

Given Sarah's lack of enthusiasm for attending McGill, she didn't expect much from the institution per se. She was, however, curious about how she would fare pursuing the sciences. More than any of the other participants, Sarah was viewing her first year at McGill as a testing of the academic waters in the sciences. As she put it, "it's more of a personal exploration to see if this is what I want, and this is what I'd be happy doing, and learning, and studying, and all that." This helps to explain why, when initially surveyed in mid-September, Sarah categorized her degree of certainty about her choice of program as "somewhat uncertain" (3 on a 5-point scale).

Sarah had decided to live at home with her family, at least for the first year. She felt that she was already taking on a significant challenge in trying to pursue studies in the sciences; the additional stress of managing an apartment was something she could do without. The monetary savings to be realized by living at home were also a significant factor, allowing her to finance a trip to New Zealand the following summer.

Pierre (U1 Science)

Pierre knew quite early on that he would go to university. In CEGEP, he also knew that he wanted to study something related to the sciences. Pierre's problem was one of clarifying exactly what he wanted to study: throughout his CEGEP studies, he had "liked almost everything in science and was pretty good at everything." Given that much of his

coursework had focused on the physical sciences, that was the direction towards which he was most attracted. Aside from what to study, Pierre was looking at university as providing an environment in which he would have greater freedom to function as an independent learner than had been the case in either high school or CEGEP. In other words, he was hoping for a learning environment in which he would not be as tied to the dictates of the classroom schedule.

Pierre's dilemma in thinking about potential academic programs was largely a function of trying to balance three sets of concerns: (a) satisfying intellectual interests, (b) ensuring academic flexibility, and (c) ensuring practical flexibility. Given his intellectual interest in the sciences, Pierre saw physics as being such a basic discipline that it would provide a good foundation for continuing his studies in any field of science. Thus, pursuing an undergraduate degree in physics seemed to satisfy the first two of his concerns. What concerned him about physics was a perceived lack of practical utility for employment purposes in the event that, upon completing his undergraduate degree, he decided against going on to graduate school or at least wanted to work for several years before doing so. Pierre saw mechanical engineering as a program area which might satisfy all three of his concerns: it dealt very much with the physical science side of things, was an area in which he could pursue graduate studies, would enable him to obtain employment upon completion of the undergraduate degree. In addition, Pierre saw mechanical engineering as occupying a place within engineering comparable to that of physics in the sciences

Possible program of study was a factor, but not the only factor, when it came to considering which university he should attend. Pierre applied to three universities, all in Quebec: McGill University, for honors physics; the Université de Québec à Chicoutimi, for physics; and the École Polytechnique, for engineering. Unable to decide between physics and mechanical engineering, Pierre nonetheless had to choose a starting point. I got the sense from Pierre, although he never fully articulated it, that he selected physics because he believed it would be easier to switch from pure sciences to applied sciences

than to attempt the reverse. When initially surveyed in mid-September, Pierre categorized his degree of certainty about choice of academic program as "somewhat certain" (4 on a 5-point scale). Beyond the availability of an honors physics program, McGill's reputation for offering a challenging education was appealing. In addition, the fact that McGill, unlike the other two universities to which Pierre had applied, was an anglophone institution meant that doing his undergraduate degree here would require him to develop a level of bilingualism that could only be advantageous when seeking employment. These seemed to be the deciding factors in Pierre's selection of McGill to begin his university studies. At the start of the academic year, then, Pierre was not yet fully committed to either his academic program or the institution.

Coming from outside the Montreal area, Pierre had considered only two options for domicile, on-campus residence hall or an off-campus apartment of his own. Although he believed that living in residence might facilitate making social connections, Pierre felt that this benefit would dissipate after a few weeks. In contrast, he perceived the personal growth opportunities afforded by living in an apartment, particularly in terms of becoming more independent and self-sufficient, as enduring for a much longer period of time.

Summary

For all of the participants, the pursuit of a university education was seen as a normal and expected undertaking, something that was almost a matter of course if not a necessary stepping stone for future success in life. To some extent, then, "going to university" was perceived as "simply what one does" after completing high school or CEGEP. Consequently, at the outset of the first year, "going to university" was as much an end in itself as it was a means to some end. For the most part, the participants seemed much less clear about the outcomes they hoped to realize through their university education than they were about the experiences or conditions they sought or desired in the course of completing that education. Few had clearly articulated and well thought out

educational and occupational plans. Although all of the participants indicated that vocational considerations (e.g., the necessity of a university degree in today's labor market) played some role in the decision to attend university, most were still very unclear about what type of occupation they wanted to pursue.

With the exception of Adam (U0 Arts), all of the participants indicated some expectation for continuing their studies beyond the baccalaureate level in order to satisfy personal interests, occupational demands, or both. They were much less likely, however, to have a clear sense of the academic subject area around which those advanced studies would be focused. Adam did not entirely rule out the possibility of post-baccalaureate studies; for now, he just wanted to concentrate on getting through his undergraduate degree.

For some of the participants, the selection of an academic program was not so much a statement of what it was they wanted to accomplish as it was one of needing a place to start. Whether or not it became the eventual core of their undergraduate degree, the initial instinct was to select a program which, on the surface, either encompassed academic subject areas in which they were already interested or enabled them to avoid those subjects in which they were disinterested. The only clear conclusion reached thus far by several participants was a decision to pursue a science degree rather than an arts degree, or vice versa. A number of the them spoke of needing to either decide between several alternative paths or to determine just what alternatives were available. Some, such as Susan (U0 Arts), saw the first year of university as being the time and place for figuring out what one wants to do.

For several participants, the decision to attend McGill rather than some other university seemed to occur through happenstance or as a consequence of immediate convenience rather than a process of deliberation. For others, McGill was clearly their first choice. Interestingly, non-academic factors associated with the institution's location in Montreal often played as much or more of a role in final choice than did particular academic features of the university. Particularly for those participants coming from

outside the Montreal area, McGill University's academic reputation was a "necessary but not sufficient" condition. Of the eight participants, Jason (U0 Science) was the only one for whom the existence of a particular program played a significant role in his decision to attend McGill rather than some other university.

Course Selection: Staking the Initial Academic Territory

The participants in this study began their university studies in what might best be termed an exploratory frame of mind, although the nature of that exploration and tentativeness varied from one participant to the next. In thinking about the simultaneous similarities and differences in the participants' stances toward their entry to university, I began to consider parallels between the pursuit of postsecondary education and prospecting for natural resources. In part, this was prompted by Attinasi's (1989) study of first year Mexican American university students in which he portrayed universities as having multiple geographies: the physical, the social, and the academic/cognitive. Just as there are a variety of natural resources for which one can prospect, so too are there a variety of academic fields which one can study; just as some locations are better suited for finding particular types of natural resources, so too are different institutions and programs better suited for particular forms and foci of study; just as some individuals may find themselves better equipped for the rigors of prospecting for particular natural resources, so too are some individuals better equipped for the rigors of pursuing particular programs of academic study. In some ways, the participants could be thought of as novice prospectors. Some had a good sense of what academic "resources" they were looking for and wanted to determine where those could best be found. Others saw prospecting (pursuing university studies) as a potentially enjoyable or lucrative endeavor and were interested in determining both what academic "resources" were out there and which might be the best to pursue (in terms of either interest or ability). However, unable to survey all areas of the physical and academic landscape of the university, the participants had to stake an initial set of territorial claims in which they could begin their

academic prospecting. This was accomplished during the course registration process immediately preceding the start of classes in the first semester.

Susan (U0 Arts)

Entering McGill from high school, Susan registered in the Freshman Program in Arts and was taking five courses in the first semester (Table 2): Survey of English Literature I, The Art of Listening (Music), Oral and Written French I, Introduction to Psychology, and Introduction to Geology. Four of these courses were 3-credit, one-semester courses; the French course was a 6-credit, full-year course. The English, music and geology courses consisted only of lecture (full class) sessions. In addition to the class sessions, the French course required work in the language laboratory. Of Susan's five courses, only the psychology course had a required weekly conference (small group) session. With a restricted enrollment of approximately 20 students, French was the smallest of Susan's first semester courses, followed by Geology with a class size of approximately 60 students. Class sizes for the other three courses ranged from approximately 175 to approximately 400 students.

Table 3. Susan's first semester course load

Course	Program Context	Credit Weight
Survey of English Literature I	FPA Humanities option	3
The Art of Listening	FPA Humanities option	3
Oral and Written French I	FPA Languages option	6
Introduction to Psychology	FPA Social Science option	3
Introduction to Geology	FPA Math and Science option	3

Susan's choice of courses was played out against the constraints imposed on her by the distributional requirements of the FPA. Within those constraints, course selection appeared to be largely governed by a desire to start off with the familiar:

> Because the first year, I didn't... you know, you don't really... you just want to take what you know, and what you know you like. And whether it turns out that way, you don't... you can't tell. I mean, I didn't even know what McGill looked like; I didn't have any conception of what it would be.

Susan had enjoyed her high school experiences in English, French, geology, and music, so these seemed obvious choices. The introductory courses in English and geology were also obvious choices given that she was contemplating both academic areas for her degree program. Given that her mother was a French teacher, she also felt that she was almost obliged to take a course in French, even if she hadn't already been interested in doing so.

Psychology was the one area that was essentially unknown academic territory for Susan. In addition to meeting the FPA Social Sciences requirement, she saw the psychology course as providing an opportunity for personal growth and development, enabling her to learn more about herself and others. However, at the time of course selection, Susan did not fully appreciate a key factor about the psychology course. Although psychology is offered as a program in both the Faculties of Arts and Science, the Psychology Department at McGill views itself as being a science rather than a social science department. This is reflected in the academic structure of the university, with the Psychology Department being part of the Faculty of Science rather than the Faculty of Arts. The emphasis on psychology as a science carried over into how the introductory course was taught, a fact that would prove disappointing to Susan.

Adam (U0 Arts)

For his first year at McGill, Adam was registered in the Freshman Arts Program. Adam was taking five courses in the first semester (Table 4): Survey of English Literature I, European Civilization in the Medieval and Modern Periods, Oral and Written French I, Introduction to Psychology, and Introduction to Greek Mythology (Classics). Three of these courses were 3-credit, one-semester courses; both the History and French courses were 6-credit, full-year courses. The English and Classics courses consisted only of lecture sessions, while the history and psychology courses both had weekly conference

sessions in addition to the lecture sessions. The French course required work in the language laboratory in addition to the regular class sessions. With a restricted enrollment of approximately 25 students, this was also the smallest of Adam's first semester courses. The other four courses ranged in size from approximately 175 students to approximately 400 students.

Table 4. Adam's first semester course load

Course	Program Context	Credit Weight
Survey of English Literature I	FPA Humanities option	3
European Civilization	FPA Social Science option; pre-requisite to a History of WW-II course in which Adam was interested	6
Oral and Written French I	FPA Languages option	6
Introduction to Psychology	FPA Social Science option	3
Introduction to Greek Mythology	FPA Humanities option	3

Given his most recent academic experiences, the choice of the Survey of English Literature course was an obvious one. Not only would it partially fulfill his FPA Humanities requirements, it would provide a good foundation in the event that he decided to pursue a degree in English literature. Some of Adam's other course choices, particularly Introduction to Psychology and Introduction to Greek Mythology, were very much the consequence of recommendations from his Grade 12 English teacher. Although Adam had not had the most positive experience with French in high school, taking a French course seemed like a logical thing to do as part of an undergraduate degree and, perhaps most importantly, would fulfill the FPA language requirements. The choice of the European Civilization course would not only partially fulfill his FPA social science requirements, but was a prerequisite to a history course on World War II in which he was particularly interested.

Adam's arrival at this final set of courses was not an easy process. He described having spent a long four hours in the academic advising session because he kept running into scheduling conflicts or finding that the maximum enrollment in one of his selections had already been reached. Nonetheless, he was pleased with the final results:

> I think it's a good choice so far. Like, all of my interests are accounted for there. Like, sort of set up different directions, so it's good that way. And I think I'll have a good idea, after the first year is over, what to major in next year.

Thus, the principle underlying Adam's choice of courses for his first year was the desire to select courses which reflected his academic interests, enabled him to explore academic alternatives, and laid down a foundation that would enable him to move in several different directions depending on which alternatives proved the most appealing.

Eva (U1 Arts)

For her first year at McGill, Eva was registered in the three-year program in English Literature. Eva began the first semester with five courses (Table 5): Departmental Survey of English Literature I, American Literature I, Canadian Literature I, another unspecified English Literature course, and German Language for Beginners. Eva had

Table 5. Eva's first semester course load

Course	Program Context	Credit Weight
Departmental Survey of English Literature I	required 1st semester, 1st year course for programs in English literature	3
Unspecified literature course	?	3
American Literature I	content area requirement for English literature program (minimum of 3 credits of American Literature)	3
Canadian Literature I	content area requirement for English literature program (minimum of 3 credits of Canadian Literature)	3
German Language, Beginners	elective	6

dropped the unspecified English course by the time we had our first interview and never discussed it in any detail. The three remaining English courses were all 3-credit, one-semester courses, consisting of both lecture (full class) sessions and a required weekly conference (small group) session. The German was a 6-credit, full-year course requiring work in the language laboratory in addition to the weekly class sessions. Enrollment in the German course was restricted; as such, it was the smallest of Eva's courses. Her other courses ranged in size from approximately 150 students to more than 300 students.

Being in the English literature program, Eva was required to take the Survey of English Literature course during her first semester. Of the four English courses for which Eva was initially registered, this was the only one restricted to students in English degree programs. Program requirements also dictated that she take a minimum of three credits in both American and Canadian literature. In discussing her reasons for choosing the various courses, Eva mentioned that, in selecting this particular American Literature course which was scheduled in the late afternoon, she not only fulfilled a program requirement but was able to build a six-hour block of free time into her Monday schedule which she could productively use for doing academic work. The German course was Eva's only real elective among her first semester courses. She had taken a year of German in CEGEP and, although it had not been easy, had enjoyed the subject. Developing further competence in the language seemed logical given her interests in literature and philosophy and she thought it might prove useful when she eventually did her year or semester of study abroad.

Mark (U1 Arts)

For his first year at McGill, Mark was registered in the three-year program in Film and Communications, one of three programs offered by the Department of English. Mark was taking five courses in the first semester (Table 6): Departmental Survey of English Literature I, Introduction to Drama, Communications and Literature, History of Communications I, and Introduction to Geology. Three of these courses were 3-credit,

one-semester courses; both the Introduction to Drama and the Communications and Literature were 6-credit, full-year courses. Mark's Geology course was the only one of the five which did not have a required weekly conference (small group) session in addition to the lecture (full class) sessions. It was also the smallest of his courses, with an enrollment of approximately 60 students. Mark's other courses ranged in size between 100 and 200 students.

Table 6. Mark's first semester course load

Course	Program Context	Credit Weight
Departmental Survey of English Literature I	partially fulfills content area requirement for Film & Communication program (6 credits of literature courses required)	3
Introduction to Drama	fulfills content area requirement for Film & Communication program (6 credits of drama courses required)	6
Communications and Literature	required 1st year course for Film & Communication program	6
History of Communication I	partially fulfills content area requirement for Film & Communication program (30 credits of courses in film, communications and media required)	3
Introduction to Geology	elective	3

Mark's choice of courses for his first semester was constrained by program requirements. The only course he was actually required to take as a first year student in Film and Communications was the year-long Communications and Literature course. Beyond this, Mark knew that over the next three years he had to take a certain number of credits in each of several content areas: literature (6 credits); drama (6 credits); and film, communication, and media (30 credits). Three of his first semester courses were thus chosen in order to begin satisfying these requirements (Departmental Survey of English

Literature, Introduction to Drama, and History of Communications I). As the normal course load for students in the Faculty of Arts is five courses a semester, Mark still had room in his schedule for an elective. Even though he was studying in the arts, Mark held an amateur interest in the sciences: in his younger years, Mark had developed a collection of gemstones and used to go to mineral shows and similar events. It therefore seemed appropriate to select a science course as one of his electives, and a geology course seemed the logical choice.

Ruth (U0 Science)

Entering McGill from high school, Ruth was registered in the Freshman Science Program. Acting on an academic advisor's recommendations about courseload during the first year, Ruth was taking four courses in the first semester (Table 7): Mechanics and Waves (Physics); General Chemistry; Calculus I; and Vectors, Matrices, and Analytic Geometry. All of these were 3-credit, one-semester courses. Both the Chemistry and Physics courses had required laboratory sessions in addition to the lecture sessions; one per week in Chemistry, and one every other week in Physics. These two courses also had tutorial sessions each week, although attendance was not mandatory. The Calculus course also had a weekly tutorial session. Students were required to attend the first half of this

Table 7. Ruth's first semester course load

Course	Program Context	Credit Weight
Mechanics and Waves	FPS Physics requirement (physical science stream)	4
General Chemistry	FPS Chemistry requirement (biological science stream)	4
Calculus I	FPS Calculus requirement	4
Vectors, Matrices and Analytic Geometry (called Algebra by Ruth)	required course in the core curriculum of Chemistry programs	3

tutorial in order to write a quiz, but were then free to leave. Only the algebra course (Vectors, Matrices and Analytic Geometry) consisted entirely of lecture sessions. It was also the smallest of Ruth's first semester courses, with an enrollment of approximately 30 students. With approximately 100 students, the next smallest course was Physics. Both the Chemistry and Calculus courses had enrollments of approximately 400 students.

Having enjoyed Chemistry, Physics and Biology at the high school level, Ruth was looking forward to seeing what they were like at the university level. Her choice of courses for the first semester was significantly restricted by the basic science and calculus requirements of the FPS. Of the four courses she selected for her first semester, only the algebra course did not fulfill an FPS requirement. Rather, it satisfied a core curriculum requirement in chemistry, the subject towards which she was initially leaning the most as a probable program choice. All in all, Ruth saw her first year courses as providing an opportunity to gain sufficient experience to ultimately decide which field would be of greatest interest to her.

Jason (U0 Science)

Technically, as an entrant to McGill from high school, Jason was in the Freshman Program in Science. However, his efforts in taking extra courses in high school had paid off. Jason reported that he had been granted advanced standing on the basis of his high school courses, even though he had not specifically requested it. Sorting out the details of his advanced standing proved to be a frustrating process that took up most of the month of August:

> From August 1st until Frosh Week — which is, like, the first week of September — I basically came to McGill every single day because . . . there was a problem and they wanted to see me, or I had to bring in materials. To a certain point, I didn't really mind because I had to make sure everything was a smooth transition. But it was extremely frustrating and annoying because, I mean, these are things they're supposed to do; I'd presented everything that I needed to present . . . They gave me advanced standing . . . But I didn't expect that there would be so much trouble in receiving it.

For his first semester, Jason was taking four courses (Table 8): Mechanics and Waves (Physics), Calculus A, Introductory Organic Chemistry I, and Molecular Biology. All of these were 3-credit, one-semester courses. Both the Chemistry and Physics courses had required laboratory sessions in addition to the lecture sessions; one per week in Chemistry, and one every other week in Physics. All four courses had weekly tutorial (small group) sessions in addition to the lecture (full class) sessions. With an enrollment of approximately 100 students, Physics was Jason's smallest course. He estimated the class sizes in his other courses at 175 students for Calculus, 225 for Organic Chemistry, and 450 for Molecular Biology.

Table 8. Jason's first semester course load

Course	Program Context	Credit Weight
Mechanics and Waves	FPS Physics requirement (physical science stream)	4
Calculus A	FPS Calculus requirement (advanced stream)	4
Introductory Organic Chemistry I	required course for Physiology programs	4
Molecular Biology	required course for Physiology programs	3

As a consequence of the advanced standing he had received, Jason started his first year of university in a somewhat ambiguous position as far as his academic status was concerned:

> Now, I'm sort of caught in between a rock and a hard place, because half my courses are U1, and half my courses are Freshman. I have a three-year program and I've declared my major. And yet, I'm not recognized by the Faculty. So, after this year, things should go much smoother. But this year's still sort of in the air.

His first semester academic program fell somewhere between what was typical for high school entrants and what was typical for CEGEP entrants. For Jason, course selection was a process of attempting to mesh two sets of academic requirements, those of the

Freshman Program in Science and those of the joint Physiology and Physics program. The Mechanics and Waves course served to satisfy one of his FPS basic science physics requirements. Similarly, the Calculus A course satisfied the FPS calculus requirements while reflecting his advanced work in high school. This particular calculus course was the most advanced of the three options available and was intended for students who have completed a full year of high school calculus, who enjoyed it, and who achieved at least an "A-." Content-wise, the course was part of an accelerated stream: the combination of this particular course and its second semester counterpart covered the same amount of material in two semesters that was normally covered by three one-semester courses. Jason's two remaining courses were required courses for Physiology programs and prerequisites to core courses in the Physiology and Physics program.

Sarah (U1 Science)

Sarah was technically registered as a student in the three-year program in Mathematics in the Faculty of Arts, but all of the courses she was taking in her first semester at McGill were science courses of the type commonly taken by students in the Freshman Science Program. Sarah had initially registered for four courses: Mechanics and Waves (Physics), Calculus I, General Chemistry, and an unspecified course in linear algebra (Table 9). Shortly before our first interview, she had been informed by an academic advisor that she didn't really need the linear algebra course in order to transfer into Science. Sarah quickly and readily dropped the course. Based on information she subsequently conveyed about when that linear algebra course was scheduled (T-Th, 10:30-12:00), my review of the academic calendar and course timetable led me to believe that this had been the same algebra course taken by Ruth (Vectors, Matrices, and Analytic Geometry), Thus, when I first interviewed her, six weeks into the first semester, Sarah was only taking three courses, all of which were 4-credit, one-semester courses.

The Calculus course had a weekly tutorial (small group) session in addition to the lecture (full class) sessions. Attendance was mandatory during the first half of this

Table 9. Sarah's first semester course load

Course	Program Context	Credit Weight
Mechanics and Waves	FPS Physics requirement (physical science stream); partially fulfills basic science requirement for inter-Faculty transfer from Arts to Science	4
Calculus I	FPS Calculus requirement; required calculus course for inter-Faculty transfer from Arts to Science	4
General Chemistry	FPS Chemistry requirement (biological science stream) ; partially fulfills basic science requirement for inter-Faculty transfer from Arts to Science	4
Unspecified course in linear algebra (Vectors, Matrices, and Analytic Geometry?)	?	3?

tutorial in order to write a quiz, but students were then free to leave. The Chemistry and Physics courses also had weekly tutorial sessions. In addition, they both had required laboratory sessions; one per week in Chemistry, and one every other week in Physics. With approximately 100 students, Sarah's smallest course was Physics. She estimated that the class sizes for both the Chemistry and Calculus courses were equivalent, with enrollments of approximately 400 students each.

Sarah's course selection for the first semester was, in essence, dictated by the requirements for obtaining an inter-Faculty transfer. Applications for such a transfer may be initiated once the student has begin his or her course of study at McGill, and it is strongly recommended that they be made as early as possible in the program. Transfer from the Faculty of Arts to the Faculty of Science, or vice versa, is conditional upon evidence of satisfactory academic performance, a minimum cumulative grade point average of 2.70 (out of 4.00) in the current Faculty. Other requirements may also obtain, depending on the direction of transfer. For example, transferring from the Faculty of Arts

to the Faculty of Science normally requires successful completion (i.e., a grade of "B-" or better) of Calculus I and II and at least 6 credits of other basic science courses.

Pierre (U1 Science)

Pierre was registered in the Honours Physics Program and was taking five courses in his first semester at McGill, two in Math and three in Physics (Table 10): Advanced Calculus I; Ordinary Differential Equations; Classical Mechanics I; Special Relativity and Modern Physics; and Laboratory in Mechanics, Heat and Optics. The laboratory course was a 3-credit, full-year course. The other four were 3-credit, one-semester courses consisting only of lectures.

Table 10. Pierre's first semester course load

Course	Program Context	Credit Weight
Advanced Calculus I	required U1 course for Honours Physics program	3
Ordinary Differential Equations	required U1 course for Honours Physics program	3
Classical Mechanics I	required U1 course for Honours Physics program	3
Special Relativity and Modern Physics	required U1 course for Honours Physics program	3
Laboratory in Mechanics, Heat and Optics	required U1 course for Honours Physics program	3

All five courses were required of U1 students in the Honours Physics program, meaning that Pierre really had no choice in which courses he would take. Of the eight participants, Pierre had the most restrictive and homogeneous courses in terms of the academic backgrounds of their respective student populations; they were all either intended for or restricted to students in Honours programs in Math, Physics, or Engineering. Class sizes ranged from a low of approximately 25 students in the Modern Physics course to a high of 50-60 students in the two mathematics courses.

Summary

In selecting their courses, participants were influenced by a variety of factors including personal interests, recommendations of former instructors, parental pressures, curricular requirements and restrictions, recommendations of academic advisors, scheduling conflicts, and course availability. Participants in the sciences were subject to the most directive curricular requirements and therefore had the least personal control in determining which courses they would be taking. This was particularly true for Pierre as a student in the Honours Physics program.

Based on the particular academic disciplines in which the courses were based, participants' course selections also varied in terms of the extent to which they were academically focused or diffuse. The three U1 participants in actual programs (Eva, Mark, and Pierre) had the greatest number of courses in their chosen field of study and therefore had the most focused or internally coherent course selections. Two of the participants were in somewhat unusual circumstances: Jason, with his advanced standing and tentative admission to the Physiology and Physics program, found himself with a mix of U0 and U1 courses; Sarah, although a U1 student, was registered in what were essentially U0 courses in order to qualify for transfer from the Faculty of Arts to the Faculty of Sciences. In terms of the consistency in academic subject areas between prior education and first semester courses, Sarah's courses also entailed a fundamental shift whereas the courses of the other participants were much more an expansion on an established academic foundation.

The final set of courses with which the participants began the first semester can be viewed as defining their points of entry into the unfamiliar territory of university study (Table 11). From the student perspective, the academic context is defined by the number and nature of these particular courses rather than by such institutional concepts as Faculty or program of study. The differences in course loads and subject areas facing the participants in this study provide a strong argument for thinking in terms of multiple

academic contexts rather than a single context when conducting research on students' academic experiences.

Table 11. Key characteristics of participants' academic contexts

Participant	First Year Program Status	Initial Course Load	Subject Areas
Susan (U0 Arts)	Freshman Program in Arts	5 courses	English, French, Psychology, Music, Geology
Adam (U0 Arts)	Freshman Program in Arts	5 courses	English, French, Psychology, Classics, History
Ruth (U0 Science)	Freshman Program in Science	4 courses	Physics, Chemistry, 2 Math
Jason (U0 Science)	Freshman Program in Science with advanced standing	4 courses	Physics, Math, Biology, Chemistry; latter two are prerequisites for joint program in Physiology & Physics)
Eva (U1 Arts)	English, Literature concentration	5 courses	German, 4 English
Mark (U1 Arts)	English, Film & Communications concentration	5 courses	Geology, 4 English
Sarah (U1 Science)	Mathematics (Arts), seeking transfer to Faculty of Science	4 courses	2 Math, Physics, Chemistry; courses selected to meet requirements for transfer to Science; basically the same as Freshman Program in Science
Pierre (U1 Science)	Honours Physics	5 courses	5 courses (3 Physics, 2 Math)

Summarizing the Participants at Entry to University

In summary, the participants in this study began the first year of university not yet having committed themselves completely to clearly defined and well thought out educational or career goals. At the same time, they all conveyed a sense of eager

anticipation and excitement about what their first year would hold. In one way or another, all eight participants described themselves as being primarily in a state of "testing the waters" either academically, institutionally, or both.

CHAPTER 5

ACADEMIC EXPERIENCES DURING THE FIRST SEMESTER

This chapter examines the academic experiences of the participants during their first semester of university study. It focuses on major issues being addressed by participants in each of three time periods — the initial weeks of the semester, mid-semester, and the closing weeks of the semester. The early weeks of the semester receive the greatest attention because it was during this period that participants were dealing with the greatest number of issues. Because issues often manifest themselves in a negative light, the negative aspects of participants' experiences frequently receive more attention than the positive. The general pattern that emerges is a movement from feeling lost and a stranger in unfamiliar territory to feeling increasingly comfortable and "at home" in the university environment as students acquire experience. This corresponds to a progression through the three intrapersonal phases of transition posited in the conceptual framework (pervasiveness, disruption and integration) while in a continuous process of appraising self-in-situation.

The Initial Weeks of the Semester

As the academic year commenced, the participants in this study were entering unfamiliar territory both in the general sense of being a university student and in the particular sense of the academic courses they would be taking. A central preoccupation, then, for participants during the first couple of weeks was exploring and becoming familiar with their new surroundings and, more particularly, the people, tasks, demands, and activities associated with their new academic circumstances. They were required to "learn the territory" for each of their individual courses and how these territories fit together. In addition, they had to "learn the ropes" of being a university student.

Shifting Gears from the Social to the Academic

One of the first tasks participants had to confront was the need to mentally "shift gears" from a focus on social activities to academic activities. The week immediately preceding the start of classes was Orientation Week. During this time, all new students were required to attend an orientation program organized by the Office of the Dean of Students and intended to introduce them to the services available on campus, the Handbook on Student Rights and Responsibilities, and the Students' Society. It was during this week that U0 students met with their academic advisors and registered for their courses. Notwithstanding these academic events, the bulk of activities were social events organized by student government at the university, Faculty and residence hall levels. These, combined with the many social activities for returning students resulted in a pervasive emphasis on social activities and partying as the semester got underway.

These environmental pressures seemed most salient for the U0 students who had opted to live on campus, particularly those in the co-ed residences, where, as Susan (U0 Arts) observed, "the focus of residence life has been just drinking and partying and noise." In contrast, none of the four U1 participants indicated they had been particularly interested in on-campus social activities during this initial period. Indeed, some of them perceived these activities as being intended primarily for the U0 students coming to McGill from outside of Montreal. Living off-campus as they did, the U1 students found that it was easy to ignore such activities by and large. Nonetheless, the pervasive social atmosphere on campus at the very start of the academic year could be distracting, even for those who did not participate directly in any of the activities. As Eva (U1 Arts) commented:

> One of the things that I had trouble with in the first few weeks was the attitude of the students — the Welcome Week, Party Week, and that sort of thing . . . I found that a lot of the people in my classes, and around me, were always saying, "Oh, did you go to the party last night?" "Yeah, I got so drunk." . . . And I found that that made it very hard to concentrate because . . . a large number of the people around you were not into school yet mentally . . . I found it was a major distraction just having to, you know, deal with the people who were talking about

> it all the time . . . (T)hey {the activities} did more to make you not want to study and not want to work. I mean, they tried to make you comfortable in the social life. But they were sort of asking you to ignore your academic life — which I suppose they think you can do in the first few weeks.

While partying and other social activities continued to take place on a regular basis, participants perceived that many students were serious about their academic responsibilities and restricted themselves accordingly within a very short period of time. For example, in talking about what changes she had noticed in her assumptions about university life over the first month of classes, Eva (U1 Arts) noted that she had erred in:

> An assumption . . . that, you know, a lot of the students are people that like to go and party all the time, and don't take it seriously. At the beginning, the first week, that was true. But now I find really most of them are very serious; which is a very nice change from high school and CEGEP. So I'm glad that that assumption was wrong because I find it very hard to work in an environment where the people aren't serious.

Ruth (U0 Science) also observed a growing restraint among her peers:

> I expected, the first year, to party quite a lot. And the first week I was here, it was party, party all the time. But classes started, and then, all of a sudden — bang! Suddenly it was, like, homework, homework; every night, homework. Friday night, you go out. Saturday night, you go out. Saturday afternoon, go shopping. Sunday, work. Every week day, work, work, work. So now it's, like, highly concentrated study intermingled with highly concentrated partying . . . (Y)ou see these signs for parties all the time, you know. I've noticed that most of the people on my floor, they don't go; they keep themselves from partying because they know they have to do work.

To some extent, each participant's perceptions of the prevalence of "partying" varied with their particular vantage point. Eva (U1 Arts), for example, lived off-campus and thus had a more restricted view of what was happening. In contrast, Ruth (U0 Science) lived on-campus in the women's residence. She, along with Susan (U0 Arts) and Adam (U0 Arts), who lived on-campus in co-ed residence halls, were much more exposed to what was happening. Even among this latter group, the extent of the shift in emphasis from partying to academics seemed to vary from one residence hall to the next.

The Classroom Experience

Background Knowledge and Feelings of Preparedness

Given their academic records, it was not surprising that all of the participants felt quite well prepared for university studies. With the exception of Sarah (U1 Science), who was entering an entirely new field of study, the participants had several courses in which they found themselves covering familiar academic content, particularly when professors spent some time in reviewing basic concepts during the early weeks of the semester. Some found this background knowledge gave them a significant advantage over many of their classmates, particularly when it involved material they had studied within the preceding two years. Eva (U1 Arts), for example, found a high degree of overlap between the literary works being covered in her Survey of Literature course and those she had studied in her CEGEP literature courses. Where many of her classmates were encountering difficulties in reading some of the Anglo-Saxon, Old English and Middle English works for the first time, she was re-reading them and was thus able to concentrate more on understanding the issues and insights being raised by her professor. In some cases, however, the potential advantages of covering familiar academic content were reduced or negated by differences in instructional approaches and learning environments between high school or CEGEP and current conditions. This was certainly true for Jason (U0 Science) in his Calculus A course:

> Well, I've taken Calculus before. But for some reason, the second time around, I'm finding it harder. I don't know why . . . I think it's just because it's slightly... the way the format is different. So I'm not used to it. It's like a bias; I'm expecting to be taught it this way, but it's being taught this way, differently. You know, the teacher just teaches straight from the book. Which is no problem. I guess the way he teaches it, and the speed he teaches — the tempo — it's not the same as I was taught . . . I know the material, because I've seen it before. But I guess it's just I have this bias because I've learned it before. See, my friend, he never took Calculus before, so when he's learning it, he's learning it straight, so it's no problem for him to put up. I'm expecting to see it in a particular manner, presented to me in this particular manner. And it's not. So I have to, like, sort of switch over.

Several of the participants commented on finding themselves in one or more courses where the subject matter was very much new to them or where they felt inadequately prepared in terms of having background knowledge in some relevant subject matter. This was particularly true of Sarah (U1 Science), who had not studied sciences since Grade 10 (four years before). She was very much aware that her lack of a science background put her at a disadvantage in comparison to her classmates. Nonetheless, she was confident that her academic abilities and some hard work would allow her to succeed. Another example was Jason (U0 Science), who reported that everything being presented by the professor in his Organic Chemistry course was completely new to him. Not surprisingly, he was finding this to be his weakest course during the initial weeks of the semester.

Ruth (U0 Science) found herself in a somewhat different situation in her Physics course, a course for which she had felt well prepared after having done well in high school physics:

> I remember the — what was it? The first? No, the second or third class. And the professor started writing calculus on the board. And I'm from {Atlantic province}, and we don't have calculus in high school! So one of the first things was, I was trying to understand. And, like, he was writing, and everyone else in the class was like, "Oh, yes, yes. Derivatives, oh, yes, I understand." And I was like, "What's going on?" So, after class, I went up to him and I said, "Excuse me, but I haven't had calculus yet, and is that necessary?" And he said, "Oh, no. It's not necessary. You don't need it, you can use the formulas you used in high school." He said, "Well, I'm just putting it there for reference purposes. The other people had to use these formulas before." So, it was more, like, if he put calculus on the board, I was supposed to tune it out. But I'm not like that. Like, if he does something, I want to know what he's doing. And so, it's hard for me because, whenever he puts calculus on the board, I'm trying to understand, and I'm asking questions, and I still don't get it.

Not having any background in calculus, the professor's regular usage of it in explaining formulae was extremely disconcerting for Ruth:

> I was so depressed afterwards, after that class. I did not understand anything he had done, and that was supposed to be a review. I didn't understand any of it. And I was majorly freaking out, that period after that first class.

When I asked how she was coping with the situation, Ruth replied:

> I try to make my notes good, and try to read them when I get back home. I try to get people who are in Calculus as their program to help me. I've gotten a few things. Like, I've taught myself how to do derivatives, so far. Well, it just seems like I'm so bogged down in this, and I'm wondering if that might hinder me in some other ways. So it's a lot harder for me.

Technically speaking, calculus is not a prerequisite for this particular physics course; rather, it is a corequisite course. Unfortunately, the calculus concepts being used by the Physics professor were at a level more advanced than what she was currently studying in her Calculus course. From Ruth's perspective, this lack of synchronization between corequisite courses would persist throughout the semester. Sarah (U1 Science) was in the same two courses. She, too, reported finding it difficult to follow the Physics professor's use of calculus.

Lectures

Although the participants had expected larger class sizes in university, many of them were struck by the reality of being in a lecture class with several hundred other students. During the initial weeks of the semester, they were very much aware of how different this classroom experience was from that to which they had been accustomed. For example, in describing her largest class, Susan (U0 Arts) stated that:

> You'll never become known. It's not a class . . . in what I've been used to, in the sense that . . . you're not participating. You're being lectured at, you're being spoken to, and then you leave. And it's up to you. And they don't know if you're dead. It's just huge.

In comparing the two sets of experiences, participants frequently emphasized such issues as instructional methods, level of interaction or participation, sense of anonymity or depersonalization, and amount of responsibility placed on students.

Large class sizes influenced faculty-student relationships in both directions; not only was it difficult for professors to get to know students as individuals, it was difficult for students to get to know their professors on a personal basis. In comparing university

to high school, Susan (U0 Arts) was one of the participants to express a regret about the limitations on forming close relationships with instructors:

> I had really good relationships with them {high school teachers}, just, you know, as people. Like, my geology teacher, I was really good friends with him; we went on a lot of field trips together because we were in the environmental group. And then my debating coach. I guess you get that in high school, though, you know: you get to be close to your teachers. And here, you don't. You know, you miss that completely. Especially if your classes are huge, and most of mine are huge.

Another consequence of large class sizes was that it made it much more difficult for professors to be aware of and respond to students when they were confused or had questions. Ruth (U0 Science) was one of the participants who remarked on this in comparing current and previous classroom experiences:

> Well, it's kind of strange when you're in a lecture hall with four hundred people, and you want to ask a question. And, like, the professor's there — well, he's just talking away. And you, like, sometimes you put up your hand and he doesn't see you because there's so many people . . . In my high school, it was, like, your teacher would — like, you'd be sitting here and your teacher would be right here. And, like, you wouldn't put up your hand or anything; you would just — if you had a problem, you'd just, you know, tell them. And he'd go, "Well, let me explain it to you." And, like, the teacher would — I don't know; it was different. The teacher would actually look at you; read your eyes, you know. After class, like, you'd be going through the door and the teacher would say, "I noticed a confused look on your face when I was explaining such and such. Do you have a problem with that?" And you could say, "Yes," if you did. And he'd walk down the hall with you and explain it to you.

Thus, participants found that the much larger class sizes in university lectures created a psychological distance between professors and students that manifested itself in several ways.

For some of the participants, this psychological distance was compounded by a sense that professors were not particularly interested in or concerned with students as individual people. Rather, it was the subject matter that was the focus of the professors' attention. Certainly, as some of the participants described, and as I witnessed in several of my class visits, such a perception was reinforced when professors entered the lecture hall upon the ringing of the bell, glanced only briefly at the students, and immediately

launched into their lecture, stopping only when the bell rang again at the end of class. The perceived focus of professors on their particular subject matter was also an element in the distinctions that some participants drew between the instructional practices of their former institutions and those they were now encountering. For example, in contrasting his high school calculus course with the one he was currently taking, Jason (U0 Science) observed:

> Our teacher, in high school, was a teacher. This is a prof; you know, like a god . . . Because the way my prof teaches, compared to my teacher — and I stress teachers . . . This was a college-level course but in a high school environment. It was totally different. Absolutely, totally different. One, basically, you're in a classroom. And my teacher "teached." Here, the prof is lecturing.

Another defining characteristic of lecturing, as participants perceived it, was that students were placed in an essentially passive role as recipients of the information being conveyed by the professor. Only a few of the participants described their professors as regularly asking questions of students or otherwise soliciting student participation. Susan (U0 Arts), for example, indicated that her Music professor regularly asked students for their reactions to the various pieces of music she played during lectures.

Although participants reported that students in their various courses did ask questions of the professors, this was an occasional rather than frequent practice in most courses. Even then, in most courses, the majority of questions that did arise during lectures were simple requests for clarification or the repetition of a point made by the professor; substantive questions had to wait until after class. Indeed, many of the participants indicated that they were much more likely to approach their TAs with questions than their professors. Several of the participants, such as Eva (U1 Arts) attributed at least part of their reluctance about asking questions to feeling intimidated by the sheer number of students in the class:

> The amount of students in my classes was very intimidating . . . I said, "I'm never going to." Just because I wouldn't want to in front of everyone, all those other two hundred people.

The extent to which students felt comfortable in either responding to the professor or asking questions was also influenced by the classroom atmosphere, an atmosphere that was partially shaped by the significance of that particular course in students' academic programs. For example, Susan (U0 Arts) indicated that she and many other students in the Music course felt quite comfortable about speaking up because the course had a very relaxed atmosphere. This she attributed to the fact that the majority of students perceived the course as not being particularly difficult and that they had taken it, essentially, as an easy elective. Students, therefore, did not have a high psychological investment in the course and had less to "lose" by making what might be perceived as a stupid comment. By way of contrast, Susan described her Psychology course as having a much more serious atmosphere. For those students considering or already registered in the Psychology program, this was a required course. Moreover, the course was more difficult than the Music course. Students were therefore more reluctant to appear "stupid" in the eyes of either the professor or their classmates.

Others perceived their professors as not wanting to answer substantive questions because it prevented them from presenting all of the material in that day's lecture. Jason (U0 Science), for example, observed:

> If you have a question, if it's not a very deep question, he'll answer it. If it is, he has to keep going. He'll get to it — maybe. If you're lucky, yes; if you're not, you have to maybe speak to a TA or ask your friends because he doesn't always have the answers.

In some courses, students' perceptions that professors were reluctant to answer questions were explicitly confirmed in instructor comments. For example, Eva (U1 Arts) reported that:

> One of the teachers actually told us — put it in the terms that, you know, "You know, since you're not allowed to ask questions in lecture . . ." You know? I think he meant it jokingly, because some people do {ask questions}. But I think he sort of meant it in the way that, you know, "Unless it's a really pressing question, don't ask, because I have a lot to say." So I thought that was a little — I don't know why — very much intimidating . . . But it's almost as if you're not allowed

> to ask questions during lecture. Which, to me, is, like, a bit — I find it restrictive because you have to save all your questions for the conference.

For other participants, it was not so much that they perceived the professor as being reluctant to answer questions as it was a case of they themselves feeling reluctant to interrupt or otherwise intrude upon the professor. This is illustrated in the following comment from Ruth (U0 Science):

> But it's different when you're in this big lecture hall, because the teacher — first, he doesn't even see you. And then it's like he has a list of things he has to cover in this class. And, like, it's not as laid back as high school. So, like, he has to get through these in order to keep up with the course outline so that he can prepare the mid-terms and the assignments, so the TAs don't get confused on what they have to do to go over and rehash. So it's, like, 'Will he feel like answering a question or not? Will he lose his train of thought? Will he get mad at me? Will he even see my hand?' You know?"

As part of a study of students' conceptions of learning (Donald & Denison, 1997b), students in introductory English, Physics and Engineering courses were asked to rate the extent to which each of 18 characteristics was descriptive, first, of the ideal student, and second, of themselves as students. Respondents indicated that participating as a constructive and active member of class was one of the characteristics they deemed most descriptive of the ideal student; at the same time, it was one of the characteristics they deemed least descriptive of themselves as students. The mean difference between 'ideal student' and 'self-as-student' ratings was greatest for this item. The results of this dissertation suggest that, at least in the larger classes encountered by many first year students, classroom conditions mitigate against active and constructive student participation whether through responding to professor-initiated questions or directing questions at the professor.

Rather than active participation through discussion or questioning, the dominant academic activity for students during lecture sessions was taking notes. A number of the participants reported that the note-taking skills that had served them sufficiently in high school or CEGEP were no longer adequate or were somewhat rusty. The new task

environment was especially troublesome for Adam (U0 Arts) who had indicated that he hadn't been a particularly skilled note-taker in high school. Complicating things, Adam explained that pain from a back injury suffered in the summer had left him feeling lethargic and unmotivated throughout August:

> And so, I got to McGill University, and I was still on the same track; I still wasn't motivated. So when I got to classes, you know, I just wasn't there {mentally} . . . He was just, you know, dictating his lecture and stuff like that. And everyone was taking notes — you know, really good notes — and I was just sitting there. I was just looking at everyone. And I didn't think the notes were — like, what he was saying was that important. And everyone was just, like, writing as fast as they could. And I was just, "Oh, yeah. I guess I've got to get listening here."

Adam found that concentrating on what the professor was saying was especially difficult in his late afternoon classes; by this time of the day, he was often beginning to feel drowsy. According to Adam, it took him approximately three weeks before he began to feel more alert or 'mentally there' in his lectures.

Mark (U1 Arts) was another of the participants who reported difficulties during the initial weeks in taking good lecture notes, primarily because he had gotten out of practice:

> There's always something that trips me up when I'm writing notes; either a word that I'm not sure how to spell, or a word that I didn't hear, or I'm not sure if that word makes sense, or whatever.

He also found that these basic problems were sometimes exacerbated by the professor's vocabulary:

> My Drama professor, he has a very, you know, extended vocabulary. He can say the same thing sort of three times in different ways. And you have to decide which of these ways that he just said best, you know, clarifies the point that he's making. And so you're writing one thing, and then he says it better. And you're, "Oh, shit!" And also, if you're writing something, and you're trying to finish the point, and then he's saying something equally or more important than what you're writing down. And you forget this, go on to this, wait, and try to remember what he was saying. And you're trying to remember what he's saying, or you're trying to remember what you have to write. It's hard; it takes a lot of practice. I'm getting better at it.

Eva (U1 Arts) was another participant who found that the vocabulary used by her professors was occasionally beyond the comprehension of many students. For example, in describing one of her professors, she indicated that:

> He tends to talk more often at his level than ours. He sometimes slips into that 'extremely intelligent professor' mode, rather than a 'trying to teach first year university students' mode.

Few professors provided students with "advance organizers" (Ausubel, 1978) or an overview of what the day's lecture would cover. Lacking such an organizational structure, many participants reported that they often found it difficult to discern the important points in the material being presented by the professor. As a consequence, many students felt obligated in such lectures to, as Eva (U1 Arts) put it, "get every single word that he says down on paper." Such a verbatim approach to note-taking created a dilemma for Eva and many others:

> Because, if you're so concerned with taking the notes, you're not really listening to what he's saying. You're not really absorbing it; you're just transcribing it.

In most of their courses, participants indicated that students were left to resolve this dilemma on their own. There were, however, some exceptions. Sarah (U1 Science) reported that that the professor in her General Chemistry course provided students with lecture notes he himself had prepared so that they could concentrate on what he was saying. In contrast to such a professor-initiated response, Jason (U0 Science) reported that he and many of the students in his Molecular Biology course had joined a Note-Taking Club (NTC) organized by the Biology students' association. Each lecture, one student would volunteer to tape the lecture and essentially produce verbatim notes which would then be photocopied. Volunteers received their photocopied notes free for the semester, while all the other students paid a modest fee to cover printing costs. Jason found these NTC notes particularly valuable because the textbook for the course was, as he perceived it, more of a biochemistry text than one specifically dealing with molecular biology.

In the study of students' conceptions of learning referred to above (Donald & Denison, 1997b), students indicated that taking good notes in class was one of the characteristics they thought most descriptive of the ideal student, but one they deemed least descriptive of themselves as students. These results are consistent with the dissatisfaction many participants in the current study expressed about their note-taking abilities. Although part of the problem lay with the students themselves in terms of their skills, instructional practices in many lectures only served to exacerbate pre-existing difficulties.

With the notable exception of language courses, participants found that in most of their course lectures they were essentially forced into a more passive classroom role than that to which they were accustomed. This was especially true in the larger classes. At the same time, participants recognized that they had to assume much more responsibility for their own learning; their professors were not going to be monitoring students' comprehension of the material to the same degree as had previous instructors. The participants acknowledged that they would have to adjust to the reality of their new circumstances. Echoing sentiments expressed by other participants, Susan (U0 Arts) said:

> It doesn't bother me; you just have to accept it. I don't know. It's not intimidating; it's just the way it is.

In some ways, the conditions in large classes could be perceived as beneficial in comparison to those in smaller classes. For example, in talking about one of her large classes, Susan observed that:

> In a way, it's a kind of relief because . . . in small classes, you really have pressure because you're noticeable. But {in large classes} it's kind of, you know, you just sit there, you take your notes, you don't have to go. It's more impersonal, but sometimes that's beneficial . . . in the sense that you don't have to put much effort into being in the class — all you're responsible for are two exams {midterm and final}. I know people who don't even go to the class; they just read the book. And they know more than I do. So it's beneficial if you're motivated yourself, I guess. But if you're not motivated, then I can see it being really — like, a lot of people are used to being motivated by their teacher; you know, you're used to that.

A key factor, then, in the ability of first year students to cope effectively with the reality of university courses is their readiness and skill for engaging in self-regulated learning (Pintrich, 1995; Pintrich & Garcia, 1994). Unfortunately, the experiences of these participants during the initial weeks of the semester suggest that it is dangerous for students if professors assume such readiness.

Conferences and Tutorials

With the exception of Pierre (U1 Science), all of the participants had at least one course which included a conference or tutorial in addition to regular lectures. Both in terms of the smaller number of students (7 to 35) and the greater degree of interaction (between students and between students and instructor), participants found that the conferences or tutorials bore greater resemblance to the classroom situations to which they had been accustomed in their previous high school or CEGEP than did their lectures. For many, this was the primary forum for asking questions in order to clear up misunderstandings about the material being covered. Tutorials in the basic math and science courses were often described as particularly valuable for gaining a better understanding of how to solve the types of problems encountered on weekly homework assignments.

This did not, however, mean that the participants found these sessions to be uniformly useful or enjoyable. For example, the only participant to have a sibling already attending McGill, Eva (U1 Arts) had been told by her brother that conferences were often a waste of time, simply repeating what had been covered in the lectures. In one of her courses at least, her initial experience bore this out. When asked about the extent to which she was able to obtain feedback on her opinions about and interpretation of the material in her literature courses, Eva observed:

> I'm not. That's the problem. In conferences, you maybe can — if you're lucky. But a lot of the times, I find the TAs just, you know, if you repeat something that the teacher said, "Oh, that's a very good point. Because you'll remember that Professor X said, 'blah blah blah blah'." But if you contradict him and say something else, they just go, "Oh! Well, now let's talk about, ah, something else."

> And they — that happened to me; he just completely ignored what I said, and he started going off on something else. I'm like, "That's not what I asked. I know that, but what about this?" And he just looks at me, and says, "Well, if you'll notice on this page, there's something else." And they just — they ignore it. And so, you know, it always makes me want to go to the professor — and I think I probably will — to ask them. Because I find it's very hard to get, you know, feedback on your opinion if it doesn't coincide with your teacher's.

A number of participants also reported that the conferences or tutorials for some of their courses did not really allow them to participate fully and freely. For example, several of the Arts participants indicated that, in some courses, a portion of their final course grade was based on student participation in lectures or conferences. Finding appropriate means of assessing such participation is often problematic, and in some cases the methods chosen may prove counterproductive. In one of her literature courses, Eva (U1 Arts) found that the TA's efforts to ensure everyone had an opportunity to participate actually served to restrict participation:

> He always assigns four people to write up questions for the next class, on whatever we're going to be doing, to make sure that everybody gets their participation mark in. But that always, you know, sort of gives the floor to one person. {The TA ends up going} "This person. Okay, now you. Tell me all your questions and I'll answer them. Okay, now you. Tell me your questions. I'LL answer them. He doesn't let other — it's not that he doesn't let other students, but he doesn't encourage other students to, you know, answer somebody else's question. And often, he'll just go on and on and on, repeating the same things. You know? It doesn't exactly encourage student participation — especially at 8:30 in the morning, when everybody's pretty tired anyway.

Although well-intended, the TA's methods limited the extent of participation and the quality of discussion. As assigned, students raised their questions and the TA provided the answer. Little, if any, discussion actually occurred, particularly between students. In addition, Eva reported that students in the conference gradually fell into the habit of doing little preparation for the conference except when it was "their turn."

In other instances, opportunities for participation in conferences or tutorials were limited because the sessions regularly ended up in an almost exclusive interchange

between the TA and one or two students. Such was the case for Adam (U0 Arts) and his History conference:

> I don't like my History conference. I'm confused in that. I mean, there's one guy in the class that, I don't know, he's just so intelligent; I mean, he just really knows his stuff. And it's just him and the TA, the whole class. And the rest of the class is just sitting there the whole class; we're just listening to him.

Similar difficulties were reported by Sarah (U1 Science) in her Calculus tutorial, where the TA often spent so much time addressing the questions of one or two students Sarah had no opportunity to raise her own concerns. Over time, as such experiences were repeated, participants' perceptions of the value of these particular conferences or tutorials began to degenerate.

Low levels of participation in conferences or tutorials during the initial weeks of the semester were not always a function of how the sessions were conducted. This was certainly the case for Mark (U1 Arts) in relation to his History of Communications conference where the combination of several factors made him feel reluctant to speak up. First, in contrast to the size of conferences in his other English courses, which he said averaged 20 students, this particular conference only had 6 or 7 students in it. Second, of all his English courses, Mark found the material for this particular course the most difficult to understand and digest. Third, a number of the students in the conference were in their second or third year of study at McGill, and he was the only first year Film and Communications student. He felt that the other students in the group were therefore "much more accustomed to the swing of things" and had "a better grasp on the material." Faced with this combination of small class size, more experienced classmates, and a perceived inadequate grasp of the material, Mark preferred to sit back and listen rather than actively contribute to the discussion.

Relating to Classmates

In their prior educational settings, each of the participants had developed a sense of comfort in knowing their "position" relative to their peers. They knew many, if not all,

of their classmates. They were aware of the academic abilities of their fellow students and knew that they themselves were among the top academic performers. With the beginning of their first semester at McGill, the participants were faced with an entirely new social geography (Attinasi, 1989) in their courses.

A Sea of Unfamiliar Faces

Having a set of friends from one's previous educational institution who are also entering studies at the same institution can play an instrumental role in how successfully new students deal with the transition to university (Terenzini et al., 1996). Providing a bridge from one academic and interpersonal environment to the next during the initial weeks, these friends also serve as early interpersonal moorings and as a point of introduction to other students. In this study, however, none of the participants was part of a cohort of friends, particularly in the context of the courses they were taking. Rather, during the first days of classes, these participants were facing a sea of unfamiliar faces in each of their courses. For example, none of the four U0 participants (Susan, Adam, Ruth, Jason) reported knowing anyone from their respective high schools who was also starting at McGill. The situation was essentially the same for two of the U1 participants. Coming from outside the Montreal area, Pierre (U1 Science) indicated that he knew only three or four students from his part of Quebec who were studying at McGill. They, however, had already been here for at least a year and were pursuing different areas of study. Coming from a Montreal-area CEGEP, Sarah (U1 Science) knew quite a few people who were entering their first year of study at McGill. However, given that her first year academic program essentially mirrored that of U0 science students, she was unacquainted with any of the other students in her courses. Only Eva (U1 Arts) and Mark (U1 Arts) indicated that there was someone in each of their courses with whom they were previously acquainted, either from CEGEP or from an earlier level of education, although these were not close friends. It is not surprising, then, that many of the participants expressed a sense of uncertainty or feeling "out of place" in relation to their new classmates.

Change in Status and Academic Anxiety

All of the participants were accustomed to being among the top academic performers in their peer group at their previous institutions. They now found themselves in an environment where everyone around them had also been a top performer. In one way or another, they had to adjust to a change in status from being a "big fish in a small pond" to being a "small fish in a big pond." A number of the participants, particularly those in U0, found this disconcerting and experienced varying degrees of anxiety or intimidation. For some, anxiety levels were at their highest at the very beginning of the semester. In the case of Ruth (U0 Science), anxiety had been heightened by information she received during Summer Orientation at the beginning of August:

> Well, I expected everyone here to be really, really, really, really smart. I don't know, perhaps {the Dean of Students} sort of brainwashed me or something. He said, "This is the smartest class we have ever introduced to McGill University. And the standards go up every year." Oh boy! I went to Summer Orientation and I heard this speech, and then I got to go home for a while and think about it. It was like, "Does he really mean that? If he does, then there'll be all these people who are so smart. And look at me, here. I'm from {small town, Atlantic Canada}. That's a far cry from, like, Toronto or Vancouver. I'll probably be the dumbest person there."

For this participant at least, comments made by university officials about the intellectual caliber of the entering class had the unintended consequence of initially heightening her anxiety about her ability to "measure up" to the level of academic competence required in her new academic environment.

Within a few weeks, however, Ruth found that she had not been the only one concerned about her academic competence and, further, that these concerns diminished with time:

> Well, I figured that I would be the dumbest person at McGill and that everyone would know it; that I would have, like, a sign on my head or something — "dumbest person," you know. But no, it's not really like that . . . Like, I think a lot of other people were thinking that, too; that they were going to be the dumbest person at McGill. And, like, in the beginning, everyone was, like, wary of everyone else. Like, "Am I the dumbest person? Or is she the dumbest person? Is he the dumbest person?" And then, after a week or so, everyone just ceased to

> care. Just, "Oh, well, you know, we all must be smart people because we're here." . . . But, like, people were talking to me as if I weren't. So then, like, I would talk back to them as if I wasn't. And, like, now I'm starting to say, "Well, maybe I'm not the dumbest. Maybe I'm just dumb." You know? It's a little bit better now.

Ruth's comments suggest that, for many new students, anxiety about one's academic competence is as much related to issues of social standing as it is to actually being able to perform the academic work. In this regard, judgments about academic competence or intelligence are initial and superficial measures for relating to and connecting with other students. As interpersonal knowledge increases, the utility of these measures dissipates; as the general level of concern about such issues drops, there is an apparent corresponding increase in level of self-confidence. Being treated as competent and intelligent by other students thus served as a form of academic validation (Terenzini et al., 1996) for Ruth.

For other participants, a conscious recognition of their change in status was not immediate; rather, it slowly began to emerge over time. As it did, feelings of intimidation increased. Such was the case for Adam (U0 Arts), who commented:

> I don't know, I guess I haven't really adjusted to the fact that everyone here has marks just as good as mine. You know, back in high school, I was one of the top academic people . . . I wasn't really intimidated by anyone in high school. And here, I guess I haven't realized that everyone is my caliber or better, you know. So I just realized that last week. I said, you know, "My God." It just hit me: I mean, everyone probably had about the same average as me, or higher. I mean, I have to remember here that, you know, I'm not the smartest person in the world.

For Adam, this realization came about only after comparing his own performance in his courses during the initial weeks of the semester to that of his classmates. Gradually, he found that:

> Everyone was, you know, writing {notes}; everyone seemed to be getting the gist of what he {the professor} was saying. And I just wasn't getting it; you know, I wasn't there, mentally . . . (I)n History class, you know, we were just having oral discussions. And he asked people in the crowd — you know, asked people questions. And they were responding with the most intelligent answers. And I was blown away by their answers. And in the French class, you know, everyone's always answering before me. I'm just really intimidated because everybody seems so smart.

Interestingly, in acknowledging that he was beginning to feel intimidated by his classmates, Adam seemed to accept their apparently superior abilities as something he would just have to get used to. He remained relatively confident in his own abilities to maintain an adequate level of academic performance. As Adam put it, "It's not that I'm not really gonna get it; it's just that everyone's quicker than me."

In dealing with this change in status, the extent to which some participants felt intimidated by the academic abilities of their classmates in a given course or anxious about their own competence seemed to be influenced in part by the makeup of the student population in that course. Accustomed to being in classroom situations where everyone was at the same grade level or year of study, many of the participants now found themselves in classes with students from different years of study and diverse academic programs. This novel situation was most clearly articulated by Eva (U1 Arts):

> So many of the other people in the class are either older than you — meaning, like, they're 35, they have degrees in other subjects, and they're wanting to get one in English — or they're in 3rd year, and they're just taking a course because they have to, or whatever. You know? And the divisions are gone . . . In high school, you only took classes with people in your grade; CEGEP, it was only just two years. So, I mean, there's not much difference; you know, everyone's pretty on the same intellectual level. But here, it's gone; I mean, you're not in a little division anymore. You're suddenly thrown in with this mess of all kinds of people, all different levels of education. And you can feel, sometimes, pretty dumb in relation to what other people say.

Heterogeneous class populations such as that just described were much more likely to be experienced by Arts participants than by Science participants. In part, this was because many of the humanities and social science courses taken by Arts participants were commonly taken as electives by upper year students. In contrast, the vast majority of students taking basic science courses were in their first year of university. Differences in the degree of structure in academic programs in Arts and Science also play a role in shaping class populations. Students in Arts programs are afforded significant flexibility in choosing the sequence in which they take their required courses while those in Science

programs are more likely to find themselves having to take a greater number of specified courses in each successive year.

Issues of Similarity and Dissimilarity

With each successive week during this early part of the semester, participants gained an increased awareness of the extent to which they had characteristics in common with their classmates. Some, such as Ruth (U0 Science), found the realization that the majority of her classmates were also accustomed to being the "big fish" in their former academic environments to be quite beneficial:

> We're all practically, you know, similar. Like, before, in my high school, I was, like, the big over-achiever. But, like, when I come here, it's, like, everyone here was, like, an over-achiever in their high school. And everyone here was called, like, a "geek" or a "nerd" or something at some point in time. So, like, it's kinda good, because they're like me. I realize that they're more like me; they're not, like, superhuman brains. I find that good. And, well, that's different from what I expected, but it's a really good difference.

Other participants commented that they felt quite different from the majority of their classmates. For example, as a CEGEP entrant taking basic science courses, Sarah (U1 Science) found that:

> All the people in my courses are from out of town. I mean, they're nice people. Again, they're all in very little cliques from residence — whether it's their floor or, I don't know, however it works. And I do find that there is a difference of — I mean, I don't like to call it level of maturity; I really don't like that — but there is a difference in their characters, and my character . . . I mean, I don't look down on them. I just — I can't become a part of going and getting drunk for the first time, because I did that so many years ago . . . I mean, I'll be friendly in class, and whatever, but there's no real effort to try to get involved outside of school. And it's just because I don't share the same experiences that they do, and I'm not interested in sharing them.

In this instance, the **incongruence** (Tinto, 1993) between Sarah and the other members of these classroom social communities was rooted in differences in age and experiential background. Quite willing to be involved with her classmates on an academic level, she saw no value in pursuing social interactions. The fact that many of her classmates were

apparently preoccupied with life experiences she had already put behind her was simply a minor annoyance, not something Sarah felt would affect her academically.

Where Sarah was comparing herself to her classmates generally, Pierre (U1 Science), focused more specifically on his colleagues in the Honours Physics program:

> And the other thing that is not really something I expected from the university, but from the other students: I expected it will really be kind of a group and a team working together. For example, we are 25 in our Physics group, but it is not really a big team. This is more of a few small teams. Also, the Physics students are kind of — not really individuals, but they like to work in small groups . . . And there's a kind of competition between all the groups. And if someone knows something that the others don't, well, they will not necessarily tell the others . . . (T)he Engineering people, I think they are more . . . social. You know? In the Engineering building, they have a party something like every two weeks, or something like that, and they are all friends of each other. And you know they also like to do something else than actually study. But this is not really the same thing in Physics; you know, the students are there almost only for this, and they are studying 25 hours a day, and that is the only thing that seems to have some importance to them . . . I think that if I am not the only one, I am one of the few that feels different from the others and who needs to work everything and see peoples, you know, and have fun sometimes — not always be studying and working.

The incongruence experienced by Pierre was rooted in issues more profound than simple differences in age and experiential background. He was becoming increasingly aware of what he perceived to be significant differences in terms of the importance of nonacademic interests and preferred ways of interacting academically with other students. Pierre's perception of his colleagues was, in turn, creating a negative impression of the program's academic climate, of what it would mean to continue in Honours Physics. In discussing the links between incongruence and subsequent voluntary withdrawal, Tinto (1993, p. 52) indicates that it is typically manifested "in the individual's judgment that the institution's intellectual climate is unsuited or irrelevant, perhaps even contrary, to his/her own intellectual preferences."

Workload

Workload is a topic frequently examined in studies of first year students. In a study of the perceptions and experiences of first year students at another Canadian university, Holdaway and Kelloway (1987) found that, when surveyed midway through the second semester, the majority of respondents reported they were working "harder" or "much harder" at university than they had in high school. Similarly, Benjamin (1990) found that 96% of the participants in his study at another Canadian university rated themselves as experiencing difficulties in keeping up with the academic demands of their courses. While such findings indicate that the workload experienced by first year students is often greater than that to which they had been accustomed and also more demanding, they say "nothing about what having such a workload **means** or what it **feels** like" (Benjamin, 1990, p. 34).

Although participants in both Arts and Science described the amount of academic work as increasing somewhat over the first few weeks, they differed in their descriptions of the onset of academic work during the initial weeks of the semester. Generally, participants in Science conveyed a sense of almost immediate onset of academic work whereas the participants in Arts perceived a more gradual onset. Both Mark (U1 Arts) and Eva (U1 Arts) felt that, during the first couple of weeks, their professors had gradually eased students into the workload. Mark also observed that, during this initial period, professors regularly reminded students of what readings they had to do for the next class meeting. After a few weeks, these reminders began to disappear. For Susan (U0 Arts), the fact that there wasn't a great deal of work during the first few weeks afforded her the opportunity to become involved in extracurricular activities such as the drama club, activities that she felt essential to feeling more "at home" at McGill.

Participants' perceptions of their workload seemed to vary as a consequence of the combination of courses they were taking and the type of work they were being required to do. This is largely consistent with Benjamin's (1990, p. 38) finding that:

> (E)ach faculty member prepares their courses as if none others existed. This lack of coordination means that, across the body of freshmen, the cumulative workload involved in five courses is likely to vary tremendously.

It was quite clear that there were differences between the Arts and Science participants in terms of the type of work assigned. Where participants in Science found that many of their courses required the submission of regular lab reports and weekly assignments of problems in addition to reading the appropriate sections of their textbooks, the Arts participants found that the bulk of their academic work during the first part of the semester consisted of reading particular literary works or chapters in their textbooks. Given these disciplinary differences in the amount of "production" work required, it was perhaps not surprising that Adam (U0 Arts) and Susan (U0 Arts) felt that they had less work to do at university than they had in high school. As Adam explained it, this delayed the speed with which he was able to "get into the groove" academically:

> I guess I'm okay at the moment. I guess I'm finally on track. But it took me about two or three weeks at least — three weeks, at least — before I was really, you know, into the groove. And I'm really not into the groove now, but I'm doing a lot better. Because I find, you know, just where it's reading, I'm not really forced — like, most of the time, I don't have work to do all of the time. Grade 12, I was really, really busy. I mean, like, I had so much English homework in Grade 12 that I was always working. But here, like, you know, I guess there's so much free time that I've gotten so lazy; really lazy . . . I need to have a major test or something — you know, just to motivate myself to study for it. And I procrastinate a lot.

With these two exceptions, the participants seemed to feel that, in general, they now had much more work to do.

Many of the participants commented on their awareness of feeling different levels of interest in the different subject matter areas and how this affected the experience of doing their academic work. For example, Susan (U0 Arts) found that:

> Like, I'm happy when I'm studying English . . . I'm studying Psychology, and I think, "This is a bitch!" That's how I feel. And then Geology — like, everything else is fairly interesting. And French I think is a bitch. So, some things are a burden and some things aren't.

For Mark (U1 Arts), on the other hand, it wasn't so much the subject matter per se as it was a question of the nature of the readings. He found that, as the professors began to stop issuing reminders about reading assignments after the first couple of weeks, he sometimes found himself falling behind in his reading for one or more courses:

> I'm not sure, like, if it's whether I don't want to, or I'm not, like, reading enough, or whatever. Because I know... I mean, I know, like, I haven't sort of done everything I was supposed to. And that was partly my fault. But, like, I'm trying to think of why that is. Like, why something — another course, where I've sort of had to choose what I got to study tonight — it's like, why I won't choose this or this, and I'll take certain things to study over others . . . (L)ike, "Read Chaucer over the next couple of weeks," or something. It's like, "Okay. Fine." And you've gotta read this certain number of pages out of this book. You know? And you read whatever philosophy the guy had. Whereas, like, picking up a play, or, you know, a story, it's easier to do. Or even a section of, I don't know, that sort of book. It's easier to sort of remember to do. And easier to digest, I guess.

When sitting down to study at night and having to decide what reading to do, he sometimes found himself preferring certain courses over others or tending to forget to do the readings in some courses. This "readiness" to put things aside seemed to be particularly true for his History of Communications course, for which the readings were the most difficult. He found the reading materials in some of his courses more enjoyable or easier to digest than those in other courses. Mark found that it was much easier to remember reading assignments involving the enjoyable or easy-to-digest materials than those which were less enjoyable or more complex.

For other participants, the key influence on attitudes was the nature of the task itself rather than the subject matter. Consider, for example, the reaction of Adam (U0 Arts) to the amount of reading he was expected to do:

> Actually, I guess that's the hardest thing so far for me — the classes — because, for Arts, there's a lot of reading, and as I mentioned before, I'm not a real reader . . . One of the biggest adjustments, actually, since I've been here, is adjusting to all the reading for every subject. I don't know, that's all I'm doing, is reading all the time. Like, other people would, you know, they'd love to have my courses, to read all the time. But I hate it.

Some of the participants found the types of academic tasks required of them to be tedious and boring in addition to being extremely time-consuming. This was certainly the experience of Sarah (U1 Science) in preparing lab reports for her Physics course:

> Like writing lab reports — I spent all day yesterday doing this error analysis, where you take your experiment, and you have .1 error. But then you have to do this formula, and it's, like, this long {spreads hands apart}. And just to work out whether it was really point .01 or .02. And it's just — I mean, I spent hours doing this. And I was like, "Why am I doing this?" And I just gave up on it, "Forget it; I'd rather lose the marks, and not waste my time." I find it's just ridiculous.

Similar sentiments about the nature of the work required in preparing lab reports were expressed by Jason (U0 Science). When participants perceived the academic tasks assigned to them as not being meaningful, they found it all the more difficult to maintain the level of motivation necessary to complete such tasks in a timely fashion and to the best of their abilities.

Feedback on Comprehension and Performance

Research on first year students has found that **academic validation** is critical to the successful transition to university in that it allows students to feel a part of the learning community and provides confirmation that they are indeed capable of being successful university students (Terenzini et al., 1996). Academic validation can take a variety of forms, both formally through the products that students produce as part of their coursework (e.g., reports, tests and exams, papers) and informally (e.g., positive oral comments from instructors and classmates, being asked for help by other students). In essence, it is dependent on receiving meaningful positive feedback about one's knowledge, mastery, and performance.

The participants in this study, particularly those in Arts, received little if any such feedback on their comprehension of course content during the first five to six weeks of the semester. Participants in language, science and math courses with regular assignments or frequent tests were receiving some feedback, but that feedback was most

often in the form of an overall grade on the assignment or test, or an indication of whether a particular answer had been right or wrong. Good results did indeed serve to academically validate participants. For example, Ruth (U0 Science) found that she was doing very well on her weekly Calculus tests. She described these tests as:

> (F)ridge material . . . that you stick on your fridge because they're going pretty good. Well, like, they brighten my mood, usually . . . (Y)ou'll put (them) up there and you'll smile. And you'll go, "Ah. Maybe I'm not the stupidest person here, after all."

Generally, however, results on weekly tests and assignments did not provide students with any "diagnostic" feedback that would enable them to understand how they had gone wrong or misunderstood and what they could do to rectify the situation. Both Jason (U0 Science) and Ruth (U0 Science) indicated that they regularly sought assistance from other students in completing their assignments or in clarifying something the professor had said in the lecture and also provided such assistance. Such interactions thereby provided opportunities for giving and receiving academic validation.

With the exception of language courses, participants in humanities and social courses had no real opportunity during the first five to six weeks of the semester to demonstrate their comprehension and mastery of course material in a formal product such as a paper. Only informal forms of academic validation were therefore available. Unfortunately, as the earlier discussion of participants' classroom experiences suggests, the minimal opportunities for active student participation in lecture sessions restricted the likelihood of receiving feedback on one's comprehension or opinions. The Arts participants also suggested that there was very little discussion of course content outside of class. The primary forums, then, for potential academic validation were the conference sessions associated with some of their courses. Here, the likelihood of receiving meaningful feedback was a function of the student's willingness to speak up. As illustrated in the negative experiences that Eva (U1 Arts) had in one of her courses, opportunities for receiving informal academic validation were also determined by the manner in which individual TAs conduct their conferences. By and large, then,

participants' experiences during these initial weeks of the semester were consistent with Terenzini et al's (1996) finding that students rarely receive formal or product forms of academic validation until the semester is well underway.

Satisfaction with Courses and Instructors

Overall, participants were quite satisfied with their courses and instructors during the initial weeks of the semester. They were excited about being in university and exploring new areas of study. Many of the participants were particularly impressed by their professors' knowledge of the subject matter. For example, both Adam (U0 Arts) and Susan (U0 Arts) commented on the fact that their Psychology professor had co-authored the textbook for their course. While feeling that their professors were generally quite good, a number of participants indicated that the teaching ability of professors was not of the caliber they had experienced in their previous educational institutions.

All of the participants commented on the reduced opportunities for interaction with their classmates and instructors in the majority of lecture sessions, but they seemed to accept this as a reality of university studies to which they would just have to become accustomed. Interestingly, in explaining her hesitancy about asking questions during lectures, Ruth (U0 Science) seemed to perceive that the instructional activities of professors in basic science courses were controlled by the syllabus, almost as if they had no influence on shaping the syllabus. This same perception has been reported in other research on first year science students at McGill (Dickie & Kato, 1993). Even though students disliked the rapid pace of instruction and the limited opportunities for questions, they were reluctant to assign responsibility for these negative classroom features to the professor; rather, it was the fault of the syllabus.

Participants reported variation in course and instructor satisfaction levels within and between their individual courses. One influence on satisfaction levels was the participant's interest in and enjoyment of the subject matter. For example, Susan (U0 Arts) had a long history of involvement in music as both a student and a performer. Given

this extensive background, she found her Music course to be pretty basic; as she put it, "I pretty well know most of the music that she {the professor} ever plays." Nonetheless, Susan indicated that this was one of the courses she enjoyed the most and that she was still learning something about the different composers and musical eras. In the case of literature courses, there is some evidence that students' level of satisfaction with their courses at any given point in time was, in part, a function of their satisfaction with or enjoyment of the material they were currently studying. For example, the syllabus in the Survey of Literature course taken by Susan and Adam, in terms of the literary works being discussed, essentially paralleled that of the Survey of Literature course taken by Eva and Mark. Both courses began with an examination of 'Beowulf' and a sample of other Old English works. Three of these participants, Eva being the exception, expressed a degree of dislike for these works — in large part because of the difficulty of the language. They gave the impression that, at the time these works were being studied, this particular course was their least favorite.

When a participant had a strong dissatisfaction with an individual professor, it could influence their level of satisfaction with the entire course even when they were quite pleased with other aspects of the course. Such was the case with Susan (U0 Arts), who reported:

> My {Subject X} professor leaves a lot to be desired, too. And that really turned me off. I really don't enjoy that class. I like the material, I like the subject matter, but I'm really disappointed with that class because of the teacher. . . . He's very unenthused, and very monotonous, and he's unorganized. And I guess my other {high school} teacher was very passionate about, you know, what you were discussing. And now, like, we just — I don't know. He seems like a really nice guy, but he just can't teach. And he knows what he's talking about, but he can't convey it. It takes him a long time to say a sentence. He doesn't hold my attention.

In a similar vein, dissatisfaction with a TA could influence a participant's satisfaction with the conference or tutorial sessions for that course. As noted earlier, Eva (U1 Arts) had been feeling very frustrated with one particular TA, the way in which he conducted the conference sessions, and his apparent unwillingness or inability to respond to her

questions. She reported that this was her least favorite conference, even though she very much enjoyed the lectures.

Some participants reported different levels of satisfaction with particular aspects of their courses. One such aspect was the nature of the academic tasks students were required to perform and their perceived meaningfulness. For example, although Sarah (U1 Science) enjoyed the subject matter of her courses and found the lecture sessions interesting, she found the actual work (problem sets and lab reports) tedious and boring. Other participants were displeased by the absence of particular types of academic tasks, tasks which they had expected to be a feature of a particular course. For example, both Susan (U0 Arts) and Adam (U0 Arts) were very disappointed to find that their Survey of Literature course would not provide them with an opportunity to write a term paper.

Compensatory activities

Several of the participants found that their involvement in particular non-academic activities compensated in some way for conditions or types of experiences they found lacking in their courses. For example, Sarah (U1 Science) missed the opportunities to discuss material and argue personal points of view that she had so much enjoyed studying the social sciences in CEGEP and saw her friends still enjoying in their courses in the Faculty of Arts. Similarly, Susan (U0 Arts) felt that her courses did not provide her with a high degree of intellectual stimulation, at least during the initial weeks of the semester. Luckily, Sarah's part-time job and Susan's involvement in the debating club provided them with opportunities for sustained intellectual stimulation and personal engagement with both ideas and others in a way they were unable to obtain through their courses. In much the same fashion, Adam (U0 Arts) found that his involvement in gymnastics and the modern dance group encouraged creativity, self-expression, and risk-taking in a supportive and non-threatening environment — conditions which were lacking in his academic experiences.

Strangers in a Strange Land: The Frustrations of Not Knowing

Being told about or reading about what university is like is not the same thing as being a university student; having toured or visited the campus is not the same thing as having to function as a student on that campus. Thus, whether they had arrived from high school or from CEGEP, whether they had visited the campus before or not, whether they had very clear educational plans or were still undecided, these first year students were very much strangers in a strange land during the first weeks of the semester. Many of the participants indicated that a major source of anxiety or concern during the initial weeks of the semester was not knowing what was expected of them in terms of a variety of academic behaviors and tasks.

The greatest levels of discomfort were often associated with issues that faculty and returning students might consider obvious or inconsequential. As Eva (U1 Arts) observed:

> A lot of the things that have happened seem, to me, so small and trivial, that it's hard to know what you would consider important . . . Because, for me, you know, really, doing the work and that sort of thing isn't hard. But things like knowing where to return a book in the library, for me, is, "Oh God. Where am I going?" That's the kind of things that I panic over. You know? . . . (T)hose are the little kind of things that make me cringe and get all nervous . . . as opposed to, you know, the more general "getting the work done" problems . . . It keeps you from feeling really comfortable in where you are. And for me, if I don't feel comfortable in the place where I have to work, then work is just not gonna happen.

Some participants were taken aback by the complexities of trying to deal with the sheer size and decentralized nature of the university administration and support services. For example, Ruth (U0 Science) was initially quite frustrated as she found her self constantly being referred from one office to another in attempting to deal with administrative details:

> I've never really been referred. In high school, if I wanted something, if anybody needed something, you could just walk into the principal's office and say, "This is what I want." And he'd say "Yes," or "No," or "We'll try," or "Let's discuss it," or whatever it might have been. And, like, you've already gone to the top man. But here, the top man is — or woman, whatever — is so far up that you never, ever see him or her . . . It was like, "You need to go to that building." "Oh, we

> can't help you here." "You need a paper." "You need to sign this." Things like that. It was aggravating during my first couple of weeks here. Now, I'm getting kind of used to it; I know where to go.

Coming from a situation in which she not only knew where to go in order to accomplish something, but had access to the academic decision makers, Ruth now found herself in an environment where the functional responsibilities of various offices were not at all obvious and where she had much more limited access to the powers that be. This lack of knowledge of the new academic environment seemed to create a sense of powerlessness, albeit temporary, in Ruth and the other participants.

Having a specific professor assigned as one's academic advisor, as was the case for the U1 students, was often just one more potential source of initial uncertainty. This is illustrated in the following comment by Eva (U1 Arts:

> My advisor is a problem because I don't know what you're supposed to go see them for. You know? I went to see mine to ask how many courses I need to take in order, you know, to be eligible for a scholarship. Right? And he said, "Oh. You should have just gone to Dawson Hall." And I'm like, "Oh. Sorry. I'm sorry." Because there was a big lineup of people outside his office, and I felt like, "Ah, you idiot. Why did you do that?" Those are the kind of things that, you know, make me nervous . . . Do I go to my advisor? I mean, he is my advisor; I mean, his name is right there on my sheet. But on the other hand, does he really care? I mean, it seems like he has a lot more important things to deal with than a first year person.

While students knew that they had this person called an academic advisor, they had no knowledge of what his or her role was supposed to be. In Eva's case, this lack of knowledge created a hesitancy about "intruding" on the time of her advisor, a reluctance to bother him with her "unimportant" questions.

After several weeks of experience in the university environment, participants had developed a level of knowledge that permitted them to feel more comfortable in their new academic circumstances. However, because some academic activities and events occur only intermittently or at later points in the semester, acquiring the experiential base was an ongoing process. As Eva (U1 Arts) conveyed, this entailed a sense that one was constantly facing the unknown:

> At first, it was not knowing what they {professors} expected of you in a lecture, and not knowing what to expect of them. And now it's not knowing what to expect on the midterm. And then it's gonna be not knowing what to expect on the term paper. And then it's gonna be the final. So, you know, just when you feel settled about one thing, there's another thing that crops up on you, and makes you worry about that. So far, I haven't been able to feel perfectly comfortable for the whole year because I know that in a few months there's going to be something else that I'm gonna have to worry about. I guess next year, maybe it'll be easier. But so far this year, it's sort of hard.

The issue for many participants, then, was more one of determining "how to function" than "what has to be done." Information about formal course requirements was readily and rapidly conveyed during the first few classes: required readings, required meetings, number and nature of examinations or tests, number and nature of term papers or other projects that need to be completed, and so on. It was the more informal minutiae of every-day university life and the details of how to actually carry out academic tasks that participants found most troublesome. Snyder (1971) discusses this in terms of the need for students to develop an understanding of both the formal and hidden curricula. Padilla and his colleagues (1997) describe a similar phenomenon, the acquisition of the institution-specific "heuristic knowledge" that students will find necessary for academic success. Although students continue to develop this knowledge throughout their student careers, a significant proportion of it must be acquired fairly early on.

Establishing a Routine and Managing One's Time

In common with students at many other universities, the participants in this study had to operate within the time frame imposed by the semester system. An ethnographic study of the temporal orientations of first year students (Anderson & McClard, 1993, p. 168) summarizes what this means for students:

> The semester has a cycle of its own over which the student has little control. There is a beginning, a middle, and an end. Within this framework students have to choose, plan, and prioritize their activities . . . Many classes require that work be handed in regularly, whereas others require it sporadically. Usually, the most time-consuming assignments are due at the end of the semester . . . Assignment

> due dates and exams drive the time frame. This in turn is determined by which courses the students have chosen. Additionally, the students must juggle time and resource demands.

As noted in the earlier discussion of participants' experiences with their academic workload, the situation is made even more complex by almost total lack of coordination between courses in establishing what academic tasks will be required of students and when they will be due.

Against this backdrop, all of the participants had established some form of academic routine by mid-October. At certain times on particular days, they knew they had to be in a particular location on campus to attend class. They began to get a sense of what tasks or undertakings they could accomplish effectively in their various blocks of free time. Participants discovered where and when they were best able to do their academic work. This was not an overnight process; the establishment of such a routine took several weeks because just as the participants themselves were engaged in a process of settling down during the first few of weeks, so too were their courses. As Jason (U0 Science) observed:

> The classes were tentative because, you know, they had to adjust class sizes. People were dropping out. So it was a very volatile situation: people were coming and going; we were changing classrooms every now and then. And, you know, they were just establishing the tutorial sessions.

Many courses experienced fluctuation in enrollment during the first two weeks of the semester as students changed their minds about taking one course and possibly replacing it with another. Until course enrollments stabilized, it was difficult for professors to finalize decisions about the appropriateness of particular classroom locations and to establish tutorial or conference groups. Changes in class location and the start up of conference and tutorial sessions required modifications to the initial routine.

In the study of students' conceptions of learning (Donald & Denison, 1997b), respondents rated managing time effectively as one of the six characteristics they deemed most descriptive of the ideal student; at the same time, it was one of the four

characteristics they deemed least descriptive of themselves as students. In one way or another, many of the participants in this dissertation research indicated that balancing the various demands on their time was one of the most troublesome challenges to arise after the first week of classes. For example, Mark (U1 Arts) observed:

> There's not enough, like, hours in the day, or days in the week, to get everything in that you need to. You know, I find if I did, I'd have to cut certain things out. And, like, I don't want to do that. So I'm gonna have to suffer. I don't know what's going to suffer — like, my own sort of personal hobbies, or whatever, my relationships, or my school work.

A key feature of the time management problem was the realization that the time required to accomplish all of the things they wanted to do far exceeded the amount of time actually available to them. Participants recognized that this would be an on-going concern that entailed continuously having to make decisions or judgment calls about priorities, the time required to accomplish particular tasks or activities, and where they could fit it in to their weekly schedule.

Balancing the various academic and personal demands and managing one's time effectively was often complicated by gaps in knowledge. Some participants found themselves hampered by the absence of a basis for judging the amount of time particular academic tasks would require. This was particularly true for Arts participants with courses involving term papers due later in the semester. For example, Eva (U1 Arts) found herself wondering:

> (S)hould I be starting them now, even though they're due in, like, six weeks? Or should I, you know, relax a bit, and give myself some breathing room, and then start them in three weeks. I mean, I can do them then. You know, it's hard to — that's something that's hard to know. Yeah, the university term paper fear. It's hard to know exactly how much time to give it because I don't exactly know what they expect.

Never having attempted some of these common yet infrequent academic tasks at the university level, participants lacked the experience necessary for accurately estimating how much time they would require.

Others attributed gaps in knowledge to the way in which their courses were designed. For instance, Pierre (U1 Science) felt frustrated because his various course syllabi provided what he perceived as insufficient information about when particular material would be covered and so on. As he related it:

> Actually, the courses are set in a way that is not bad, but the thing is that we do not know, for instance, what we are going to do in the book, or if we are going to skip some chapters. So. You have to be in class to know all those little things, so you can't afford to skip a class sometime and just read by yourself and see the same thing that you will see in the class. So. This is the only thing that I do not like, and that is we do not know where we are going until the teacher tells us, and he usually does it a bit on every class. And the thing that I would like is that, as far as it is possible, I would like to have an outline or something like that on the first day that is telling us we are going to see this, and this week you will have to hand in an assignment in, and the numbers that you will have to do are these ones, and in such a way that you know what you will be doing for the next two or three months.

For Pierre, having information about upcoming tasks doled out incrementally on a class-by-class basis restricted his ability to plan ahead.

As the pace of work began to pick up, seemingly with each succeeding week, many found the challenges of effective time management becoming increasingly difficult. This was certainly true for Eva (U1 Arts), who reported that:

> (O)ne of the things that has gotten worse, I think, is trying to balance time at home. And not at home, just in my house, but outside of school — like on weekends and that sort of thing. I feel like I'm spreading myself too thin, you know, trying to spend a lot of time at school work, but also with my family, my boyfriend, and my other friends. And myself — personal time, which is now nonexistent. I just don't have any at all. I find that's gotten harder. But I guess that comes with being an overpreparer, a perfectionist type — trying to throw myself into my work, but not leaving enough time for everything else. And I still haven't gotten a handle on being able to do that yet. You know, that's really — it's second guessing myself on what I should be doing, and how much I need to do, and how much I've already done. I find that's gotten harder since the beginning. At the beginning, I was feeling comfortable; you know, "Oh, this isn't so bad. I can do this." And now that I find myself really throwing myself into it, I'm finding it hard to maintain a balance in everything in my life.

As Eva's case illustrates, the challenges of dealing with an increasing academic workload were often all the more difficult for participants with strong external non-academic commitments.

As the participants in this study described it, the world of the first year student involves a seemingly ever-changing set of academic demands which must be met within finite resources of available time. The inherent fluctuations of this existence are echoed in Anderson and McClard's (1993, p. 171) finding that:

> Students . . . lived in a present-oriented world, like the pioneers of old — facing unknown hardships each day that seemed to emerge from no place . . . Is every moment a crisis time, a time when students need help? No. Students are, in many ways, much more like farmers in their time orientation than . . . 9-to-5 workers . . . The farmer, like the student, sometimes has to work from dawn until dusk, and at other times hardly at all. His clock, like the student's clock, depends on tasks that have to be done. Crises often hit farmers all at once, and so too for students; they are barraged at times with crises — papers, exams, and so forth.

Reappraising Initial Decisions and Perceptions

At various points during the first five to six weeks of the semester, a number of the participants found themselves reconsidering or having doubts about some of their initial academic decisions in light of their early experiences. Two of the participants dropped a course, thereby modifying their academic contexts. The first to do so was Eva (U1 Arts) who reported dropping one of her four English courses, a course which she never specifically identified, early in the semester:

> I started out with five; and I dropped one, because it was just — it was overwhelming. I mean, I could have done it easily and, you know, read everything, and got good marks in it. But I wouldn't have had the freedom to read around it. And I was just... I found I was just reading. "Okay. Read two hours of this. Okay, put it away. Okay, read two hours of this. Okay, now put that away." And I wasn't having time to think about everything. So I dropped one, and took four instead, because I think it's important to really get the most out of it that you can, rather than just, "Okay. Do my 3 years and get out."

Eva's reasons for dropping the course had nothing to do with disliking it or feeling that she couldn't do the work. Rather, she reduced her course load in order to ensure that she could devote the maximum amount of time and energy possible to her other English courses. For her, simply meeting the minimum necessary conditions for academic success in her primary courses was not acceptable.

During the sixth week of classes, Sarah (U1 Science) met with an academic advisor and discovered that she did not really require the Linear Algebra course she had been taking on Tuesdays and Thursdays. This was welcome news to Sarah whose situation was somewhat more complicated than that of the other participants in that she was essentially a novice at "doing science":

> So I dropped that. So I'm very happy with that. I hated that course so much; that was tedious. So now I'm down to three courses. So it's not too bad; it's a manageable workload. It's still quite a bit. I don't know; I'm just trying to feel my way through it.

Beyond the reduced course load, dropping the Linear Algebra course also resulted in an alteration to her weekly schedule. No longer having to worry about a class on Tuesday, Sarah was now free to drive out of the city on Monday afternoons to her family's cottage, returning the following afternoon in time for her part-time job. This afforded her a solid block of time which she could spend working on her various assignments in what she found was a more comfortable and productive environment than her room at home. In addition, the absence of the Thursday class meeting meant that she was no longer feeling quite as rushed.

In contrast to these relatively simple or basic decisions about individual courses, other participants were addressing more profound decisions about program of study and choice of institution. For example, one month into the semester, Mark was having second thoughts about whether he was doing the right thing in pursuing academic university studies at McGill rather than pursuing applied studies at a technically oriented postsecondary institution:

> I'm not sure if I'm doing the right thing going here, or if I should be going to some technical institute. But then there's stuff that I don't know . . . (I)t's like being able to play along with Jeopardy {the television game show} kind of thing . . . I like knowing stuff. And not that I'm the most motivated student. And, like, I know this. And I'm not going to get the best marks. But I know this. But it doesn't mean that I don't want to go to university, and I don't want to learn, and whatever. I don't know, it's like I'm just trying to — I'm sort of dabbling. You know? It's like, if I knew I wanted to be an English teacher, you know, sort of dive in and, you know, spend all my afternoons in the library. But I'm not prepared to sort of do that. I'm not sure if it's because, you know, even if I did that, I'd finish or whatever — "But I don't want to do this; what am I doing?" You know? It's just because I sort of have these ideas about what I'm more interested in, but I'm not sure.

This was not a case, then, of Mark finding his academic experiences uninteresting or unrewarding; rather it was more a function of still having unclear educational and vocational goals. Although he was enjoying this "dabbling," Mark was aware that his uncertainty was creating a degree of hesitancy that inhibited his engagement or involvement (Astin, 1984; Willis, 1993) in his studies. This is consistent with research linking goal clarity with quality of effort and subsequent outcomes (Kaufman & Creamer, 1991; Volet, 1997). Insofar as Mark was giving some thought to the idea of transferring to another university, it is also illustrative of the potential effects of low goal commitment on subsequent institutional commitment (Tinto, 1993). The question of whether or not to transfer to a more technically or professionally oriented institution would stay with Mark into his second semester.

Susan (U0 Arts) was another participant who, during these early weeks, had seriously considered the idea of transferring to another university. Even though all of her experiences had been more or less positive, Susan's first month at McGill had been very much colored by a sense of loss at being separated from her boyfriend. She described her emotional state during this period as constantly fluctuating:

> Sometimes I've been really depressed, sometimes I've been really happy. Though mostly, if there's a medium, I'm mostly to the depression side of the medium.

In addition to the personal sense of loss, Susan also indicated that she had been so accustomed to the presence of her boyfriend in past social interactions that his absence sometimes left her feeling unsure about how to interact with her new peers. Consequently, she had been thinking about transferring to a university at home after Christmas so that she and her boyfriend could be together. It was not until the fifth week of the semester that Susan finally decided against undertaking such a transfer. With the passage of time, Susan found herself enjoying her new friendships and the activities available to her on campus and in the surrounding city. During this same period, she reported being often frustrated and distressed with her boyfriend's apparent disinterest in maintaining regular and frequent communication. In coming to a conclusion that this long distance relationship would have to be put on hold or terminated, the idea of transferring to another university no longer seemed worthwhile. Susan's experiences represent what Tinto (1993) would term initial difficulties in successfully resolving the separation stage in his longitudinal model of voluntary student attrition. During the early weeks of the semester, the strength of Susan's continuing connection to her boyfriend interfered with her attempts at establishing social integration. In turn, this attenuated the level of her institutional commitment. As the level of Susan's social integration increased and as she began to psychologically separate herself from the relationship with her boyfriend, her level of institutional commitment increased.

Adam (U0 Arts) had also been considering the idea of transferring after Christmas to a university at home. Frequently feeling lost in one or more of his courses, finding it difficult to get work done in residence on the weekends because of social distractions, Adam was also finding the big city atmosphere of Montreal rather uncomfortable in contrast to the small size of his home town. He found his level of satisfaction with being a student at McGill fluctuating from one day to the next:

> One day, it's been a great day, and I'm saying, "Oh, wow. I just love it here." And the next day, I want to go home. "I hate it here."

Particularly on more negative days, Adam was thinking that transferring to a university back in the Maritime Provinces would be beneficial in several ways:

> I don't know, I just like the small town atmosphere better. Or a smaller city . . . And the fact that — I don't know, it's just, on the weekends, like, I really want to get work done, but my friends are distracting me. And, like, if I was back in {home province}, I would go home on the weekends. So I'd get — I'd be more on top of my work if I was at home. And I could talk to my parents more. Stuff like that.

Thus, Adam's level of institutional commitment was being negatively influenced by a combination of academic and social factors. In terms of Tinto's (1993) model, it could be argued that Adam was experiencing difficulties in successfully resolving the separation stage and simultaneously experiencing problems in achieving the necessary level of academic integration. His ambivalence about the merits of remaining at McGill would remain until the middle of the semester.

After a month or so of classes, Ruth (U0 Science) was happy with her decision to attend McGill but was beginning to have second thoughts about whether she should stay in the sciences:

> But, now that I'm here, it's a little more iffy because I'm doing science and I'm not too happy with it right at this moment. Chemistry — I really enjoy chemistry. And calculus is fine. Algebra is fine. But I'm seeing more — I'm living right next door to the Music building and I hear it every day. And I see Music students running around. And, you know, people painting in the streets and things like that. More and more, I'm getting sort of pulled over to that area. And, I really don't know — it's more than likely that I'm going to stay in science, but I don't know. Sometimes, I wonder.

Where Adam had been experiencing academic difficulties in some of his courses, Ruth was doing quite well academically. For her, the problem was one of what could be termed goal conflict. Although Ruth had arrived at McGill with a strong commitment to pursuing a science degree, she also had well-developed and strongly held interests in the creative and performing arts. Ruth was now finding that the academic demands of her courses were preventing her from acting upon and satisfying those artistic interests (e.g., taking an active part in the Players Theatre, attending concerts, etc.). This inability to adequately satisfy an important element of her sense of self because of the nature of her academic

program was having an effect on Ruth's commitment (Tinto, 1993) to the goal of completing a science degree.

The most extensive reconsideration of initial academic decisions was undertaken by Pierre (U1 Science). By the time of our first interview in mid-October, Pierre had come to the conclusion that a Mechanical Engineering program was more suited to his interests and preferences than was the Honours Physics program in which he was currently registered. Part of Pierre's dissatisfaction lay in a perception that there was little room in the structure of the program to satisfy his preference for "self-learning." More salient for him, however, was a distinct sense of not being like the other students in his program and not wanting to become like them. He perceived them as being insufficiently cooperative, overly competitive, and narrowly obsessed with academics. In contrast, he liked what he saw of the regular social and intramural athletic activities of students in Engineering. Academically, Pierre also saw Engineering students as being much more collaborative in pursuing their studies. In addition, he was becoming more convinced that, compared to a Physics degree, an Engineering degree would afford him greater opportunity and flexibility in educational and employment options upon graduation. As far as he was concerned, Pierre had seen and experienced enough during the initial weeks of the semester to decide that he would seek to transfer into an Engineering program for the winter semester. Still quite willing to remain at McGill at this point, Pierre was also giving serious thought to the École Polytechnique. In the terminology of Tinto's (1993) model, Pierre's lack of interest in closer association with his peers in the Honours Physics Program illustrates a low level of social integration. This contributed to a decrease in goal commitment as far as pursuing a Physics program was concerned. To the extent that he was again considering another university, Pierre was also manifesting a low level of institutional commitment to McGill.

Mid-Semester

Through the middle portion of the semester, participants' academic lives were shaped, in large part, by the need to prepare for and write midterm examinations. As these were concluded, participants had to refocus their efforts on regular coursework.

Midterm Examinations

Anticipation and Anxiety: The Lead-up to Midterms

The imminent arrival of their first midterm caused many of the participants to realize just how quickly the first five or six weeks of the semester had passed. As Mark (U1 Arts) expressed it:

> Where did the time go? That about sums it up. . . All of a sudden, yeah, midterms. That's the only thing. But, I mean, that happens all the time. Except the only big difference between, like, I mean, CEGEP and university and high school is that, in high school, you're, "It's only October? Aww!" And in CEGEP, it's sort of halfway. And here, I'm like, "Okay, God, please can we wind the clock back a little bit? I need some more time to go over that."

Mark's reactions as a university student to reaching this point in the academic year were more profound than his reactions to similar points in time as either a high school or CEGEP student. Not only did the time seem to have flown by, but he, like the other participants, found himself responsible for learning a greater amount of material within a specified period of time than had been the case in earlier stages of his educational career.

Many participants also perceived that the pace of instruction had been increasing as the semester progressed. In retrospect, several participants, including Eva (U1 Arts), felt that the gradual onset of academic work they experienced during the first two weeks of classes had, in fact, lulled them into a false sense of security about how difficult it would be to keep up with one's work. Some participants were now finding that the pace of instruction was exceeding their ability to master the material. One such participant was Jason (U0 Science), who observed:

> (T)he rate at which these lectures are progressing, it's geometric; the way my absorption of all the materials, is arithmetic. So the sequence is off, and I always have a backlog of work and readings.

Jason reported that the effort he was expending on his work did not seem to pay off. When he spent extra time trying to ensure that he understand the course material well, he fell behind in his assignments; when he tried to keep on top of his assignments, his mastery of the material lagged and the quality of his work suffered, as did his results on those assignments. In addition to the pressure of keeping up with work that some participants were beginning to find stressful, nearly all of the participants were experiencing a growing sense of fatigue. For some, this was a consequence of the stresses of university study and constantly having to balance the multitude of demands on their time. For others, particularly those living in residence, changing sleep patterns were a contributing factor.

In the days immediately preceding their first midterm examinations, many of the participants reported feeling anxious about this upcoming challenge. Faculty members were not unaware of student anxieties. A number of the participants described various ways in which the instructors in their courses intentionally tried to prepare students for the midterm exams. More frequently cited practices included the provision of information about the format of the exam, providing or making available copies of past exams, and holding "practice tests" during conferences. In several courses, professors provided students with a list of potential essay questions, indicating that a subset of these would actually appear on the exam. Helpful as such faculty efforts were, they did not allay participants' concerns.

Some participants took the time to raise questions about course content with their professors or TAs. One such participant was Eva (U1 Arts); she arranged to meet with her Canadian Literature professor in order to clarify several areas of uncertainty and to discuss the poor relationship with her TA. Not knowing what to expect from this meeting, Eva felt anxious about it. Consequently, she wrote down all of the questions and points she wished to raise. The actual encounter was surprisingly pleasant:

> When I went, he was so nice; he was very helpful. And I was in there for an hour with him — which was a long time, because he always has a string of people outside his office. And I said, "You know, if I'm keeping you from something?" He goes, "Oh, no. We made an appointment; that's the most important thing. And I was surprised; you know, I felt, "Oh! Okay!" You know, it made me feel like I was doing the right thing; I wasn't intruding upon his space and all that sort of thing. So that was good, too. And when I asked him my things, he seemed very — he encouraged me to keep coming to him and asking things. Which, you know, was a great help to me because I had been afraid to go and see him in the first place. And he said that my preparation and everything was excellent. He seemed, you know, impressed with the amount of work that I had done to prepare for this . . . meeting with him. Which made me feel very good about myself. And he goes, "Well, you're very prepared for this midterm."

Eva's experience in this meeting with her professor was so satisfying, and the academic validation it provided was so strong, that she would later cite this as one of the most positive experiences of the entire semester.

One source of anxiety for some of the participants was uncertainty about what they were supposed to have learned. For example, Mark (U1 Arts) indicated:

> I find I'm having trouble now, like, sort of feeling prepared. And I'm having midterm anxiety. And there's this thing where there's no one thing that tells me exactly what I have to know. And I have it five times over. So it's like a lot of unknowns. So it's like, know everything you've been taught — and then some — for every course, and then be able to access that information when you're asked it on the midterm; like, what you need, and the examples that you should give, and whatever. And I'm just like a rag.

Given the amount of material that had been covered in their courses thus far, uncertainties about the learning task were understandable. Compounding the situation, many participants reported that a number of their professors never made clear distinctions during lectures between what was important and what was peripheral. The lecture experience thus far, for some participants, had been one of being on the receiving end of a massive download of raw, undifferentiated information.

Awareness of the exam format did not always alleviate participants' concerns. Some participants, for example, had doubts about how well particular types of questions would provide a true measure of what they had learned. For others, past experience with

particular types of questions that they knew would be on the exam contributed to anxiety about their level of preparedness. Ruth (U0 Science), for example, was concerned about the multiple-choice format of her upcoming Chemistry exam:

> I don't really know what to expect on Wednesday; that's what I'm worried about . . . I have seen a copy of what the test is like, so I know it's multiple-choice. And I know it's very challenging, easy questions building to harder and harder questions. Generally, I don't like multiple-choice because it's all, like, either you know it or you don't. Like, if by accident you substitute the wrong number in a certain part of the equation, all of a sudden it's going to be wrong. But, whereas, in a long answer, at least you can be partially right; even if, like, you have a general idea of what's happening, you can get marks on it. I don't know; it's so cut and dried . . . I don't know if I'm going to like it or not. I have, like, a horror of not being prepared or anything. Even though I've been working hard, I'm afraid that I haven't prepared enough.

For all of the participants, midterm exams represented the first significant testing situation at McGill. Even though many of them had a good sense of what the format of the exams would be like and what types of questions they could expect, they had not as yet actually experienced writing a university-level examination. The heightened anxiety associated with participants' awareness of this "lack of experience" would continue until the first midterm had been written. Once this milestone was behind them, regardless of how well the exam had gone, many participants reported feeling more confident in dealing with subsequent midterm exams; they were no longer dealing with a complete unknown.

Engagement: Preparing for and Writing the Midterms

There was considerable variability in the "exam load" with which participants had to cope, the number of midterms being determined by the number of courses they were taking and which courses those were. Not all of the courses taken by individual participants had midterm exams. For example, the Calculus course taken by Ruth (U0 Science) and Sarah (U1 Science) had weekly quizzes instead of a midterm; others, such as the German course taken by Eva (U1 Arts) and the French course taken by Susan (U0 Arts) and Adam (U0 Arts) had "major tests" at intervals throughout the semester. On the other hand, some courses had, from the student perspective, two midterm exams, one in

mid-October and one in mid-November. Such was the case with the Organic Chemistry course taken by Jason (U0 Science) and the General Chemistry course taken by Ruth (U0 Science) and Sarah (U1 Science). Thus, participants differed not only in the number of midterm exams with which they had to deal but also in the duration of the midterm exam period. For some, midterm exams were completed within the space of two weeks; for others, midterms were spaced out over as much as four weeks. One participant, Pierre (U1 Science), expressed the view that there could be better planning and coordination between professors when it came to scheduling midterms. Comparing his own situation with that of a friend at another university in Quebec, Pierre felt that even building in a study week without any classes just before midterms would have been a significant improvement.

Participants used a variety of strategies to prepare for midterm exams. Several reported that they selected locations for studying different from those used for "routine" academic work; for example, making increased use of campus libraries as a means of avoiding the distractions they regularly encountered when working in their rooms at home or in residence. Others spoke of becoming more assertive or posting signs in order to minimize interruptions by other students or family members. In terms of the study strategies used, many of the participants seemed to rely primarily on those they had used in their previous educational institution. They allocated effort and time resources in studying for their midterms based on the perceived difficulty of the particular course, their level of comfort about their mastery of the material on which they would be tested, and how much value they assigned to the course. Some students indicated that previous exposure to the subject matter afforded them a degree of comfort. For example, when it came to preparing for midterms, Eva's (U1 Arts) existing familiarity with the literary works in her Survey of Literature course enabled her to reduce the amount of study time she needed to dedicate to this course and allocate it to her other literature courses. Sarah (U0 Arts) did much the same thing with her Geology exam, as much of the material in the course was similar to what she had studied in high school the previous year.

Several participants commented on the fact that they found themselves having to mentally "switch gears" as they moved from one exam to the next. For some, this need arose when dealing with a course that involved subject matter that was very different from most of what they were studying. Accustomed to studying humanities and social science subject matter, Mark (U1 Arts) reported that studying for his Geology midterm was a very different experience than studying for his English courses. He found himself:

> (J)ust going through my notes and picking out important-looking words, and looking them up in the index of my textbook, and reading the sections around them. And I just kept doing that. I didn't really have, like, a study system; I was just, like, rote learning almost. So it wasn't, like, the best way to do it.

For others, the need to "switch gears" was more a function of perceived differences in the type of learning required. For example, Jason (U0 Science) found that his Biology and Organic Chemistry courses required what was essentially memorization whereas his Physics and Calculus required much more emphasis on practice in solving problems.

Several of the participants reported that studying for particular midterms had been a meaningful experience. For example, Sarah (U1 Science) commented on the experience of preparing for her Physics midterm:

> At first, I thought I'd be totally lost and not interested in it at all. But once I started to grasp the concepts of it, I found myself very interested in it. I'd be driving up north and, you know, I'd go around a curve, and I'd be trying to figure out what the angle of the banking was. I mean, just things like that, which were the problems that we were studying, with the friction between the tires and all these things. And I found myself looking at the physical world and trying to, you know, analyze it. And I enjoyed it.

Not only did Sarah find her level of interest and enjoyment increasing with the recognition that she did indeed understand the concepts in the course, she also found herself applying those concepts to the world around her. For Adam (U0 Arts), it was preparing for the essay questions on his English midterm that proved meaningful:

> It was the first time this year that I actually had to do, like, a thesis paper where, well, you know, I really had to think about something . . . Like, I really had to prepare for that well, so I really put deep thought into my essays.

This was Adam's first experience of sustained intellectual engagement with the academic content of his course. In contrast to the passive reception of information that characterized his classroom experience, he now had to think about and work with the course content.

Many of the participants described the process of preparing for and writing the exams as having thrown their academic routines into disarray. In order to concentrate on preparing for a midterm in one course, they put off or paid less attention to the weekly reading or assignments in their other courses. As the next exam approached, the process was repeated. For example, in the week immediately preceding our second interview, Sarah (U1 Science) had her Physics midterm. As she described it:

> Everything revolved around that. I just studied, like, five days in a row, 24 hours a day. So my classes were — I mean, I went to most of them, but I didn't really focus on any of my classes or get any work done for the past two weeks other than Physics.

As a consequence, many participants found themselves falling behind. Several also reported that, during this period, they either reduced the extent of their participation in or gave up entirely many of their regular social and leisure activities. The magnitude and duration of this disruption in routine varied from one participant to the next, and was largely determined by the magnitude of their exam load and the duration of their exam period.

Reactions to the Exams and Exam Results

By and large, participants found their midterm exams quite challenging. Some, such as Eva (U1 Arts), found that they had over-prepared for certain exams; they had so much information in their heads that they found it difficult to select what was most important to include in their answers. Others, such as Jason (U0 Science), found that they had erred in judging what they should concentrate on in their preparation; topics on which they spent a lot of time were not addressed, while other topics which they had given less attention constituted significant aspects of the exam.

While they were generally satisfied with the midterms as testing situations, participants did identify several negative features. A number of participants from both Arts and Science commented that the amount of time in which they had to complete the exam was barely adequate given either the number of questions on the exam or the level of difficulty involved in answering those questions. Some negative exam experiences were unique to Science participants. For example, several were displeased with having to write their exams outside of regular class or tutorial periods. Others perceived noticeable differences between what they had been doing in their weekly assignments thus far and what they found on the exams; it was as if the exam questions required an entirely new set of academic competencies.

Most of the participants passed all of their exams, and many were quite pleased with the grades they received. For some, doing well on their midterms generally or on a particular exam was a significant form of academic validation; here was proof that they were competent university students. This was certainly the case for Adam (U0 Arts), particularly in relation to the results of his English exam:

> And that's why I was really happy that, on the exam, that — wow, you know, I actually fit in here, in the English class. I can actually keep up with other people; you know, with the thinking in the class. So, so far, so good. My goals at the beginning were just to make "B's." You know, that was my goal. And I've been achieving them, so I'm happy with that.

Some participants, however, did not perform as well as they had hoped or found themselves having to deal with their first significant experience of failure. Following a disappointing experience on his Organic Chemistry midterm, Jason (U0 Science) found himself with a failing grade on his Calculus midterm. After receiving these results, Jason described the rest of that day and the next as being pretty much of a blur:

> It's hard because, like I said, it's this big shock, and you go into a state of denial because you don't want to think about it. You know, it's just so much pain, so much frustration, so much stress. You've got to try and think clearly, but it's hard because your mind is so cluttered with emotions.

Reactions to poor performance or failure on midterm exams were shaped, in part, by the meaning of the course for the student involved. For example, Ruth (U0 Science) received a failing grade on the second of the two midterms in her Chemistry course:

> That was devastating. Because I wanted it to be my major. I was looking towards Chemistry as being my major. And, well, it's very devastating when you fail this test, you know. It would have been, I think, okay if it would have been, like, Physics — which is beyond me anyway, and I don't really like, and I don't want... I didn't want to have taken. But. Well, Algebra and Calculus, I suppose, if I had failed a test there, it could have been, like, chalked up to, you know, I computed wrong, or I didn't have my calculator with me, or whatever . . . Chemistry was always my strong point, and so that makes it all the worse.

Having passed all of her midterm examinations thus far, Ruth's failure on this final midterm in mid-November came as a real surprise. In contrast, Sarah (U1 Science) had done quite poorly on her Physics midterm and yet remained quite positive:

> I didn't let the exam discourage me, and I'm not going to — not even when I see the marks. As far as the other courses, I haven't really paid that much attention to them to really have them influence me all that much. I don't know if I'll want to stay in Physics, but at least I know I could; if I need any more prerequisites, I could get through them . . . Like I said, my attitude towards the exam was more if I understood the concepts, as opposed to just being able to get through the exam, knowing what I have to know. And so, with that, I did understand them, and that made me enjoy them.

Regardless of her performance on the exam, Sarah was satisfied with her comprehension of the concepts in her Physics course. As a consequence, she was feeling more comfortable about her ability to do sciences.

Getting Back to Work

With midterm exams essentially now behind them, participants found themselves having to play catch up on the backlog of regular work that had accumulated while they concentrated on studying for exams. At the same time, they had to deal with their current work. For those in Science, this entailed a refocusing on regular assignments. For those in Arts, however, term papers now became a much more salient issue. This was particularly

true for Eva (U1 Arts) and Mark (U1 Arts), both of whom had several courses requiring term papers. Earlier feelings of anxiety associated with having classmates who were more seasoned university students now resurfaced for some of these participants. Such was the case for Eva (U1 Arts) as she began working on term papers in her various English courses in late October and early November:

> Other people will ask questions, and you'll be like, "Oh my God. If they write their paper like that, and if they mark on a curve, I'm dead." Because there's no way that me, being a first year student, that I can think of things like that — I just can't — because I haven't gone through the kinds of things that they have; I just haven't been exposed to that way of thinking. And I think, "If they compare those people's essays to mine, you know, that's it." But, I mean, I don't know if they do that when they're marking. But still, it makes you afraid to get started because you think, "Geez, first, I gotta think of a really hefty intellectual angle on this," when you really just want to talk about something simple, that's interesting. It's hard, you know, to know whether to keep to your own level, and keep to your own, "Well, this is where I am now, and this is what I'm gonna do." Or trying to be what the other people are, because you're afraid of being low down.

Pierre (U1 Science) had a unique set of additional tasks. Having reached the decision that he wanted to transfer out of the Honours Physics program into an Engineering program, Pierre had to make some decisions about which Engineering programs he should apply to and at which universities. Even from a much earlier point in the semester, he had been thinking that mechanical engineering was the most appropriate area in which to specialize. With this in mind, he had also been considering both McGill and the École Polytechnique. By late October, Pierre confirmed these preliminary choices. In early November, he submitted his application forms to both universities in the belief that one program would accept him even if the other did not.

As they began to return to "normal" academic life following the midterms, a number of participants commented on changes that had or were occurring in their study and work habits. Some simply felt less motivated than they had been. For example, Susan (U0 Arts) observed:

> I'm noticing, you know, everyone else isn't studying, and I'm probably not quite as serious anymore. Because, like, I'm wondering why I'm trying to get "A's"

> because you don't really need them. I guess you do, for Honours, but you can go through university just getting, well, you know, "C's" and just passing everything.

Susan also found that her changing level of interest in particular courses was contributing to changes in the degree of effort she expended. Most, however, were reacting to the sheer amount of work they had to do. Some participants decided they would simply have to put more effort into keeping up with their work. For example, Adam (U0 Arts) had not really enjoyed the experience of recent weeks. As he put it when talking about how he would approach his work during the rest of the semester:

> Just from cramming — like, just doing a lot of work really quickly — I really wanted to keep up with my work after that. Because I don't want to be staying up late and doing this. And being forced to think, you know, right before the exam is so hard . . . I just don't want to be in that situation again, so I'm just working more.

Other participants reached the conclusion that they would have to change the manner in which they organized their academic work. Reflecting on recent experiences, Sarah (U1 Science) commented:

> I find that I've always kind of left things to the weekend and said, "Okay, on the weekend. Oh, yeah, I've got all this time. I can get it all done. But I find I'm so exhausted by the weekend that I'm just like, "Oh, forget it. I deserve to relax." So what I've decided is that it's more realistic for me to focus on getting one thing done every day. So, like, tonight, I'm getting my lab done. Tomorrow, I have something specific I'm going to get done. And I've spread things out so that it's more realistic for me to think of getting one thing done as opposed to my whole workload.

Sarah felt that such a reorganization of her work schedule would also allow her to reincorporate into her routine some of the leisure activities (e.g., working out at the gym) she had been neglecting during exams.

Reappraising the Situation

By the end of October, several of the participants reported that their attitudes toward particular courses or aspects of courses had changed. In some cases, these changes

were for the better. For example, Susan (U0 Arts) reported a significant change in her attitude toward her English course. Initially, she had been extremely disappointed with the course because she perceived the professor as being unable to clearly communicate his ideas. Susan was now feeling very positive about the course. She found the literary works being covered at this point in the semester much more enjoyable than those at the beginning of the course. Her attitudes toward the professor had also changed. As she became increasingly accustomed to classroom realities and to the professor's style and mannerisms, Susan found that she was better able to appreciate what he was trying to do. A better understanding of the circumstances in which an instructor was working also proved a key factor in changing the perceptions of Eva (U1 Arts) about a TA with whom she had been very dissatisfied (this was discussed earlier in the chapter in relation to early classroom experiences). During a meeting with the professor for this course, she was surprised to learn that, in English at least, TAs were often not specializing in the material being covered in that course and were therefore sometimes only slightly more knowledgeable than the students themselves. Eva found that this new insight enabled her to sympathize somewhat with the TA and to better tolerate the situation in her conference sessions.

Negative changes in perception were also experienced by some of the participants. For example, Susan (U0 Arts) had initially felt relatively positive about her Psychology course, in large part because she was impressed by the professor's intelligence and found the lectures interesting. Over time, however, she found that the lectures essentially repeated what was in the textbook and became increasingly disillusioned by the focus of the course on psychology as a science rather than a social science. When studying for the midterm exam in this course, she became aware that a copy of the test bank from which the exam's multiple choice items were drawn had been circulating in the residences for several years. With access to this item bank and her perception of duplication between textbook and lectures, Susan came to strongly believe that all she needed to do in order to pass the final exam was read the textbook. After the midterm, she essentially stopped

attending the lecture sessions; they were no longer perceived as having any real utility. Susan also began to skip the conference sessions, although she did plan to attend any future sessions that specifically addressed the final exam.

Sarah (U1 Science) experienced a similar lessening of the perceived utility of attending class. For her, it was the tutorials for her Calculus course. Attendance at the first half of the Calculus tutorial was mandatory because the weekly quiz was written during this period. However, by the middle of the semester, Sarah reported that:

> And my Calculus tutorial, I don't usually go to. Because we have a quiz, the first 45 minutes, which I go to. And the rest of it, I find really... I don't find it helps at all. So I'd rather just... if I don't have any problems with the assignment, then I just leave. And I can go work on my own, or something like that . . . Her {the TA's} English is really not very good. So she has a bit of trouble explaining. And I think she has problems, like, figuring out what the class knows and what the class doesn't know. Maybe it's the class's fault, too, because we're not very responsive. But she'll say something like, "Oh, do you know this?" And if no one says anything, then she'll start going through things that you went through in Grade 7. And she finally does that, and we say we can understand. "But wait, I want to give you one more example. One more." You know? And, at that point, we're just — no one's listening; we're just so aggravated because we never get to the problems that we do need to know for the next quiz or whatever.

For Sarah, tutorials in this course had become nonproductive learning experiences.

The three participants taking language courses reported negative changes in their attitudes or behaviors regarding their respective courses. Eva (U1 Arts), for example, reported that, when prioritizing academic activities, she was increasingly likely to put her German course at the bottom. When extra time was required for tasks in her English courses, Eva found herself all too willing to put less effort into keeping up with her German work. Such a development was understandable given that Eva was an English major. However, the changes experienced by Sarah (U0 Arts) and Adam (U0 Arts) were more profound in nature and arose from the particular content and types of activities often associated with language courses and their own academic performance. Sarah reported that:

> It's just not a very interesting class. And I'm sick of French. I don't think I should have taken it. See, my mother's a French teacher, so I had to take French — according to her. Like, I like French, but I'm sick of doing grammar and stuff like that. Like, we did that to death in school. And in that respect, it makes me not do as well. And also, I'm getting poor marks, so that makes me not like it. Like, my last test — I'm getting a "B," but my last test wasn't very good.

Even though she no longer enjoyed the course, Susan was not willing to give up on it entirely. Such was not the case, however, for Adam. Although he enjoyed some aspects of the French course, particularly the more relaxed and interactive activities in what he termed the conference sessions, Adam had experienced difficulties in the course from the beginning of the semester, constantly feeling lost during the lecture sessions. As Adam described the situation in mid-October:

> French is, as of late, my worst nightmare. Actually, it's sort of been that from the beginning of the year. It's just that my French professor, he's naturally French, of course . . . And he just talks really fast, like a normal French person. And I just find classes so difficult in French. I'm just lost. I mean, I'm not understanding what he's saying so often — you know, it's really often . . . And in that class, like, no one else is like that — I'm the only person, it seems. Well, not the only person, but one of two or three people that are always not understanding what he's saying . . . (L)ike, I'd be saying, "Je ne comprend pas," every five minutes. And everyone else is getting the answers always, you know, so quickly. And they always know what's going on. So French class is really uncomfortable for me.

Adam began to seriously consider withdrawing from the course, something a friend of his had just recently done. In early November, he finally decided that he had had enough and dropped the course:

> I could just see it coming. It was just like my Biology class in Grade 12. It just kept sliding the whole year. I mean, my interest level, and marks level, and that. That was happening with French. I could see it. So I think it was the right decision. I know it was the right decision. Because I was lost every day, and my marks were going down. I didn't fail anything, but they were just going down . . . I wasn't learning anything, basically.

Having experienced similar difficulties in a high school course, Adam was confident that dropping French was the correct course of action for him at this point in time, even though he would have to make up the lost credits at some future point.

In summary, participants' academic experiences through the middle weeks of the semester largely revolved around preparing for and writing midterm exams. Several participants had finally taken the opportunity to meet outside of class with one or more of their instructors in order to clarify areas about which they were uncertain. Typically, this involved meeting with graduate teaching assistants (TAs) as they were perceived to be more approachable. In some cases, however, participants arranged to meet with one or more of their professors. By and large, these meetings were useful and occasionally, as in the case of Eva (U1 Arts), proved a significantly positive experience.

While most participants succeeded in passing their midterm exams, some did more poorly than expected. Several experienced emotional shock when they found themselves having to deal with failure for the first time. Reactions to poor exam results were, in the longer term, mediated by the meaning which participants attributed to either the exam in particular or the course more generally.

Many of the participants indicated that, having survived their first major testing experience in university, they felt both more comfortable at McGill and more confident in their abilities as students. Eva (U1 Arts) was the participant who best described how the confidence that resulted from positive experiences with midterm exams and interactions with instructors differed from the general confidence with which participants had begun the academic year:

> When I said before that all the things I'd gone through in that week of midterms, and that sort of thing, gave me confidence, it was a different sort of confidence than I first came with. Because, then, it was sort of, "Well, I'm <u>sure</u> I can do it." And now, it's "I <u>know</u> I can. I've been told by professors that I'm doing well." You know? And it really helps you to not be afraid to go and talk to people, or take a different angle and disagree with people . . . Now, I feel extremely confident in my abilities to not only get things done, but get things done well; not only to my teachers' satisfaction, but to my own.

Comments such as Eva's highlight the importance of academic validation in making a successful transition to university.

Midterm exams also proved a focal point for reappraising academic experiences to date, the efficacy of current work habits, and the utility or value of particular course components. Some participants, particularly in the Arts, found that preparing for midterms marked their first experience of sustained intellectual engagement with course content in contrast to the more passive experience of reading textbooks and listening to professors. A number of participants came to realize, in light of their midterm exam performance, that they would have to work either harder or more efficiently; persisting with current approaches would not be productive. Others came to perceive that regular attendance at lectures or conferences in particular courses was not a particularly valuable use of time. They felt that more could be accomplished by working with the textbook on their own, consulting other students when the occasional difficulty arose. By this point in the semester, several participants also found that their initial attitudes toward certain courses had changed; sometimes for the better, sometimes for the worse. Initial impressions and expectations had been modified by experience over time.

End of the Semester

The Closing Weeks of Classes

During the closing weeks of the semester, the Science participants were engaged in the same type of academic work they had been doing throughout the semester; keeping up with weekly homework assignments, preparing for labs, completing lab reports and so on. Nonetheless, there were some noticeable differences in the experiences of particular participants. For example, Jason (U0 Science), who had already begun to experience difficulty by mid-semester, was finding it increasingly difficult to keep up with his work. He characterized the combined effects of the rapid pace of instruction in his courses and the ever-accumulating assignments as similar to being on a conveyor belt or assembly line:

> Do as much work as you can, and whatever mistakes — fine — so be it. Hopefully the conveyor belt is not going so fast that you just forget. You try and

> fix whatever you can, but the next thing's going to come. So now you fiddle with that. You try and fix it, and hopefully it's enough.

To some extent, the perception that the sheer cumulative amount of work required in science courses interfered with one's mastery of the content was also shared by Pierre (U1 Science). Pierre found that the amount of time required to complete the assigned work left little, if any, additional time for trying to solve additional unassigned problems or to read ahead in the textbooks.

For Pierre, the final few weeks of the semester were also a period of gradual disengagement. By the time we spoke at the end of November, he had received letters of acceptance into the engineering programs at both McGill and École Polytechnique. Fully committed now to the prospect of changing academic programs, Pierre had not yet decided which institution he would choose to attend in January. In anticipation of his changing circumstances, Pierre had recently formally withdrawn from his full-year laboratory course, and was no longer attending class on a regular basis in his other courses. Rather, he indulged his preference for independent learning by completing the remaining readings and assignments on his own.

Toward the end of the semester, both Ruth (U0 Science) and Sarah (U1 Science) expressed feelings of disillusionment about being in Science. In Ruth's case, the critical factor was a loss of confidence arising from having failed her last Chemistry midterm. Now, she was no longer certain about her academic plans:

> What am I doing here? I don't know. Well, I came here because I thought that I could do good in science, and science was something that would be good for me, because I had always done good in science. But now that I'm here and I'm not really doing as good as I had anticipated or hoped, it's, "Why are you in science, Ruth? What are you doing?" And it makes me wonder what I'm trying to do in here because perhaps, you know, I'm not supposed to be a scientist.

In Sarah's case, the problem seemed to be more generalized and not linked to just one course; it was not so much a matter of disillusionment with science per se as it was one of disillusionment with her current courses:

> I mean, I'm studying a bit of everything. And everything is at such a superficial level that, I mean, you just touch upon it and then you go on to something else. And you understand that, but it doesn't leave you with any kind of feeling of what it's all about.

This disillusionment was exacerbated by uncertainty about her career plans to the extent that Sarah was frequently thinking about quitting university until she could determine more clearly what she wanted to do:

> I mean, right now, it's just... it (school) doesn't mean very much to me. I'm just kind of going through and seeing what happens, not taking it very seriously . . . It changes every day. I mean, every day I think about quitting school and just going away somewhere. What's important is just trying to, like, make sure I don't get on the next plane out of here . . . I just don't know what I want to be doing. So I don't see the point of going through all this and having my parents pay money. And going through, like, hours of studying, or stress, or anything like that, if I'm going to end up doing all this for nothing. So I'd rather just get away and see what I want to do . . . My mother was thinking that I should just quit school for a while because she sees how unhappy I am in school. I mean, I really don't like it.

At points during these final weeks of the semester, Sarah's disillusionment had been sufficiently severe that even her parents were suggesting she should consider taking some time off from university.

In contrast to the "routine" work of the Science participants, the four participants in Arts were engaged in researching and writing various types of term papers in addition to regular reading for their courses. The extent of this additional work was least for the two U0 students, Susan and Adam, who had only one term paper to complete. Eva (U1 Arts) had three papers due by the end of the semester, one for each of her three English courses. Finally, Mark (U1 Arts) had papers due in two of his English courses and one in his Geology course. In addition, he had a major oral presentation to do in another of his English courses.

With the exception of Adam (U0 Arts), who was facing "only a book report" for his History course, the Arts participants were enthusiastic about the prospect of getting to work on their papers and presentations. For example, Eva (U1 Arts) commented:

> I really get enthusiastic when I do a paper because that's really when you can see your own thoughts structured, thought out, put together complete in front of you. People agonize over papers, but I really like doing them. I have fun. Even the research is fun — you know, going to the library and looking through things — because that's really when you learn a lot, just by going and reading other things on it, rather than just taking the professor's point of view.

Even though her only paper for the first semester was in her Geology course, Susan (U0 Arts) expressed similar sentiments:

> I actually like writing papers. I like it. I find it therapeutic. You know, I just like to look through things and, like, organize things — especially if you have a lot of time to do it.

Recognizing the amount of time and effort these papers and presentations would require, these three Arts participants nonetheless viewed them as meaningful and enjoyable academic tasks.

Finalizing a topic for a paper occasionally proved a lengthy and complicated process rather than an easy and straightforward one for these participants to accomplish. To her consternation, Eva (U1 Arts) found this to be the case in one of her courses. The professor had provided a list of suggested topics, but none of these were appealing to Eva. Some of the suggested topics were even quite daunting because they incorporated terminology and concepts which had not been discussed in class. Eva came up with a topic of her own creation and obtained approval from her TA. At this point, Eva felt quite confident. However, impediments quickly arose:

> So then I made an appointment to see her {the TA}, and brought my outline. And she looked at it. And she didn't like the way it was done. Which I don't understand, because she had told me before that she did. So then she was in a rush, and I couldn't really talk to her about it. So I went home that day, and I was all depressed. This was Monday. And I was all depressed because the one paper I — before this, I was saying, "Oh, I can't wait to get started on this because I know exactly what I want to say and it's just going to go like clockwork." And then, all of a sudden, it got shot down and I was just, "Oh, no! What am I going to do?" . . . I knew that I had to see her again on Wednesday. So, Tuesday night, I really thought about it, and I changed certain things. And I brought it to her on Wednesday, and she was so enthusiastic . . . So now I feel better, but . . . I've only got four days to work on it.

Although a well-intentioned effort to help Eva write a good paper, the TA's feedback dampened Eva's enthusiasm and confidence — at least in the short term. In general, however, the two U1 Arts participants who had TAs providing feedback at various points in the process of writing their English papers found it useful. In contrast, neither of the U0 Arts participants reported receiving any assistance in writing their papers.

Working on papers and presentations was often a major investment of time and energy. Much as they did in preparing for and writing midterm exams, several participants reported letting work in their other courses slide while they focused on researching and writing the paper at hand. Both U1 Arts participants, Eva and Mark, indicated that they then had to quickly catch up on the backlog of readings in order to be ready for final exams.

Beyond the fact that these were their first university papers, several of the participants found particular papers to be novel experiences. For example, Adam (U0 Arts) reported that his History paper was the first book report he had ever written. Similarly, Susan (U0 Arts) reported that her Geology paper was not only the longest paper she had ever had to write, it was the first time she had been required to use footnotes. Consequently, as she put it, "it was a big thing for me; I wanted to do well on it." Mark (U1 Arts) was in the same Geology course. When interviewed one week before the end of classes, he was still doing the research and had not yet started writing; priority had been given to the tasks in his English courses. In our follow-up interview at the end of January, Mark reported that he found the experience of actually writing the Geology paper to have been quite different from his English courses. In particular, he found himself unsure how to go about writing a paper where he had to rely entirely on secondary sources:

> How do you write a paper without plagiarizing, basically? Because all you're doing is paraphrasing, compiling, and you draw conclusions from that. And there's nothing new. Whereas, in sort of an English paper, maybe you're given topics to discuss, but you come up with your own conclusions or whatever about that topic.

Mark ended up describing his role in the writing process as being akin to a coin sorter; the reference books he had consulted were the piles of coins, and his job was to sift through those piles, setting aside the pennies (the information he didn't need) and keeping only the quarters and dollar coins.

Final Exams

Anticipation and Preparation

The formal exam period for students in the Faculties of Arts and Science was scheduled to begin on Tuesday, December 8, the day after the final day of classes, and would continue until December 23. While all of the participants would be writing final exams in December, there were variations in the exam loads they faced. For example, as was typical with full-year language courses, neither Susan (U0 Arts) nor Eva (U1 Arts) faced final exams in their respective French and German courses. Others found that the final exams, or portions of them, for some of their courses had to be faced even before the final day of classes. For example, Susan's final Music exam would consist of two components; an aural component to be conducted during the final week of classes, and a written component that would take place during the exam period. Similarly, Mark (U1 Arts) had a take-home final exam in his History of Communications course that had to be submitted on the last day of classes — the due date for the term papers in his Geology and Introduction to Drama courses.

Whether their exam loads were heavy or light, participants' anxiety levels increased as the start of the final exam period rapidly approached,; they recognized the importance of final exams in determining their final course grades and also recalled the stress they had experienced writing their midterm exams. Several of the participants found the final exams in some of their courses taking on an increased importance because of poor results on midterm exams. Some, such as Sarah (U1 Science), had negotiated with a professor to assign greater weight to the final exam in determining final course grade.

Others, such as Jason (U0 Science), simply had to do very well on the final in order to achieve a passing grade; this was "do or die time."

Even though they were understandably anxious, most of the participants felt fairly confident as they began preparing for their exams. Indeed, a few participants found the experience of preparing for final exams to be not that much different from preparing for midterm exams. Susan (U0 Arts), for example, reported that, if anything, she didn't study "with as much intensity" as she had for the midterms:

> Because, your first set of midterms, you're really worked up about them. But then, by the end {of the semester} . . . I think that I was less, like, psyched out about them, just because I had done them before. So, I don't know, I didn't take them as seriously, I guess.

For Susan, university exams were no longer an unknown entity. Having successfully survived the experience during midterms, the prospect of writing final exams was no longer so daunting.

One notable exception to these generally high levels of confidence just prior to final exams was Ruth (U0 Science) who found out just two weeks prior to the end of classes that she had failed her last Chemistry midterm. In a follow-up meeting with her professor, Ruth discovered that she knew the course material fairly well but had failed the exam because of careless calculation errors. Coming so close to the end of the semester, this failure shattered Ruth's self-confidence just when she had to begin thinking about her final exams; she felt that she could no longer trust her thinking:

> That's what's going to worry me most: going into that Chemistry exam, and sitting down, and reading the first problem, and doing the answer, and checking it off, and then being afraid to go on to the next question. "Maybe I should do that problem again. And again. And again. Maybe I'll still get it wrong because I can't trust what I'm thinking."

As they began preparing for the final exams, participants were not operating in an information vacuum. Much as they had done with the midterm exams, many professors provided students with information about what they could expect on the final exams, both in terms of the types of questions they could expect and what proportion of the

semester's material the exam would cover. Some organized special review sessions prior to the last day of classes. Others made copies of old exams available. Still others provided a list of potential exam questions, particularly essay questions, to help students focus their preparation efforts.

Many of the participants reported regulating their study efforts according to how much the final exams in particular courses were worth as a proportion of the final course grade and how much value they placed on each of the courses. In addition, participants drew on their perceptions of course differences in the difficulty of the material and their own performance to date. As Susan (U0 Arts) expressed it:

> By the end {of the semester} . . . you know how well you can do, type of thing, and you moderate. Like, you know there's some courses you don't have to study your head off for because you know that you kind of know what's going on in the course anyway.

The greater the extent to which the material in certain courses was a review of material studied in their pre-McGill educational institutions, the more comfortable participants felt in reallocating efforts to courses with less familiar material. Such was the case, for example, with Eva (U1 Arts) and her Survey of Literature course. In a few instances, initial plans for allocating study efforts were significantly modified in light of recent events. This was certainly true for Ruth (U0 Science) after receiving the results of her Chemistry midterm:

> I thought, in the beginning, "Okay, this exam schedule is good. Calculus is pretty good for me. Algebra, I'll concentrate on." And then I thought, "Oh, well, afterwards, Chemistry should be pretty good, and I'll concentrate on Physics. But now, I can't trust myself to slack off on anything.

Within a few days of receiving her midterm results, Ruth kicked her exam preparation into high gear, investing a great deal of effort in all of her courses.

Participants' studying behaviors were also influenced by the nature of their final exam schedules, both in terms of the period of time between the last day of classes and the date of their first exam and in terms of how their exams were spaced out over the exam period. For example, some participants with periods of more than a week between exams

found this interval problematic; with "so much time" before the next exam, they found it all too easy to procrastinate with their studying. For others, however, such intervals were perceived as positive because it gave them a chance to "recover" from the preceding exams before turning to final preparations for the next exam.

Pierre (U1 Science) encountered a unique situation in that, during the same period he was preparing for and writing his final exams, he also had to prepare for and write admissions exams for the engineering program at École Polytechnique. This created an additional burden for Pierre in terms of allocating his study time and effort among the various exams he had to write. However, as he put it, "I had to do it, so I did the best I could."

Reflecting on the Exam Experience

Participants' comments on the final exam experience fell into two general categories; those addressing the general subjective experience and those dealing with the experiences of writing specific exams. As had occurred with the midterm exams, participants reported that getting the first final exam successfully completed often resulted in a boost in confidence as far as the remaining exams were concerned, particularly when that first exam was a positive experience. Several participants had to write two exams on the same day and found this a very fatiguing experience. Where both exams required students to write a lot of open-ended or essay questions, muscle fatigue made the second exam a much more difficult experience. Such was the case for Eva (U1 Arts) who had to write two of her English exams on the same day.

Many participants found themselves having to write exams in the university gymnasium amidst a large number of other students. Some of these participants reported that their ability to concentrate on the task before them was hampered by the distractions of buzzing overhead fluorescent lights and the inevitable noise levels produced by such large numbers of students. Ruth (U0 Science) had the misfortune to have her first exam

take place in the gymnasium on the very first day of the exam period. As she related the experience:

> It was petrifying; I was totally petrified the whole time. My first exam was on the very first day of exams — December the 8th, in the morning — so I had, like, no time. I had classes the day before, because exams started on Tuesday. So I went to class on Monday because I knew I had to, because it was review. And I studied the weekend before, and I studied the night before. And it was a totally frightening experience. I went to Currie Gym — I had never been to Currie Gym before — and the expansiveness of it all was terrifying, with all these seats and little tables. I sort of swayed back and forth and I, like, sat down. And then they said, "Start," or whatever. And it was like I was imagining school; like, starting for the first time. And everyone was, like, working, but . . . It was so different in Currie Gym. Like, people were drinking pop, and opening up cans, and coughing. And, like, the wind was blowing around the top, and the lights were humming. It wasn't quiet at all — it was so noisy. And it was so stressful. And everybody was writing, and I was just sitting there. And I was like, "Oh, my God!" It was so horrifying. That was awful, totally awful . . . And it didn't help . . . that the exam was totally hard.

Ruth had another exam the next day in the very same location. This time, however, she was starting to get used to the room and even brought along a pair of earplugs to help cut down the background noise. While Ruth might have been able to deal fairly well with any one of these sets of circumstances (timing, location, exam difficulty) in isolation, the combination of the three was overwhelming.

A number of participants expressed dissatisfaction with the features of particular exams. Some reported that certain exams presented questions in an overly complex fashion. For example, in describing the experience of writing his Geology exam, Mark (U1 Arts) reported:

> You had to do four sections. And each section had about three subsections; and some of the subsections had sub-subsections. So it got a little confusing.

Similarly, in describing one of the sections on her Chemistry exam, Sarah (U1 Science) related that:

> He set it up so that he had, like, a page with ten different molecules. And then, the next eight questions were all, "How many of these are sugars? How many are this?" Like, all these strange questions that you weren't sure of. And the answers were multiple-choice. So it was like, "1 and 2," "1 and 2 and 3," "1 and 2 and 3

> and 4," "4 and 2," "4 and 3." You know? You had, like, about 15 options. So if you got one out of these ten molecules that you didn't quite get — even though you knew the other ones — then you just screwed up that whole section of the exam.

In such circumstances, participants expressed reservations about the extent to which the exam was a fair assessment of what they had learned. Indeed, several of the Science participants reported learning, after the fact, that certain of their professors had intentionally designed the final exam in such a way that either a certain percentage of students would fail or that it was impossible to achieve higher than a grade of 80 percent on the exam. If such practices did indeed occur, then student concerns about the legitimacy of exams as assessments of learning were well-founded.

A number of participants from both Arts and Science also indicated that there were noticeable differences between what they had expected and what they were required to do on certain exams. In some cases, participants reported that their professor had led students to believe that certain subject areas or certain types of questions would not be on the exam; yet, these did indeed appear on the exam. In other instances, participants reported finding questions on topics which the professor had touched upon only lightly during the semester; participants had formed the erroneous assumption that these topics were thus somehow less central to the course.

In summary, the last weeks of classes for the semester were a busy period for participants, particularly those in Arts who had term papers and presentations due. Indeed, the two U1 Arts participants indicated that, except for a few days of recuperation, the entire period of the semester from midterm exams forward was extremely hectic. For the most part, participants who had term papers or oral presentations to do for their courses found these to be meaningful and enjoyable learning activities. Participants were also very cognizant of the fact that final exams were looming. Most were feeling quite confident as they began studying for the exams. Participants regulated their study efforts on the basis of a variety of factors: weight of the final exam in determining final course grade; their academic performance to date; perceived difficulty

of the course material; perceived mastery of the course material, including background knowledge from prior education; and the exam schedule itself. Some participants found the location in which they had to write their exams created stressful conditions which added to existing levels of anxiety. Others were perturbed by what they found on particular exams; for example, topics they had not anticipated or exam questions which were presented in a complicated fashion.

Looking Back Over the Semester

Evaluating Courses in Retrospect

Looking back over the semester, participants were frequently able to make fine-grained differentiations in evaluating their first semester courses. For example, many participants drew distinctions between the courses in which they learned the most and those in which they received the highest grades. For others, courses which they found to have the most difficult subject matter were not necessarily those in which they invested the greatest effort. In speaking of those courses which they had enjoyed the most, some participants differentiated between courses in which they enjoyed the subject matter and those in which the classroom experience itself was enjoyable. Even within the discussion of classroom experience, some participants indicated that they enjoyed the lecture sessions in certain courses but disliked the conference or tutorial sessions while the reverse held true for other courses.

While not completely impressed with all of their first semester courses, the U0 Arts participants were generally pleased with the opportunities the Freshman Program in Arts provided them to explore a variety of subject areas. In contrast, the three Science participants taking basic science and math courses expressed reservations about the value of these courses as learning experiences. This was most fully articulated by Ruth (U0 Science), who observed:

> I don't really know if there's much to these courses that you do — these science courses that you do — if you really learn much. I think it's more like you learn it

> for the course and then, after, you forget it. I think there's a lot of that in there . . . Freshman courses — like, you don't take them because you want to take them. You take them because . . . they're assigned to you; you have to take them. They're general; general everything. So it's a lot of nothing, basically, is what you're doing — I think. And it's not anything that interests you in particular . . . I understand you have to start at the bottom in order to get to the top. But, you know, it doesn't seem applicable, somehow, the things that they teach you in first year; you know, basically a lot of laws and working out this problem in this way. They teach you how to think, basically. They don't teach you anything relevant; like, as to what's happening right now.

Echoing sentiments expressed to a lesser degree by Jason (U0 Science) and Sarah (U1 Science), Ruth also commented on perceived shortcomings in the ability of some of the professors in basic science and math courses to work with first year students:

> You know that they're teaching something that is so far beneath them, that they're sort of — like, they're helpful, but they're kind of disinterested because it's so elementary. That's what my {course} prof used to always say when someone would ask him why this equals that. "Well, it's elementary," he'd say. And he wouldn't even know how to explain it because it was so obvious to him. But, like, to us, it was totally unobvious. And you get that kind of feeling that what you're doing is not significant because it doesn't seem to be significant to anyone else.

Such perceptions of the academic environment form the subjective reality for students and influence their subsequent attitudes, behavior and development (Bronfenbrenner, 1979; Tinto, 1993). It is beyond the scope of this study to ascertain how widespread and ongoing are such perceptions of the Freshman Program in Science. Nonetheless, these findings raise questions about the extent to which the FPS inhibits rather than enhances first year students' motivation to persist in the pursuit of a science degree.

Characterizing Experiences During the First Semester

In trying to characterize their experiences during the first semester, many of the participants commented on how stressful the first semester had been. This was particularly true for Ruth (U0 Science) and Jason (U0 Science) who had experienced failure on some of their exams; they spoke of the semester as having been an emotional roller-coaster. As Ruth put it:

> In the span of a week, it {university} can be more fun than you've ever had at home. And, at the same time, it can be the worst experience you've ever had in your life.

Even those who had done quite well academically acknowledged the ups and downs of student life during the first semester. For Eva (U1 Arts):

> Challenging would be the word I would use — but in a very good way. It's been frustrating. It's been aggravating at times. Sometimes it's been wonderful. But, even through the bad — frustrating TAs or, you know, closed Porter's offices, or anything — that's why I'm here . . . That's really the way I have to look at it; it's all part of the adventure of school.

All of the participants spoke of the first semester as having been a learning experience. For example, Susan (U0 Arts) spoke in terms of learning what it's like to be on your own, of becoming more independent. For Mark (U1 Arts), it was a case of the semester having presented a series of relatively small, novel events that, when taken collectively, were "enlightening and enjoyable." Some participants spoke in terms of the semester allowing them to become clearer about what academic areas they were interested in pursuing; for others, it was a case of learning what they were not interested in.

When asked what changes they had seen in themselves over the course of the first semester, many of the participants spoke of having become more independent. However, the form of independence varied from one participant to the next. For example, Susan (U0 Arts) commented:

> I've always been really independent, I guess. But, like, I'm more so, now. And I can see that I've also been kind of spoiled by my parents and sheltered in that way. But, like, I have a better view of what the world is like, too. And also, I've learned to be a little more careful — just walking around at night, and that kind of thing.

In contrast, the increased independence experienced by Eva (U1 Arts) was more in the social sense of becoming more comfortable in undertaking activities without having to be accompanied by others. Many of the participants from both Arts and Science talked of increased self-confidence in meeting academic challenges. Particularly for those in Arts, participants reported improvements in their note-taking skills. Where Eva (U1 Arts) had

initially tried to take down every word her professors uttered, by the end of the semester she had learned how to write more condensed notes that combined the professors' sentences. Mark (U1 Arts) spoke of an increased ability to discern in which lectures it was important to take notes. For Adam (U0 Arts), improved note-taking was more a consequence of learning how to be more attentive during lectures. As might be expected given the number of papers they had to write during the first semester, both U1 Arts students (Eva and Mark) reported significant improvements in their writing skills. Eva indicated that the teaching assistants had provided valuable assistance in this process, even though, at the time it was received, that assistance was often also a source of frustration and stress.

In summary, thinking back over their first semester experiences and how they had changed during that time, all of the participants — even those who had failed or only marginally passed one or more courses — reported having developed what can best be described as a sense of "competence in context." They described themselves at the end of the first semester or at the beginning of the second in such terms as feeling "blooded," "experienced," or "older and wiser" in contrast to the way they had felt at the beginning of the academic year. Having actually experienced and survived a full semester, they felt that they had "learned the ropes" of being an undergraduate student. University was no longer the big unknown that it had been at the beginning of the first semester, and they were no longer strangers in a strange land. Consequently, they were confident in their ability to cope with the demands of university study. As Pierre (U1 Science) noted in January, this increased self-confidence and familiarity with the university experience carried over to make his transition from McGill to École Polytechnique a smooth one.

Review of Findings

Personal Contexts for Beginning Study at McGill

The participants in this study came from both coasts of Canada, as well as from Quebec. They came from a variety of family backgrounds, particularly in terms of the

educational attainment of family members. Most had at least one parent with some form of postsecondary education (university, teachers college, nursing school), one had a father who was a university professor. Several had siblings who had already completed a university education or were currently pursuing one. One, however, was the first member of his family to go to university. The participants came from two different types of educational background, high school (those who had applied to McGill from out-of-province) and CEGEP (those who had applied from within Quebec). While most had attended public institutions, two of the participants had attended private institutions. All of the participants had performed well in their previous academic environments and had, for the most part, enjoyed their educational experiences. Several commented on having had close relationships with their teachers, some of whom had a profound impact on participants' educational plans. For all of the participants, the pursuit of a university education was seen as something that was almost a matter of course if not a necessary stepping stone for future success. All indicated that their families strongly encouraged them to attend university.

Few of the participants had clearly articulated and well thought out educational and occupational plans, although all but one expected they might well continue their studies beyond the undergraduate level. Their selection of an academic program or field of study was often more a result of needing a place to start their studies than it was a statement of what it was they wanted to accomplish. For many participants, their initial choice was to select an academic program which, on the surface at least, either enabled them to pursue academic subject areas in which they were already interested or to avoid those which they disliked. One of the participants entering from CEGEP (Sarah) had decided to make a significant departure from her previous studies in the social sciences by pursuing a science degree. In deciding to attend McGill, non-academic factors associated with the institution's location in Montreal played as much as or more of a role for many participants than did particular academic features such as the availability of a specific academic program or institutional reputation. Course selection for the first semester was

influenced by a variety of factors including personal interests, recommendations from parents or past instructors as well as academic advisors, curricular requirements and restrictions, and course availability. These choices defined participants' points of entry into the new world of university study, a world which they were approaching with a sense of eager anticipation and excitement.

In trying to understand participants' plans, goals, and decision-making regarding the pursuit of a university education, I was able to distinguish two qualitatively different sets of motivational factors or forces contributing to university attendance: (a) **propellants** and (b) **attractants**. Propellant factors encompass those prematriculation circumstances, interests, beliefs and the like which serve to propel the student forward from high school or CEGEP to university studies. Included here are such things as parental and sibling modeling (postsecondary educational attainment of parents or siblings), parental valuing of education, parental expectations that their children would attend university, perceptions of the labor market, intrinsic interest in learning (either generally or in specific subject areas), positive prior educational experiences, attending educational institutions where preparation for university is a fundamental aspect of institutional mission and/or where going on to university is normal and routine for the majority of students.

Attractant factors encompass those goals, experiences, and ends associated with the pursuit of university studies which are deemed desirable or attractive by students and which serve to pull them forward from high school or CEGEP into university studies. These attractant factors can be further differentiated into **experiential** and **outcome goals**. Experiential goals refer to particular types of experiences, opportunities or conditions deemed desirable as part of one's university education. For example, both Susan (U0 Arts) and Ruth (U0 Science) spoke of wanting access to cultural facilities such as theaters and museums. Sarah (U1 Science) spoke of wanting the "whole university experience" of living away from home and having university be the center of her life, while Eva (U1 Arts) was quite clear about wanting the opportunity to participate in a student exchange

program for a semester or an academic year. Outcome goals, on the other hand, refer to the particular educational or developmental outcomes participants sought to obtain as a consequence of university study. For example, Pierre (U1 Science) spoke of wanting to obtain a sufficient degree of both academic and practical education that he could either continue his studies at the postgraduate level or, if he so desired at the time, find meaningful and relevant employment upon completion of the Bachelors degree.

Academic Experiences During the Semester

The Initial Weeks

During the initial weeks of the semester, the participants in this study were strangers in a strange land, entering unfamiliar territory both in the general sense of being a university student and in the particular sense of the academic courses they were taking. Orientation Week, the week immediately preceding the start of classes, was characterized by the prevalence of social activities. With the onset of classes, participants were immediately confronted with the need to mentally "shift gears" and begin focusing on academic activities.

Participants' experiences during these initial weeks of the semester can be described as falling into three successive phases: familiarization, acclimatization, and routinization. The participants found that the process of **familiarization** or "learning the territory" of academic life was relatively easy to accomplish within a couple of weeks in terms of more or less stable characteristics; for example, the locations where the various class sessions for the their courses were to meet, administrative office locations, what happens during a lecture in a particular course. The process was more difficult to accomplish in relation to tasks or events which occurred infrequently and at only certain points in the semester (e.g., midterms, final exams, term papers).

As their sense of familiarity with academic life increased, participants entered a phase of **acclimatization**, during which they became habituated to their new surroundings. For the participants in this study, it was more of a perceptual outcome at a

given point in time, particularly in relation to the physical characteristics of the environment and the personal characteristics of the people with whom they interacted on a regular basis. Several of the participants, for example, spoke of initially finding it difficult to understand some professors because of their accents. After a few weeks, however, they had become accustomed to the accents. Others found that, as they got more used to what work was required for their various courses, they noticed a decrease in the discomfort that had initially arisen because they didn't know what to expect. For example, in discussing some of the changes she had noted in herself during the first five or six weeks, Eva (U1 Arts) commented:

> Well, just feeling generally much more, you know, comfortable about the workload, also; not feeling scared that I can't handle it. I initially just said, "Geez, what if I can't read, you know, all of Thoreau by Wednesday." You know? Whereas, now, it's — I know how to organize my time a bit better. Now that I've really settled in to what I have to do for each class, I find it's much easier to organize and know to time out, you know, "Okay. Yes, Monday, I can read four hours of this. And still have time to go to the library and read up on American history or whatever." I find that's gotten a lot easier.

As the participants became increasingly familiar with and acclimatized to their new surroundings, many of the environmental features and academic activities which were initially very salient (e.g., class size, having to be in a particular location at a particular time on particular days of the week for a class session) faded from their conscious awareness. A sense of this is captured in the following comment from Ruth (U0 Science):

> (I)t's becoming more routine now. Like, in the first week, I freaked totally. I've never experienced anything like this in my entire life. It was so nerve-wracking. But now, it's, like, okay. I don't even look at the number on the room anymore. I just walk in. I sit down — like, in about the same area I sit all the time. And the same people sit next to me. Like, I don't really notice how big my classes are anymore because, like, it doesn't seem like a big deal. All I see is, like, me and the group of people who are around me that are always the same, and the professor, too. It's like the size of the class doesn't really matter.

In essence, the recurrent aspects of university academic life became routine.

Mid-Semester

Participants' academic experiences through the middle portion of the semester were shaped, in large part, by their preoccupation with midterm examinations. There was, however, considerable variability in the "exam load" with which each participant had to cope and in the duration of their "exam periods." Midterm exams almost completely disrupted the routines participants had established for attending classes and keeping up with their work. Many of the participants found themselves putting aside or lessening their attention to work in other courses while they concentrated on studying for each exam. The longer the exam period, the longer this disruption continued. As midterm exams were completed, participants then had to "catch up" with the backlog that had developed while simultaneously trying to keep up with new work as it emerged. Particularly for participants in Arts, midterm exams provided the first opportunity thus far in the semester to receive substantial feedback on their academic performance. Positive exam results were a source of academic validation. Some participants, however, did not perform as well as they had hoped or found themselves having to deal with their first significant experience of failure. The impact of receiving such negative results was mitigated by the value they placed on the course involved and the meaning they attributed to the exam.

Several further points about the disruptive nature of midterm exams are worth emphasizing. First, the scheduling of midterms is not an issue when courses are looked at individually, but becomes problematic when one considers the courses collectively; the combined effect is that of sustained disruption in students' academic routines (up to a month in duration, judging from the experiences of Jason and Ruth). Second, Science participants found themselves with courses that had two "midterms," a consequence of which was that the "midterm period" was longer for them than for their counterparts in Arts. This meant that they also experienced a longer period of disruption. Finally, if lack of coordination in scheduling midterms results in conditions which are indeed as disruptive as the participants seemed to suggest, what are the consequences for learning outcomes of a lengthy midterm period?

The Final Weeks

During the final weeks of classes, participants were increasingly cognizant of the imminent onset of final exams. This was a busy period for all of the participants as they sought to complete the last of their coursework and begin studying for exams. In addition to their regular coursework, the Arts participants (particularly the two U1 students) were also preoccupied with completing term papers. While most looked upon papers as meaningful and enjoyable learning activities, these participants also found the experience of writing them similar to what they encountered with midterm exams. Other work was put aside in order to allow them the time they needed to complete the papers. As a consequence, several Arts participants had to catch up on a backlog of reading while trying to prepare for exams.

Participants made a variety of judgments in regulating their study efforts for particular exams; they considered, for example, the weight of the exam in determining final course grade, academic performance thus far in the course, difficulty of the subject matter, the sequence within which the exams would fall, and the amount of time between them. Looking back, participants indicated that the actual experience of writing particular exams had been shaped by such factors as the location in which the exam was written, their level of preparation, and the way in which exam questions were formulated.

Looking Back Over the First Semester

In reflecting on their experiences during the first semester, participants made very fine-grained differentiations between their various courses. They made distinctions, for example, between those courses for which they were most pleased with their results and those which they enjoyed the most, and between those courses in which they received the highest grades and those in which they learned the most. Similarly, satisfaction with the lecture sessions in a given course did not necessarily mean they were also satisfied with the conference or tutorial sessions or the laboratories.

All of the participants viewed the first semester as having been a learning experience. Additionally, all of the participants perceived themselves as having changed over the semester, most often in terms of becoming more independent and more self-confident. A number of participants also spoke of having improved their note-taking abilities and, in the case of those with several term papers, as having improved their writing skills. By the end of the semester participants felt that they had "learned the ropes" of being a university student.

CHAPTER 6

DISCUSSION

Adequacy of the Conceptual Framework

The results of this study showed that a number of the background factors identified in the conceptual framework (e.g., pre-transition environment, educational and career plans, initial educational choices) did, as posited, influence the extent and nature of participants' involvement with the academic system of the university. This was most obvious in terms of their influence on course selection. The effects of other background factors such as educational orientation (reasons for attending university) or psychosocial development on subsequent involvement were not as clear.

The conceptual framework suggests that ongoing interactions between the student and the structures and members of the academic environment present the student with various challenges which precipitate a series of changes or microtransitions which can be described along four dimensions: (a) type, (b) context, (c) impact, and (d) theme. Certainly many of the participants' experiences related in Chapter 5 can be characterized as changes or microtransitions. Many of these same experiences can be categorized in terms of the dimensions identified in the conceptual framework: (a) type (e.g., the chronic hassle of a professor who cannot clearly communicate his ideas or the unanticipated failure on a midterm exam), (b) context (e.g., interpersonal relationships with instructors outside of class, as in the positive effects of feedback from a professor on self-confidence), (c) impact (e.g., the disruptive effects of midterm exams on academic routines), and (d) theme (e.g., academic competence, as in struggles with note-taking). Many of these microtransition experiences could also be seen as passing through the three intrapersonal phases of transition found in the conceptual framework: (a) pervasiveness, (b) disruption, and (c) integration. Collectively, participants' experiences over the entire semester also seem to follow this pattern. To a lesser degree, it was also possible to map

particular changes or microtransitions experienced by participants in terms of the three institutional phases of transition: (a) separation, (b) transition, and (c) incorporation. Thus, in the face of the results, many elements of the conceptual framework developed in advance of data collection proved useful for understanding the transition to university when attention was focused on students' academic experiences.

The model used in this study conceptualized the university environment as consisting of both academic and social systems, each of which can be further differentiated into formal and informal systems within the institution. While these distinctions were helpful for thinking about the institutional environment as a whole, more fine-grained categories were required in the analysis of the interview transcripts to define the specific academic contexts in which individual students experienced the first semester. Students' academic lives were not lived in the institution as a whole, but rather within academic programs and specific courses. Complicating the situation further was the fact that courses often had multiple components (e.g., lectures and conference sessions) and that participants may have had qualitatively different experiences in these components. In addition, throughout the interviews, participants frequently discussed their experiences at different levels of contextual specificity: a component of a course, the course in general, and their courses collectively.

Characteristics of First Semester Academic Life

Lack of Integration and Coherence in First Year Academic Programs

By and large, the participants experienced their courses as separate and unrelated. Even for the U1 students who were ostensibly in disciplinary based academic programs (Eva, Mark, and Pierre), there was little sense of meaningful connections between the courses in their primary area of study. The situation was magnified for the remaining students, none of whom was taking more than one course in any particular academic discipline. What sort of a foundation does this provide for subsequent study?

Nature and Pattern of Academic Work

In terms of regular (i.e., weekly) tasks and activities, students in Arts had less opportunity to tangibly work with and apply the concepts and ideas presented in their courses than students in Science programs. It was only when Arts students were required to write a term paper or prepare an oral presentation that they had the opportunity to become deeply engaged with the subject matter in an active way. In contrast, the Science students routinely had to apply course concepts in their lab reports and weekly homework assignments.

These disciplinary differences in the nature of the academic work that Arts and Science students had to perform also created disciplinary differences in the patterns of work or activity levels over the course of the semester. As illustrated in Figure 4, Science participants in this study tended to describe a more immediate onset of work at the beginning of the semester. They also tended to speak more of having a lot of work to do each week because of their homework problem assignments and lab reports. In contrast, Arts participants' work during the first part of the semester consisted almost entirely of reading and they tended to speak of a more gradual onset of work. Both at the beginning and at mid-semester, the U0 Arts participants commented on how much less work they had to do in university than they had been accustomed to in high school. In other words, they drew a distinction between academic work which required the production of some product and that which did not. Activity levels for both Arts and Science participants jumped significantly during the midterm exam period. Where Science students returned to normal work levels following midterms, many of the Arts participants now had to deal with term papers and presentations. For them, a brief pause for recuperation after the midterm exams was followed by heightened activity levels that increased as the semester progressed. Subjectively at least, the pattern of academic work in the sciences, as manifested in the types of activities and activity levels over the course of the semester, appeared to be more stable than that in the arts. In this sense, time management and self-

regulation may be somewhat easier for first year Science students than for their counterparts in Arts.

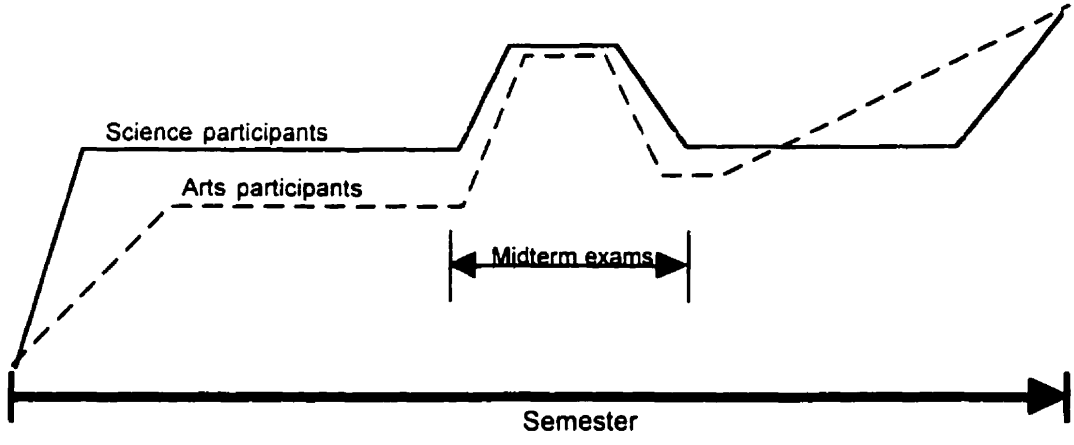

Figure 4. Subjective activity levels associated with academic workload over the semester

Pace of Instruction and Ability to Keep Up

Although participants in both Arts and Science commented on the amount of material presented in each lecture, it was problematic primarily for the Science participants. The amount of material professors believed they needed to cover in the introductory science and math courses necessitated a rapid pace of instruction. In and of itself, most participants seemed able to deal with this. However, the combined effects of this rapid pace and the weekly problem assignments frequently created problems for Science participants. The amount of time students had to dedicate to completing their assignments meant that they were afforded little opportunity to review material and correct misunderstandings. Over time, the cumulative effect of this created a situation in which the pace of instruction sometimes outpaced students' abilities to master the

content. While this was occasionally restricted to just one course, it was more commonly a consequence of the combined effect of the student's courses.

Feedback on Comprehension and Performance

Because of the regular homework assignments and lab reports in many of their courses, first year Science students routinely received feedback on their academic performance. In contrast, Arts students, particularly U0 students, found that many of their courses provided little if any feedback until the results of midterm exams were returned. In general, neither group of students was very likely to receive formative or diagnostic feedback. The English courses taken by the two U1 Arts participants were a partial exception in that these courses typically required students to meet with or submit material to TAs at various stages in the process of writing term papers. Thus, there were two problems associated with the issue of academic feedback to first year students: (a) infrequent or delayed feedback; and (b) the quality or content of the feedback given to students.

Interactive and Combinatorial Effects of Course Components

Participants were very much cognizant of the lack of coordination between their courses generally, and this occasionally carried over to a lack of coordination between different components within the same course. Students were more likely to encounter difficulties or experience frustration when they experienced asynchronous conditions. Particularly important were the extent to which: (a) co-requisite courses (e.g., Calculus I and Mechanics & Waves) were synchronized in the presentation of concepts; (b) laboratory sessions and conferences or tutorials were aligned with lecture sessions in terms of the concepts being addressed; and (c) the pace of instruction (presentation of academic content) matched students' ability to digest the material.

The extent to which less than optimal learning environment conditions (e.g., instructional practices, heavy reliance on particular types of academic activities or tasks)

resulted in student difficulty or dissatisfaction was dependent upon the combined effects of the problematic condition and other course conditions. For example:

- heavy reading loads were further complicated because students frequently did not have a clear idea of what they should be focusing on;
- lack of opportunity for active student participation during lecture sessions was mitigated when such opportunities were afforded in conference or tutorial sessions;
- students' ability to digest the large amounts of information conveyed by professors during lectures was heavily influenced by the manner in which that information was presented; the degree of structure provided could either facilitate or inhibit digestion.

Recommendations for Research and Practice

The findings of this study highlight the complexity of the academic environment in which students experience the transition to university and suggest that the conditions encountered by many first year students are less than optimal for facilitating the transition. Such findings provoke discussion of needed steps for both research and practice. The following section focuses on an expanded conceptualization of the academic context, issues for further research on first year students, and the kinds of academic interventions that might facilitate students' transition to university.

Adopting An Ecological Perspective on the Academic World of Students

Greater thought needs to be given to the types of conceptual frameworks which guide research into various aspects of the transition to university, particularly students' academic experiences. Despite their apparent similarity to the interactional college impact models prevalent in research on postsecondary education, the development and application of ecological approaches to the study of postsecondary student experience is relatively uncommon. Among the few examples is the work of Canadian researcher

Michael Benjamin who has developed an ecological model of student development (Benjamin, 1986) and an ecological model of student satisfaction (Benjamin, 1994, 1995; Benjamin & Hollings, 1997). One possible explanation for the paucity of ecological models pertaining to postsecondary student experience is provided in Benjamin and Hollings' (1997, p. 214) observation that "such models tend to be complex rather than simple, interactive rather than linear, and sensitive to context rather than acontextual" and thus conflict with the widely held value of theoretical parsimony. While parsimonious models may be appropriate when researchers are considering relatively simple phenomena, Benjamin and Hollings (1997) argue that maintaining such a modeling strategy becomes increasingly problematic when dealing with complex phenomena. It would seem appropriate then that the investigation of such a complex phenomenon as the transition to university utilize ecological models as they are likely, in the long run, to provide a more comprehensive and coherent understanding of the experiences of first year students.

One of the few examples of an ecological model being used in research on the transition to university is an investigation of the communication perspectives of first year students as they adjust to the new environment and how these might differ in conjunction with differences in residence arrangements (Johnson et al., 1995). The particular ecological model used was Bronfenbrenner's (1979, 1989) theory of the ecology of human development, the core of which is a hierarchical taxonomy of ecological systems: microsystems, mesosystems, exosystems and macrosystems. The **microsystem** is the most proximate to the individual and entails "a pattern of activities, roles, and interpersonal relations experienced by the developing person in a given face-to-face setting with particular physical and material features, and containing other persons with distinctive characteristics of temperament, personality, and systems of belief" (Bronfenbrenner, 1989, p. 227). Significantly, the theory emphasizes "that what matters for behavior and development is the environment as it is perceived rather than as it may exist in 'objective' reality" (Bronfenbrenner, 1979, p. 4), and is thus consistent with the

emphasis placed on individual perceptions in the conceptual framework of transition to university described in Chapter 2. The system of microsystems in which the individual is directly involved constitutes that individual's **mesosystem**, which might also be thought of as the individual's "life space."

As noted, the individual can be affected by events in distal settings. Bronfenbrenner (1989, p. 227) describes the **exosystem** as encompassing "the linkage and processes taking place between two or more settings, at least one of which does not ordinarily contain the developing person, but in which events occur that influence processes within the immediate setting that does contain that person (e.g., for a child, the relation between the home and the parent's work place; for a parent, the relation between the school and the neighborhood group)." At the most remote and inclusive level is the **macrosystem**, which Bronfenbrenner (1989, p. 228) defines as "the overarching pattern of micro-, meso-, and exosystems characteristic of a given culture, subculture, or other broader social context, with particular reference to the developmentally-instigative belief systems, resources, hazards, life styles, opportunity structures, life course options, and patterns of social interchange that are embedded in each of these systems." As such, the macrosystem constitutes a form of societal blueprint.

The Basic Structures in an Academic Ecological Taxonomy

Given a focus on understanding how individual students experience the transition to university, the most germane elements of Bronfenbrenner's (1979, 1989) taxonomy are the mesosystem and the microsystem. Beginning with the mesosystem, these concepts can be reconceptualized in order to tailor them to the postsecondary environment and to allow a fine-grained level of analysis (Figure 5). It is common practice in many areas of research to think of the mesosystem or life space as being divided into multiple domains. For example, Schlossberg's (1984) model of adult transition identifies such domains as family, friends, and work as types of settings within which transitions can occur. In a similar vein, Phelan et al's (1991) multiple worlds model differentiates between family,

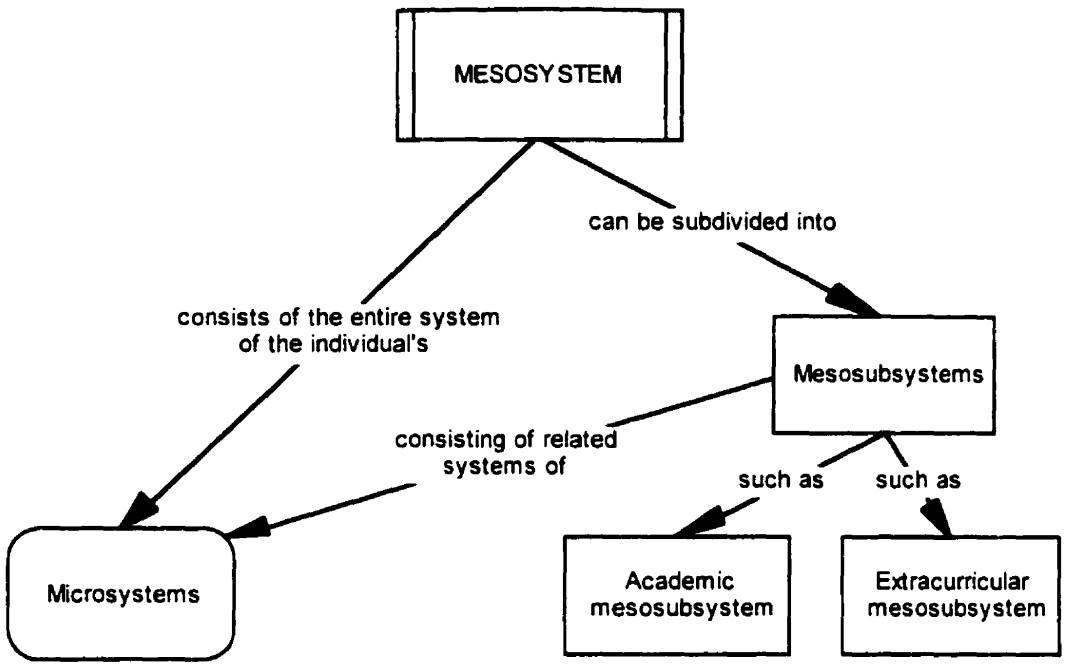

Figure 5. Core elements of the mesosystem

peer group, and school. However they may be labeled, these various domains of the individual's life space can also be seen as clusters of related microsystems. If the mesosystem is the system of microsystems in which an individual is directly involved, these clusters of related microsystems can be thought of as forming **mesosubsystems**. The mesosystem can therefore be reconceptualized as consisting of a system of mesosubsystems, each of which is a system of microsystems associated with a particular domain or aspect of the individual's life space. Hence, for a given student, we can identify as many mesosubsystems as are necessary to accommodate the particular involvements of that student within a specified timeframe. In this study, for example, Adam engaged in a number of extracurricular activities (e.g., gymnastics and modern dance) while Eva participated in none; thus, an extracurricular mesosubsystem existed for Adam but not for Eva.

Of central concern to this study is the academic mesosubsystem and its characteristics. If the basic unit in Bronfenbrenner's ecological model is the microsystem, the basic academic unit in postsecondary education is the course. From the perspective of an academic mesosubsystem, the course now becomes a **course microsystem**. However, the need to accommodate multiple course components (e.g., lectures, laboratories, conferences) and to differentiate structural differences in mapping the academic experiences of students necessitated a reconceptualization of Bronfenbrenner's notion of the microsystem. Generally speaking, each of the instructional setting components of a course meets the basic definition of a microsystem. At the same time, the course as a whole remains the basic academic unit. Consequently, the various types of instructional setting components which constitute any given course can be conceptualized generically as **course microsubsystems**. It thus becomes possible to talk or think about particular types of course microsubsystems such as lecture microsubsystems, conference microsubsystems, laboratory microsubsystems, and so on.

Drawing on Tinto's (1993) distinction between the formal and informal academic systems, these various types of course microsubsystems can be thought of as **formal microsubsystems**: their existence is dictated by the institution rather than the student. However, a basic fact of academic life is that much of the work that students do for their courses occurs "out of class." This aspect of a student's course experiences can be thought of as constituting the **informal microsubsystem**, a component of the academic ecology which is inherently amorphous and highly subject to change over the lifespan of the course. This has a parallel at the level of the academic mesosubsystem because students engage in a variety of academically related interactions with various university offices and departments which are not directly associated with specific academic courses. For example, participants spoke of participating in academic advising sessions, consulting the registrar's office, and consulting the Faculty office. Such aspects of a student's academic experiences can be viewed as situated in the **informal microsystem**.

Thus, as depicted in Figure 6, the academic mesosubsystem is composed of the informal microsystem and a number of course microsystems, each of which is in turn composed of an informal microsubsystem and one or more formal microsubsystems. The results of this study suggest that course microsystems in Science tend to be more complex

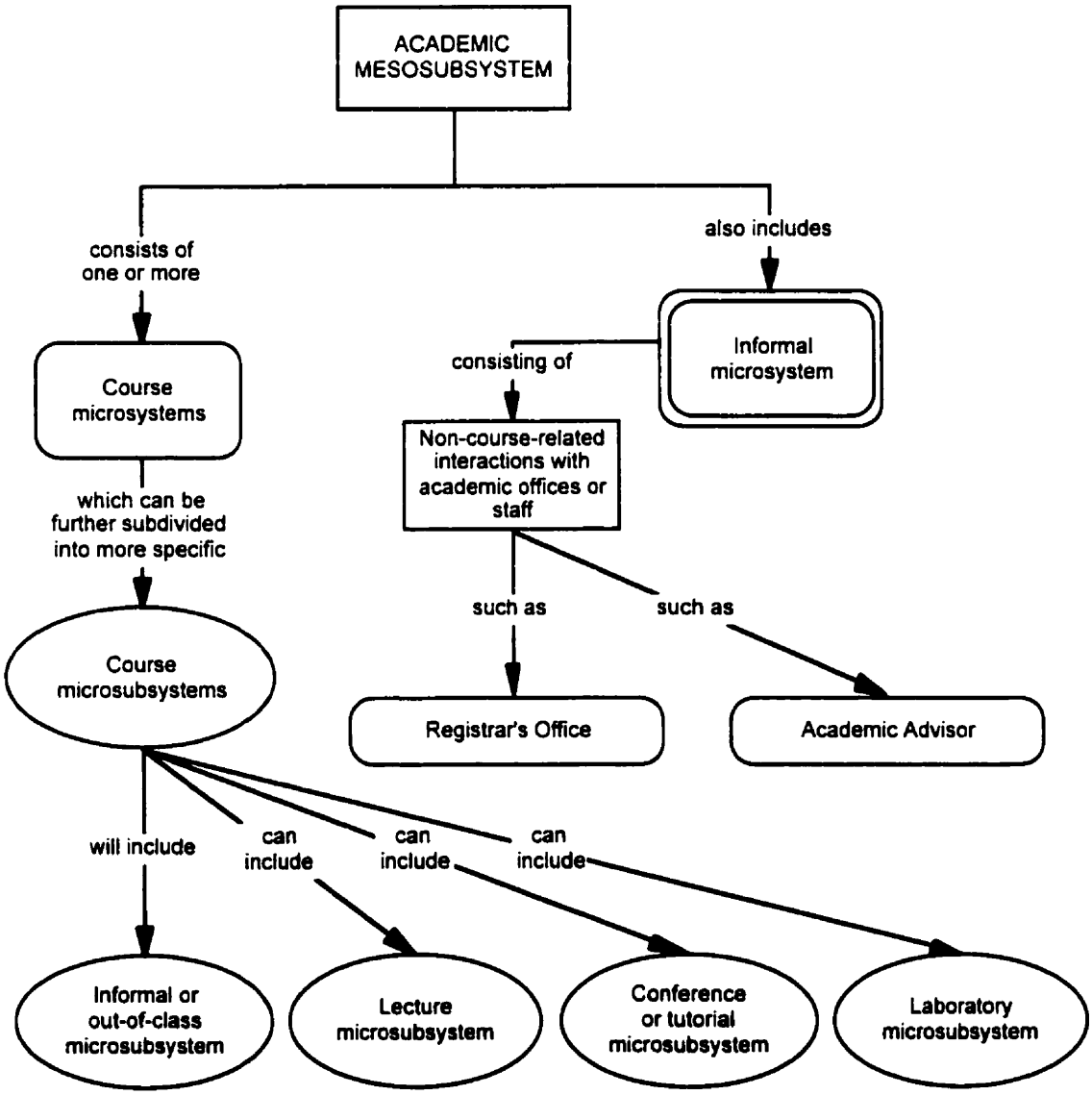

Figure 6. Core elements of an academic mesosubsystem and a course microsystem

than those in Arts in terms of their constituent microsubsystems. For example, the Mechanics and Waves course taken by Ruth, Jason and Sarah consisted of a lecture microsubsystem, a tutorial microsubsystem, a laboratory microsubsystem and the informal microsubsystem. In contrast, the course microsystems experienced by Susan in her Art of Listening course and by Adam in his Introduction to Greek Mythology course consisted of only a lecture class microsubsystem and the informal microsubsystem.

From an institutional perspective, all students taking a given academic course with a specific identifying designation are, in essence taking the same course: Course Number X is always Course Number X. Such an approach may be convenient for record-keeping purposes, but proved inaccurate and unwieldy from an ecological perspective because of the number and mix of course components and alternate sections encountered in trying to map the environments actually experienced by participants. Phenomenologically, two students ostensibly taking the same course in the same semester do not necessarily share the same academic settings or course components, although they may share common elements. For example, three of the participants in this study (Jason, Ruth, and Sarah) were registered in the Mechanics and Waves physics course. The course was divided into two class sections, each taught by a different professor. In addition, students had to choose between two alternate sections for the biweekly lab, and two alternate tutorial sections. Ruth and Sarah attended the same class sections and lab sections, but attended different tutorial sections. Jason attended a different class section and lab section, but attended the same tutorial section as Ruth. As it turned out, each tutorial section was led by the same graduate teaching assistant, but the students came from both class sections.

A course microsystem, then, is the system of formal (lectures, labs, etc.) and informal academic microsubsystems in which an individual student directly engages while taking a particular academic course. Structurally, the course microsystem is largely defined by the components experienced by the individual student. To the extent that all students in a given course are members of the same course microsubsystems, the structures of their course microsystems are similar. When students must choose among

alternate sections of various course components, it becomes increasingly likely that the structures of their course microsystems will differ and that, consequently, so too will their experience of that course.

Because the academic mesosubsystem consists only of those academic microsystems (courses, etc.) in which the student is directly involved and because students cannot be directly engaged with all aspects of the institution's academic environment, it can be seen as embedded in the institution's formal and informal academic systems (Tinto, 1993) but not commensurate with them (Figure 7). In the figure, each of

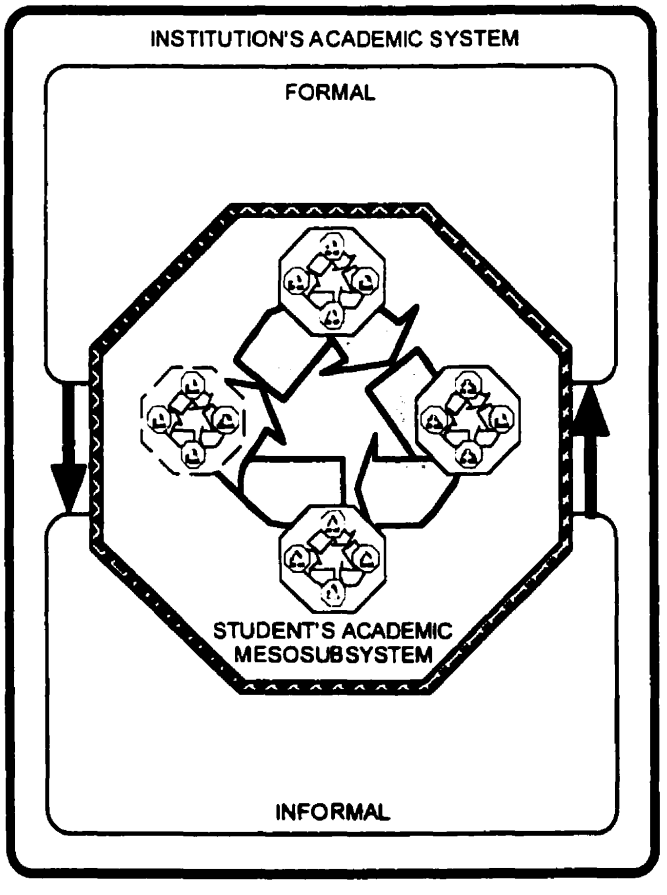

Figure 7. Relationship of the academic mesosubsystem to the institution's academic system

the small octagons with solid borders represents an individual formal or course microsystem and its constituent microsubsystems, while the small octagon with a broken border represents this hypothetical student's informal microsystem.

Defining Characteristics of Academic Ecological Systems

As shown in Figure 8, Spradley's (1980) concept of the **social situation** provides a useful starting point for identifying the different types of features or characteristics that can be used to describe the academic mesosubsystem and its various formal and informal academic microsystems and microsubsystems. Drawing on the results of this dissertation, three sets of features are discussed below: physical, temporal, and interpersonal.

Physical features. Each formal course microsubsystem (lecture, lab, conference, etc.) has a specific physical location (i.e., a specific room in a specific building). In addition, each of these physical locations has a particular set of physical features (e.g., physical size, type of seating, audiovisual facilities, etc.). For many students, this physical location remains constant for the duration of the course. It is not uncommon, however, for a relocation to occur, particularly in the initial weeks, in response to such factors as the instructor's preferences, seating capacity of the initial room (typically a case of either insufficient space for the number of students or too large a space), or incompatibility with planned instructional methods (e.g., seating arrangements incompatible with conducting small group work, lack of appropriate audiovisual facilities, etc.). In contrast to the relative permanence of the physical location of formal microsubsystems, the informal microsubsystem is likely to entail several physical locations or settings where academic work is carried out. Moreover, students' usage of these locations may change over the semester in response to changing tasks or student growth and development in such aspects of self-regulation as environmental monitoring. Thus, each course microsystem can be thought of as having a physical structure consisting of one or more physical locations. Collectively, the physical structures of the course microsystems form the physical structure of the academic mesosubsystem which,

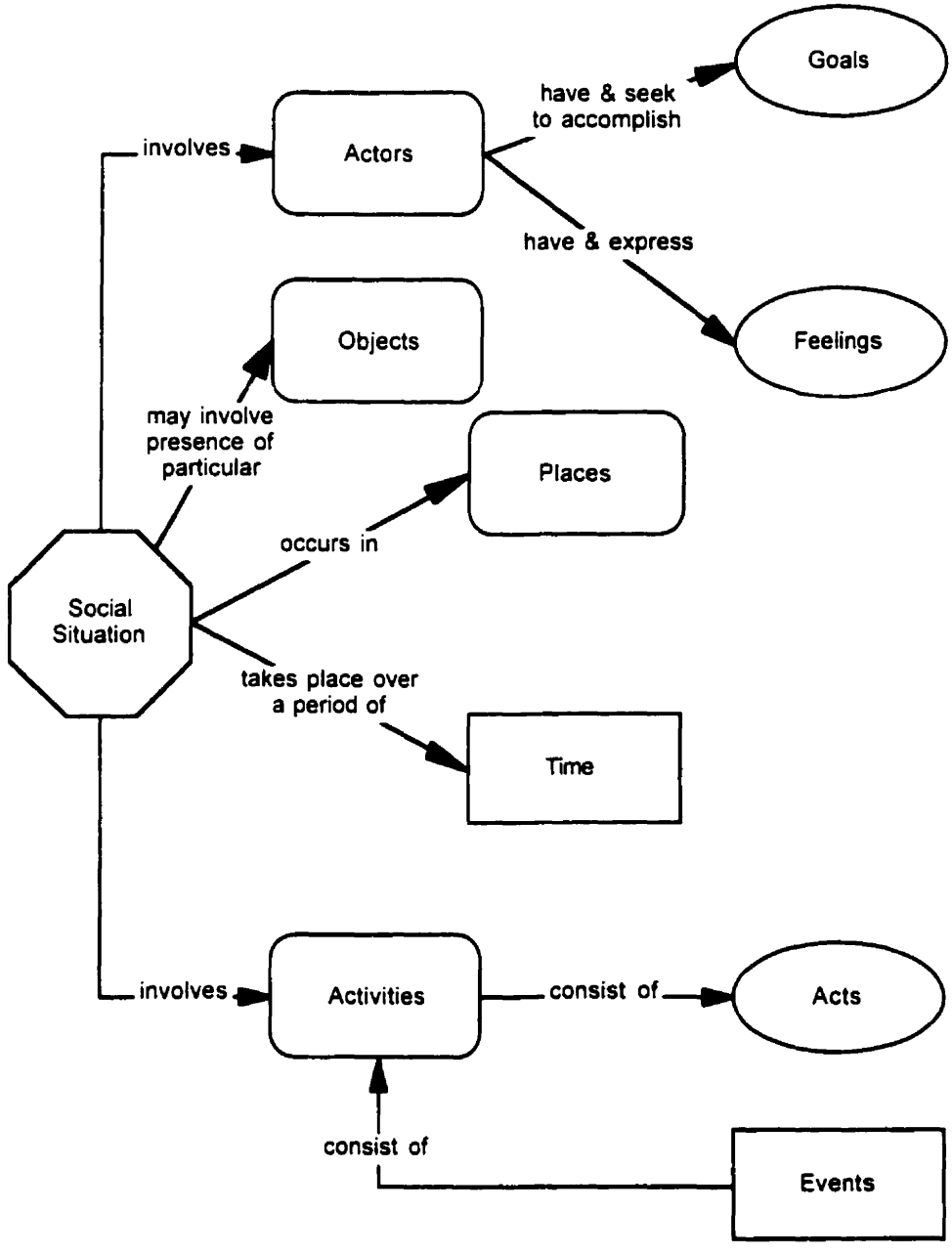

Figure 8. Dimensions of a social situation

in turn, shapes or governs those areas of the campus with which students interact. An important feature of this mesosubsystem physical structure is its diffuseness or spread. On the one hand, students with highly diffuse mesosubsystem physical structures may

develop a better knowledge of the campus than those with highly concentrated mesosubsystem physical structures. On the other hand, the latter group of students may find it much easier to develop "roots" and a sense of belonging or membership in an academic community.

Temporal features. Each formal course microsubsystem has its own temporal structure, defined primarily along four dimensions: (a) frequency of meetings (e.g., three times a week, twice a week, every other week, etc.); (b) duration of meetings (e.g., one hour, one-and-a-half hours, three hours, etc.), (c) day(s) of week on which meetings occur, and (d) time of day. These are all relatively stable course features. The informal course microsubsystem can also be described along these four dimensions, but the resulting temporal structure is much more fluid. Taken collectively, the temporal structures of the formal course microsubsystems constitute the core temporal structure of the course microsystem. Alone or in combination, these temporal dimensions can influence students' experiences in particular formal course microsubsystems. For example, if the lecture microsubsystem is scheduled late in the day, students may be tired and therefore find it more difficult to concentrate.

Collectively, the course-level temporal structures form the core temporal structure of the academic mesosubsystem as manifested in the weekly course schedule. The composition of this mesosubsystem temporal structure, in terms of the distribution and placement of free blocks of time and those "dedicated" to course microsubsystems creates a set of affordances and limitations influencing student experience and activity. For example, large blocks of free time in the schedule afford students the opportunity to get their academic work done during the day. In contrast, mesosubsystem temporal structures where course microsubsystems are scheduled either back-to-back or in close proximity to each other may result in students feeling that they are "constantly on the run" and unable to accomplish any meaningful work between "appointments." The combination in a given academic mesosubsystem of a temporal structure such as that just mentioned with a diffuse physical structure in which the adjacent course microsubsystems are located in

distal areas of the campus can create chronic hassles for students that add to stress and frustration levels.

Each course microsystem develops a temporal cycle based on the number and frequency of microsubsystem meetings. This most commonly takes the form of a weekly cycle in which all meetings of the student's formal course microsubsystems (e.g., lectures, conferences or tutorials, laboratories) take place between Monday and Friday of the same week. The schedule of microsubsystem meetings is the same from one week to the next. However, in cases where at least one of the formal microsubsystems occurs on a less frequent basis, the cycle is more extended. For example, Jason, Ruth and Sarah's course microsystems for Mechanics and Waves operate on a two-week cycle because their lab sessions occur every other week. Collectively, these course-level temporal cycles shape the temporal cycle at the level of the academic mesosubsystem. For example, certain days of the week are busier than others.

As units of academic experience, courses have a finite lifespan or duration. This lifespan is typically determined by two factors: (a) the temporal cycle on which the institution operates (e.g., quarter system, semester system, etc.), and (b) the credit weight of the course. McGill University operates on a semester system, with the Fall and Winter semesters lasting 13 weeks. The university utilizes a credit hour system for weighting courses wherein the typical course takes place in one semester and carries a weight of 3 credit-hours. Thus, for most students at this university, including the participants in this study, the majority of their course microsystems have a lifespan of 13 weeks.

The academic mesosubsystem also has a finite lifespan, the temporal boundaries of which will vary from one institution to another (and possibly from one Faculty to another) depending on the usual length of courses. At McGill, for example, the vast majority of courses are one-semester rather than year-long. Consequently, for the participants in this study, academic mesosubsystems have a default lifespan of one semester. The fact that a number of the participants in this study were taking year-long courses does not negate the notion of the one-semester lifespan of the academic

mesosubsystem. Given that most of the courses taken by the participant terminate at the end of the semester, new ones must be taken up in the following semester. If the constituent components of the academic mesosubsystem no longer exist, then it follows that the mesosubsystem as constituted has also ceased to exist. In effect, the taking up of a new set of one-semester courses essentially creates a new academic mesosubsystem: an ecological transition has occurred. The anomalous year-long courses serve as a link between the two mesosubsystems and represent a source of continuity in the academic life of the student.

Interpersonal features. As with any social setting, a course microsystem is characterized, in part, by its actors. Depending on the size of the course, the existence of more than one section for the course, the presence of graduate teaching assistants, full-time or graduate laboratory demonstrators, et cetera, the day-to-day actors (i.e., students and instructors) may be constant across all course components or may vary, depending on the particular course component. For example, the actors in the tutorial microsubsystem of Jason's Physics course included students from both sections of the course. Course microsystems may also vary in terms of the homogeneity of the student population. For example, in this study, the courses taken by participants in the Faculty of Arts had much more heterogeneous student populations, both in terms of program of study and year of study, than did the courses taken by participants in the Faculty of Science. This was initially disconcerting for some of the participants who commented on the fact that they were accustomed to being in courses where everyone was at the same educational level.

Ecological Transition

The ecological taxonomy of nested systems provides a framework for thinking about the transition to university more generally. Bronfenbrenner (1979, p. 26) asserts that whenever a person's position in the ecological environment is altered as the result of a change in role, setting, or both, an **ecological transition** occurs. Given this definition,

Banning (1989) argues that the multiple changes associated with entrance to college or university study constitute an ecological transition in the lives of students. What does it mean if we view the nature of the transition to university for these participants from an ecological perspective? An immediate point of departure is to consider the extent to which coming to university alters the individual's mesosystem. For example, in coming to McGill from Western Canada, Susan (U0 Arts) observed:

> Like, you're here to do work {academics}. The funny thing is there are so many things that go along with that. . . . Like, you're only here to do work, but everything else ties into it. You're leaving your life behind.

Contrast this with the following comments from Sarah (U1 Science) on how her experience as a local resident differed from that of her U0 classmates:

> And I knew that, by living in the city and living at home — it's where I've always grown up — so it's not a big deal for me to just hop on the Métro {the city's subway system}. It's just like the same thing as going from high school, to CEGEP, to university. It's the natural progression, you know, not some big change where I can really get into it, or anything. It's just school. Heh heh. And that's pretty much it. . . . But I just find it's very different. It's a whole new experience for them {referring to her classmates, most of whom came from outside the province}. Whereas, for me, it's just, you know, I still go home, and I have dinner. I have my job that I've had, I go to the gym that I've always gone to, and I have all my old friends. And to them, it's meeting new people, and everything is just totally new and different.

To the extent that they were "leaving their lives behind," three of the U0 participants (Susan, Adam, and Ruth) and one of the U1 participants (Pierre) were faced with the need to substantially create entirely new mesosystems. In contrast, the three U1 participants from the Montreal area (Eva, Mark, and Sarah) only had to deal with new academic mesosubsystems; other aspects of their mesosystems remained substantially intact. Jason (U0 Science) could best be described as occupying an intermediate position. Only recently returned home after spending his junior and senior high school years living with his grandparents in New York, Jason had already been dealing with a substantially altered mesosystem and now faced a new academic mesosubsystem.

Undergraduate academic life as a series of ecological transitions. Each time that a student undertakes a new course in a new semester is in itself an ecological transition, albeit on a lower level of magnitude. A sense of this is conveyed in the comments at the end of the first semester by one of the participants, Eva (U1 Arts), in describing how university differs from CEGEP:

> But now, I mean, this is just like, "Okay. Start over again." You know? Every term it's going to be, "Okay. Start over again. Start over again." You know? It's not like you ever get to really make friends with the people in your classes. At least, it doesn't seem it to me. Because, I mean, they're from all over the Faculties, everywhere. And... I don't know. As I said, that's a little... it's a little disconcerting, but it's also sort of an adventure, you know. At least that's the way I like to look at it. I mean, it doesn't scare me or anything. Like, it doesn't make me nervous. It's just sort of like, "Oh! Look! Well, okay." You know?

Undergraduate academic life can thus be viewed as entailing an ongoing series of ecological transitions. Such a perspective is consistent with both: (1) Chickering and Havighurst's (1981) view that complex developmental tasks may never be completely resolved and will need to be re-addressed at varying levels of complexity and sophistication; and (2) Schlossberg's (1984) assertion that adults often find themselves having to rework earlier transitions.

In summary, the value of this ecological perspective is its recognition that students operate in multiple environmental settings. When those environmental settings or systems most proximate to individual students are combined in mesosystems, the researcher must in turn recognize that students may be operating in qualitatively different environments even though they attend the same university. Because microsystems and mesosystems are experientially defined units of analysis, this perspective requires the researcher to attend more closely to the lived experience of students than may be the case when using institutional academic or administrative categories to define environmental contexts a priori. Such a perspective encourages the researcher to think in terms of the constellation or particular combination of environmental contexts within which a student functions (as well as those more distal contexts which also influence the student) rather

than simply in terms of a student being in one environment as opposed to another. Thus, the frame of reference is multivariate, interactive, and hierarchically nested. The importance of considering differences in the particular combinations of academic contexts experienced by students is reinforced by research showing that differences in coursework patterns are associated with differences in academic outcomes (Ratcliff, 1992; Ratcliff & Yaeger, 1994).

Research on First Year Students

Re-evaluating Out-of-class Interaction with Faculty as a Research Variable

Out-of-class interaction between students and faculty frequently appears in the literature as a key element in operationalizing the concepts of academic integration and academic involvement. However, one of the striking findings in this study was the limited extent to which students, particularly the high school entrants, thought of contacting their professors outside of class and acted on those thoughts. Where graduate teaching assistants were attached to the course, students often got the message (explicitly or implicitly) that they should address their questions to their TA rather than to the professor. To the extent that opportunities for out-of-class interactions with faculty are restricted by students' academic environments, the utility of measuring such interactions as an indicator of academic integration or involvement is questionable.

Intrinsic Interest and Task Involvement

The finding of variation in the extent to which students were motivated to complete particular academic tasks (e.g., lab reports) or keep up with their work brings to mind recent work by Sansone and her colleagues on intrinsic interest, particularly the variable they term **task involvement** (Sansone & Harackiewicz, 1996, p. 208):

> In our work, "feeling like it" is captured by the variable . . . termed task involvement. Task involvement reflects the degree of cognitive and affective absorption in the task. As such, it can be considered the positive phenomenal experience of intrinsic interest.

Where much of the research on intrinsic interest and self-regulated learning focuses on intrinsic motivation as an outcome, Sansone and her colleagues propose that it is also a process:

> In addition to motivation to reach the goal, we propose that motivation also derives from the individual's phenomenal experience while working toward his or her goal. Thus, once an individual begins an activity, the extent to which he or she feels like continuing may exert a greater influence on subsequent behaviors (such as persistence, degree of effort, attention, and so on) than the initial motivation to reach the goal. In other words, **outcome-derived motivation** may be necessary and sufficient to draw individuals into an activity, but **process-derived motivation** may be necessary to maintain performance over time. (Sansone & Harackiewicz, 1996, p. 208) {emphasis added}

If, as the experiences of the participants in this study suggest, students' academic experiences and perceptions are shaped to a significant degree by the types of activities in which they engage and by the challenges and supports presented by instructional practices, there is a need for research which investigates the extent to which first year courses, as they are currently designed and delivered, either facilitate and sustain intrinsic interest (process-derived motivation) or inhibit and erode it. This then needs to be followed up by research investigating the influence of intrinsic interest on subsequent educational outcomes (e.g., academic performance, satisfaction levels) at various levels of aggregation (e.g., at the course level, across concurrent courses, etc.).

Investigating the Connections Within and Between Courses

The results of this study suggest that many first year students encounter little coordination between their courses. Many also appear to find problems in the level of coordination between the various components within individual courses (e.g., between lectures and laboratories). There exists a need for research which investigates the connections between and within courses and subsequent consequences for student learning and satisfaction with courses. Phelan et al's (1991) research on the ease or difficulty with which adolescents move from one world to the next (e.g., from the world of school to the world of peers) highlights one possible avenue for such research: an

investigation of the factors which facilitate or inhibit students' mental transition from one course to another and the consequences of various levels of transition difficulty for educational outcomes.

Orientation and Academic Advising Practices

Expanded and Extended Orientation Programs

Historically, the majority of orientation activities at McGill have been organized by student associations on campuses and have a strong social rather than academic emphasis. The results of this study provide evidence that there is a need to expand the orientation provided to new students to incorporate academic issues. Particularly during the initial weeks of the semester, many of the participants experienced an almost constant state of anxiety arising from inadequate knowledge of the nature of the academic world they had entered. Of particular concern was determining the types of activities and tasks they would have to perform, what they needed to do in order to perform those activities and tasks, and the standards of performance expected of them. Although the university has made progress in introducing more academically oriented activities to the schedule of events, academic messages seem to be drowned out by the dominant emphasis on social activities.

Rather than trying to cover everything in the week prior to the start of classes, the results suggest that academic orientation activities should be extended over a longer period of time, perhaps over the duration of the entire first semester. Orientation Week is a hectic period for first year students, particularly those who have relocated geographically in order to attend university. During this period, new students are preoccupied with a variety of immediate tasks as they try to organize their academic and domestic situations in preparation for the start of classes. In addition, new students are inundated with information pamphlets and handouts; adding more would simply result in information overload, with a strong likelihood that the new information would be overlooked. Furthermore, many significant academic tasks (e.g., exams, term papers, etc.) do not arise

until much later in the semester. New students are preoccupied with addressing their most immediate academic challenges. They may therefore pay insufficient attention to information about more distal academic challenges, only to find that such information is needed when those challenges arise later in the semester.

It must be acknowledged that, generally speaking, the participants expressed increasing levels of comfort with being a university student as the semester progressed. In part, these increases in comfort and confidence were associated with an increased sense of "knowing what to expect," which in turn was associated with what might be best described as the acquisition of an experiential knowledge base. This knowledge base is akin to Snyder's (1971) notion of the hidden curriculum and Padilla et al's (1997) concept of heuristic knowledge as a primary source of student decision making about how to cope with the challenges of undergraduate study. As each new set of academic challenges was encountered, this experiential knowledge was expanded and modified. While some might argue that leaving students to learn academic survival skills through actual experience is the best solution, university officials need to seriously consider the question of whether the behaviors and strategies that prove sufficient for dealing with academic challenges are necessarily the same as those which are likely to maximize high quality learning outcomes.

The results of this study also indicate that additional attention needs to be paid to U1 students in planning orientation activities. The comments made by the U1 participants suggest that many in this group somehow get the message that orientation activities are intended primarily for U0 students; they are therefore disinclined to participate unless required to do so. Thus, university officials need to ensure that orientation activities are indeed relevant to the needs and concerns of U1 students, and that their relevance is communicated to these students. One obvious area for attention in this process is the provision of orientation to specific academic programs. None of the three U1 students who were functionally in the first year of a specific academic program made any mention of orientation activities specifically geared to students in their program. If such activities occurred, they did not appear to influence student behavior or

be memorable. Potential topics for inclusion are (a) an introduction to the academic and support staff within the department, (b) an overview of the nature of the academic program and the rationale behind its design, and (c) a discussion of prospects for employment or graduate study associated with that particular field of study. There is research evidence to support the utility of addressing such issues. For example, student lack of knowledge of career opportunities and unrealistic views of the discipline have been identified as potential contributors to low persistence rates in physics programs (Vázquez-Abad, Winer & Derome, 1997).

Improved Information on Courses for First Year Students

At the time of this study, the only information available to students selecting their courses for the first semester consisted of the brief descriptions provided in the undergraduate academic calendar and the verbal advice of academic advisors. By the very nature of its brevity, such information is inadequate for giving students a clear picture of what a particular course entails; what subject matter will be covered and how; what skills and knowledge students are expected to acquire as a consequence of the course; the instructional methods used and their relationship to the course's learning objectives; the types of assignments and assessment methods used in the course, their weighting in determining course grade, and their relationship to the course's learning objectives; and a statement of expectations regarding the extent of active student participation and involvement in course activities.

Some of this information is made available either in the printed course syllabus distributed during the first week of classes or is presented verbally by the instructor; other aspects, students must discover for themselves as the course progresses; and some of this information is never made clear to students. As is common with many universities, McGill has a period of two weeks at the beginning of each semester during which students may add or drop courses without academic penalty (although not necessarily without negative consequences for learning). It is during this period that students obtain

much of the information unavailable to them when they first register for the course. The resultant coming and going as students discover what their courses "are really about" creates a period of uncertainty about course enrollment which frequently delays the startup of conference or tutorial sections and may also interfere with the professor's instructional plans. This disruption and uncertainty might be avoided, or at least significantly decreased, if students were given more detailed information prior to selecting their courses. The costs of making such information available to a wide audience in printed form would be prohibitive. Given both the increased access of students to personal computers and thus to the Internet and the increased involvement of the university in designing web pages, electronic distribution of such information is much more feasible.

Enhanced and Expanded Academic Advising for First Year Students

The experiences of the participants in this study — for example, the uncertainty expressed by Eva (U1 Arts) about the role of her departmental academic advisor and anxiety about the types of issues it was appropriate to raise with him — suggest that there exists considerable room for improvement both in terms of increasing student access to academic advisors and in terms of clarifying the role of academic advisors and communicating that information to students. There is evidence that misunderstandings about the function of the academic advisor may continue past the first year, resulting in a less than optimal relationship between student and advisor. A survey of McGill University alumni (Denison, 1995) found that many respondents were dissatisfied with the commitment and competency of the academic advisors they had dealt with as undergraduates. What many respondents seemed to be calling for was the presence of academic "counselors" rather than the academic "advisors" or, as some termed them, the "academic approvers" they had experienced. They were looking for the development of an advising program in which students had frequent, or at least regular, contact with someone whose clear concern was with helping the student to clarify academic interests

and goals, to explore the best options for realizing those goals, and to develop and implement an academic plan that would maximize the undergraduate experience. Moreover, respondents to this alumni survey indicated that these advising positions should be filled by people who had the desire, skills, knowledge, and time to fulfill their responsibilities.

Enhancing Students' Repertoires of Learning Skills and Strategies

All of the participants in this study reported high levels of academic performance in their previous educational environments. Nonetheless, in dealing with the demands of university courses, many of them reported experiencing academic difficulties related to specific learning skills such as note-taking. Similarly, in discussing how they went about studying for midterm examinations, a number of the participants specifically reported using the same strategies they had used in high school or CEGEP, only to find that these did not produce the academic results to which they were accustomed. They subsequently described utilizing a trial-and-error approach in trying to modify their learning strategies to suit new academic challenges. There appears to be a need, then, for universities to explore ways in which they can assist first year students in acquiring or enhancing critical learning skills as well as enhancing their repertoire of learning strategies. To be effective in this endeavor, institutions need to shed the perception that this is simply a remediation issue affecting only the poorest students. Rather, they need to adopt a perspective which sees such activities as a means of maximizing the learning potential of their students.

Program Design, Course Design and Instructional Practices

Enhancing Coherence and Connections in First Year Programs

There is considerable room for improvement in terms of the extent to which first year programs in the Faculties of Arts and Science provide an integrated, coherent and focused academic experience for new students. The lack of program coherence perceived and experienced by students in the first semester was particularly evident in the

Freshman Programs for U0 students, but was also characteristic of the degree programs for U1 students. Currently, the majority of courses taken by first year students are introductory-level courses open to most undergraduate students. Few if any of the most common courses taken by U0 students in the Faculty of Arts have been specifically developed with first year students in mind. Nor do there appear to be any intentional mechanisms in either Faculty for drawing linkages between the courses (i.e., providing a sense of coherence to the FYP), or for ensuring that students acquire and/or develop the skills and habits (intellectual and otherwise) necessary for academic success at the university level. Given this situation, one could argue that the current Freshman Year Programs are more an administrative construct than real academic programs. A fundamental question, then, for members of the Faculties of Arts and Science, is: how seriously do they want a coherent and intentional Freshman Year Program?

There are at least two fundamental questions decision makers in the Faculties of Arts and Science need to consider in planning revisions. First, what educational purposes should the program seek to attain? In other words, what are its goals and objectives? Decisions about changing the existing courses and structures of the Freshman Year Programs could prove potentially self-defeating in the absence of clearly defined goals and objectives for the program as a whole. These goals and objectives should focus on student outcomes rather than content to be covered; for example, the knowledge first year students should have acquired by the end of the program, the skills and abilities they should possess, and at what levels of proficiency. As these issues are clarified, it then becomes necessary to consider the types of learning experiences (e.g., opportunities to engage in academic writing or small-group collaborative learning experiences) that are likely to be useful in attaining those program goals and objectives. It is recommended, for example, that the Faculties of Arts and Science undertake a serious investigation of possibilities for establishing Freshman Interest Groups or other forms of learning communities in Freshman Year Programs (see, for example, Gabelnick, MacGregor, Matthews & Smith, 1990; Tinto & Goodsell, 1993).

Clarification and Communication of Learning Objectives

Participants in this study often seemed to be at a loss in terms of understanding the learning objectives in their various courses. They could describe what topics were being covered or what activities had to be carried out but often seemed unsure about what they were trying to accomplish. Instructors of courses for first year students need to clarify just what it is they want students to accomplish in terms of acquiring knowledge and skills as a result of the course. They then need to clearly communicate these learning objectives to students, explaining the links between the various learning activities of the course and these objectives.

Development of Reading Guides

As described by the participants, a common feature of many humanities and social science courses is a great deal of reading. Indeed, keeping up with one's readings was a constant challenge for the Arts participants throughout the semester. I got the sense that this problem was exacerbated by the fact that participants were often unclear about what they should be trying to get out of those readings. The challenge for instructors is two-fold: (a) making reading assignments more effective as learning activities, and (b) providing a means to assist students in becoming more efficient in their reading practices. It is therefore recommended that instructors provide students with reading guides that serve to focus the assignments. These could take a variety of forms such as a statement of what students should get out of the reading, a list of questions to be answered or key concepts that need to be understood, or a list of themes or patterns to which students should attend while reading.

Better Planning of Conference and Tutorial Sessions

As described by the participants in this study, the conference and tutorial sessions in many first year courses seem to suffer from what can best be described as "mission creep," to borrow from military jargon. They frequently end up trying to

accomplish too many competing purposes given the time available; for example, reviewing material from the lecture sessions, providing an opportunity for students to discuss course material and ask questions, reviewing concepts and procedures related to homework assignments, providing a forum for assessing and assigning participation marks, and preparation for tests and exams. As a consequence, their effectiveness and potential as learning environments is diminished. Instructors should therefore take the time to clearly think through and prioritize what they want these course components to accomplish. Thought also needs to be given to the types of activities and conditions that are most likely to facilitate the realization of these objectives. It is important that the graduate teaching assistants who actually conduct these conferences and tutorials be involved in this process. Once a clear set of objectives has been established, the purpose of these sessions needs to be clearly communicated to students. Alternative methods for dealing with unaddressed student needs should also be explored.

Increased Opportunities for Active Learning

Instructors of courses taken primarily by first year students need to re-evaluate the types of activities that take place during lectures, conferences or tutorials, and laboratories, and how these various class components are conducted. The results of this study suggest that many first year students encounter limited opportunities for active learning in their courses, particularly during lectures. Instructors, therefore, need to explore ways and means of modifying existing practices to increase the opportunities for active learning.

Evaluation Practices and Improved Feedback to Students

Evaluation practices in first year courses need to reduce reliance on multiple choice test formats. In designing tests and exams, instructors need to ensure there is consistency between what is taught and what is tested. They also need to eliminate artificial ceilings on student performance. Both professors and graduate teaching assistants need to explore ways of supplementing traditional "results-based" feedback

with more "diagnostic" feedback so that students will have a better understanding of where and how they are "going wrong" and what they need to do in order to improve the situation. Particularly where TAs are the primary source of feedback from instructors, they are likely to require additional training in how to diagnose student errors and misconceptions, the types of strategies needed for overcoming these weaknesses, and how to communicate such information to first year students.

Conducting Comprehensive Formative Course Evaluations

Instructors of courses either designed for first year students or taken by large numbers of first year students should consider conducting comprehensive course evaluations in order to ascertain what students perceive as being beneficial or problematic about various aspects of the course in terms of facilitating learning. One suggestion might be to present students with a list of the learning objectives for the course and ask them to respond to each objective in a variety of ways. For example, they might ask students to: (a) rate how much importance they place on each of the objectives, (b) rate the extent to which they believe that each of the listed objectives is actually an objective for that course, or (c) rate the extent to which they perceive themselves to be making progress in realizing each of the listed objectives. By using a combination of such approaches, instructors will be better able to assess both the extent to which the learning objectives in a course have been communicated to students and the extent to which those objectives are being accomplished.

Original Contribution of the Study

The study contributes an original conceptualization of the transition to university which synthesizes elements of Schlossberg's (1984) work on adult transitions, Tinto's (1993) theory of voluntary student attrition, and Chickering's (1969; Chickering & Reisser, 1993) theory of psychosocial development in postsecondary students, as well as research in instructional and cognitive social psychology. This provides the type of

comprehensive conceptual framework needed by both researchers and practitioners concerned with the first year student experience.

In a recent article, Tinto (1997) makes several observations about the current state of research on student persistence that highlight the need to more closely examine the lived experiences of students, particularly in the academic domain. First, he notes that, to date, little has been done to explore how the experience of the classroom comes, over time, to shape student persistence. Second, he suggests that, although we know that student involvement matters, we have not yet adequately documented how student educational experiences come to shape involvement within the context of differing institutions of higher education. This includes the critical linkages between involvement in classrooms, student learning, and persistence. Third, he identifies the need for a better understanding of "the complexity of student involvements and the linkages that arise over time between classroom and out-of-class experiences" (p. 619). Finally, he indicates that we do not yet have an adequate understanding of how the educational opportunity structure of campus life is shaped by interactions across the academic and social geography of a campus and how this, in turn, shapes student learning and persistence.

By examining similarities and differences in the academic experiences of individual students over the first semester, this study extends our understanding of the transition to university and the environment in which that transition takes place. In particular, it provides insight into the changing reactions of students over time to the characteristics of course design and implementation, both individually and collectively, and their potential consequences for student learning. It also highlights the fact that first year students are strangers in the unfamiliar territory of university study and that the instructional conditions and successive sets of academic challenges encountered in the first semester form the experiential knowledge base that will govern their future functioning as students. Such information can have practical significance if used to plan more effective strategies for enhancing student success in the first year.

The results of this study provide confirmation of the need for a more fine-grained and comprehensive conceptualization of the academic environment as experienced by students. To address this need, the study contributes an original reconceptualization of elements of Bronfenbrenner's (1979, 1989) theory of the ecology of human development which adapts them to the context of higher education. Although by no means fully defined, ecological models of student experience such as that arising from this study show promise as a means by which we can map the linkages between experiences in various concrete settings and student outcomes such as learning and persistence. In presenting this framework for delineating the settings in which students operate (as opposed to differentiating types or dimensions of the institutional and external environments generally), the study provides means for enhancing the ecological validity of future research on postsecondary students' experiences. Moreover, given the extent to which the participants in this study experienced a very uncoordinated first year program, this tentative ecological model of the academic domain has practical significance in that it provides a framework within which instructors, administrators, and student affairs staff can think about consistencies and inconsistencies within and between the experiential settings encountered by students (e.g., academic courses) and their consequences for academic and developmental outcomes.

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APPENDICES

Appendix A: Student Background and Perceptions Questionnaire

Student Background and Perceptions
Version 1

D. Brian Denison

Centre for University Teaching and Learning

McGill University

1992

This survey asks you for information about your backgrounds, your program of study, and your reasons for attending university. It has been developed as part of a doctoral thesis study being conducted by the author into aspects of the student experience at McGill. Your honesty and assistance in completing this survey is greatly appreciated and will make a valuable contribution to the study.

Confidentiality of Responses

Because personal information is being requested, you may have some concerns about the confidentiality of your responses. Please be assured that only the researcher will have full access to the information gathered from individual students and no information that might identify you as an individual will be shared with anyone else.

Instructions

You are asked to make your responses using the computer scored answer sheet provided. Please note that this requires the use of an HB (No. 2) pencil. Accompanying each question are instructions as to where you should record your responses on the answer sheet. It should take you approximately 10 minutes to complete this survey.

Section 1: Background Information

ID Number: Find the code number printed on the front of the envelope which contained this questionnaire. Please record this number in the space labelled "STUDENT NO." on the answer sheet

For the remainder of this questionnaire, the number in front of each question indicates the space on the answer sheet where you should record your responses.

1. **Course Number:** Please indicate the course number for the class in which you received this questionnaire.

   1 = 110-200A 3 = 198-131A
   2 = 110-202A 4 = 198-230A

2. **Sex:** Please indicate your sex using the following codes:

   1 = Female 2 = Male

3. **Age:** Which of the following categories most accurately reflects your age today?

   1 = 17-18 years
   2 = 19-20 years
   3 = 21-22 years
   4 = 23-24 years
   5 = 25 years or older

4. **Geographic Origins:** Which of the following best describes where you lived prior to enrolling at McGill?

   1 = Quebec
   2 = Ontario
   3 = Atlantic Provinces
   4 = Western Canada
   5 = Country other than Canada

5. **Citizenship Status:** Are you a Canadian citizen or landed immigrant?

   1 = Yes 2 = No

Please continue on the next page.

Student Backgrounds 2

6. **Current residence:** Which of the following best describes your residence during the academic year?

   1 = University residence hall
   2 = My family's home or apartment
   3 = My own apartment
   4 = An apartment or home shared with other students
   5 = Other

Registration Status:

7. Year of study at McGill University:

   1 = 1st 2 = 2nd 3 = 3rd 4 = 4th

8. Did you enter McGill University from: 1 = High school?
   2 = CÉGEP?
   3 = Another university or college?

9. Are you registered as a: 1 = Full-time Student? 2 = Part-time Student? 3 = Other?

Academic program:

10. In which Faculty or School are you currently registered?
    1 = Arts
    2 = Science
    3 = Engineering
    4 = Education
    5 = Other

11. Are you currently in the Freshman Program in either Arts or Science? 1 = Yes 2 = No

12. Which of the following best describes the program of study you are currently intending to pursue?

    1 = English
    2 = Other humanities or social science program
    3 = Physics
    4 = Other physical or life sciences program
    5 = Other

13. How certain are you that your current choice of program of study is the best one for you?

    1 = Am currently undecided about a program of study
    2 = Very uncertain
    3 = Somewhat uncertain
    4 = Somewhat certain
    5 = Very certain

Please continue on the next page.

Section 2: Reasons for Attending University

When people make the decision to attend university, they typically have a number of reasons for doing so and some of those reasons may be more important than others. The following series of statements represent a number of reasons that students might have for coming to university. Please use the following scale to indicate the extent to which each of the reasons below was important in your own decision to pursue university studies:

1 = of no importance

2 = of some importance

3 = of moderate importance

4 = of high importance

5 = of very high importance

14. To develop my intellectual and problem solving skills.
15. To further develop my set of ethical and moral values.
16. To develop my creative abilities.
17. To develop greater personal insight.
18. To develop my leadership and organizational skills.
19. To acquire marketable skills.
20. To increase my ability to achieve financial security in the future.
21. To obtain specialized preparation for a particular career.
22. To open up a larger number of career opportunities.
23. To obtain a degree.
24. To learn for the sake of learning.
25. To gain exposure to different viewpoints.
26. To gain exposure to new areas of knowledge.
27. To increase my knowledge and understanding.
28. To obtain a general liberal education.
29. Most of my friends are also going to university.
30. To meet new and interesting people.
31. To make new friends.
32. To be accepted by others.
33. To improve my social relationships.

This is the end of the survey. Thank you for your honesty and assistance.

Appendix B: Invitation to Participate in the Study

INVITATION TO PARTICIPATE IN A STUDY OF THE TRANSITION EXPERIENCES OF FIRST YEAR UNIVERSITY STUDENTS

Dear Student:

I am a Ph.D. student in the Department of Educational Psychology and Counselling and at the Centre for University Teaching and Learning here at McGill University. The subject of my doctoral research is the transition to university, how it manifests itself in the situations and concerns experienced by first year university students, and how those issues influence students during the first year of university. I will be studying students who are entering McGill University this year from Canadian high schools or CEGEPs and who are pursuing academic studies in the Faculties of Arts and Science, particularly in programs in English or Physics.

As part of this study, students will be asked to participate in four assessment sessions and five interviews over the course of the academic year. Each assessment session will last approximately 90 minutes. You will be asked to complete three instruments: a variation of the *Student Backgrounds and Perceptions*, the *Challenges of University Life*, and the *Student Developmental Task and Lifestyle Inventory*. Each interview will take place approximately one week after the assessment session and will last approximately 90-120 minutes. The initial interview will focus on your reasons for attending McGill and choosing your particular program of study, and your intitial experiences. Each of the remaining four interviews will focus on the types of situations and issues you are experiencing as you adjust to university. In exploring these issues, I will be asking you about how you see different aspects of the situation, and how you are trying to deal with it. The final interview will involve exploring your overall perceptions of your first year at McGill and how you have changed over the course of the year. My goal is to analyze the materials from your assessment sessions and interviews in order to better understand the experience of first year students as you make the transition to university.

Students selected for the study will be paid for their time, although this is not the only potential benefit of participating. Students who participate in this type of research often find the experience rewarding in terms of the personal insight they gain, and I hope that this will be true for this study. The assessment sessions and interviews present a unique opportunity to reflect upon and explore your experiences as you progress through the year.

If you are a first year student here at McGill, a Canadian citizen or landed immigrant, have started or are thinking of pursuing a degree program in English or Physics, and are interested in participating in the study, please provide the information requested on the back of this form.

Thank you for your time and consideration,

D. Brian Denison

PLEASE PRINT

Name _____ Code Number Printed on Envelope _____

Local Mailing Address: _____

_____

_____

Local Telephone Number: _____

Times during the week (day or evening) when you would be able to meet or be interviewed:

Monday _____

Tuesday _____

Wednesday _____

Thursday _____

Friday _____

Appendix C: Interview Dates

Participant		Interview			
		Context Interview	Experience Interview #1	Experience Interview #2	Experience Interview #3
Susan	U0 - Arts	16 Oct. 92	6 Nov. 92	30 Nov. 92	5 Feb. 93
Adam	U0 - Arts	12 Oct. 92	29 Oct. 92	26 Nov. 92	28 Jan. 93
Ruth	U0 - Science	11 Oct. 92	1 Nov. 92	29 Nov. 92	31 Jan. 93
Jason	U0 - Science	9 Oct. 92	30 Oct. 92	27 Nov. 92	29 Jan. 93
Eva	U1 - Arts	13 Oct. 92	3 Nov. 92	26 Nov. 92	27 Jan. 93
Mark	U1 - Arts	15 Oct. 92	5 Nov. 92	3 Dec. 92	25 Jan. 93
Sarah	U1 - Science	21 Oct. 92	2 Nov. 92	24 Nov. 92	1 Feb. 93
Pierre	U1 - Science	13 Oct. 92	5 Nov. 92	27 Nov. 92	28 Jan. 93

Appendix D: Participant Consent Form

The Transition to University: An Investigation of the Experiences of First Year Students

CONSENT FORM FOR CASE STUDY PARTICIPANTS

To participants in this study:

A standard feature of educational research is that both researcher and participant complete a consent form before the study begins. The purpose of this consent form is to outline the purpose of the study and what you are being asked to do. In addition, it outlines the benefits and potential risks that might result from your participation and the measures that will be undertaken in order to ensure the confidentiality of the information you provide and your personal well-being. With our signatures, the document becomes an agreement as to what we can reasonably expect of each other during the course of your participation in the study. For our mutual protection, each of us will have a signed copy of the consent form.

What is the study about? I am a Ph.D. student in the Department of Educational Psychology and Counselling and at the Centre for University Teaching and Learning here at McGill University. The subject of my doctoral research is the process of making the transition to university, how it manifests itself in the situations and concerns experienced by first year students, and how these issues influence students during the first year of university. I am interviewing students entering McGill University from high school or CÉGEP and pursuing academic studies in the Faculties of Arts and Science. You are one of eight participants.

What are you being asked to do? As part of this study, you are being asked to participate in four assessment sessions and five interviews over the course of the academic year. Each assessment session will last approximately 90 minutes. You will be asked to complete three instruments: a variation of the *Student Backgrounds and Perceptions*, the *Challenges of University Life*, and the *Student Developmental Task and Lifestyle Inventory*. Each interview will take place approximately one week after the assessment session and will also last approximately 90-120 minutes. The initial interview will focus on your background, your reasons for attending McGill and choosing your particular program of study, and your intitial experiences. Each of the remaining four interviews will focus on discussing the types of situations and issues you are experiencing as you adjust to university. In exploring these issues, I will be asking you about how you see the situations, your thoughts as to their sources or causes, what effect they are having on your experiences as a student, and how you are trying to deal with them. The final interview will also involve exploring your overall perceptions of your first year at McGill and how you have changed over the course of the year. My goal is to analyze the materials from your assessment sessions and interviews in order to better understand your experience and that of other first year students as you make the transition to university.

Taping of interviews and confidentiality of data Each interview will be audiotaped and transcribed. These audiotapes and transcripts, as well as the results of the assessment sessions, will be used confidentially; that is, they will not be used in any way which might identify you as an individual. Only I and my supervising professor will have access to the data. In order to ensure your privacy and to maintain confidentiality, you and I will agree upon a pseudonym to be used in place of your real name. This pseudonym will be used in transcriptions of your interviews and in any written or oral use of material from either the interviews or the assessment sessions.

Your rights to withdraw from the study and withdraw consent for the use of material from the interviews You may withdraw from the study at any time simply by notifying me that you no longer wish to participate and giving me some indication of your reasons for doing so. You may also withdraw your consent to have specific excerpts of an interview used by telling me at the time.

Potential risks Participation in the study presents no risk of physical harm or danger, nor do I anticipate any psychological harm coming to you as a consequence of your participation. However, it is possible that some of the situations you experience during the academic year will be very personal in nature and discussion of these in the interview sessions might be a source of discomfort for you. If such is the case, you are under no obligation to discuss these concerns with me.

I have training and experience as a counsellor acquired through seven years of working with university students; however, I am not a licensed professional. If, in the course of the interviews, an issue emerges which causes you emotional discomfort such that you feel the need for assistance, there are several alternatives. First, we can terminate the interview (including the audiotaping) and focus on the issue at hand, rescheduling the interview for a later time. Second, we can continue the interview and discuss the particular issue in more depth upon its conclusion. In both of the above alternatives, my role will simply be that of an objective listener. Third, you may choose to terminate the interview at that point, without further discussion of the issue, and reschedule it for a later time. Fourth, we can continue with the interview without further discussion of the particular issue. Further assistance is available from Student Services.

Benefits of participation As compensation for your participation in the assessment and interview sessions, you will be paid at the rate of $10.00 per hour. In signing this consent form, you are agreeing to this rate of payment and to the use of the data. Students who participate in this type of research often find the experience very rewarding in terms of the personal insight they gain, and I hope that this will be true for you as well. The assessment sessions and interviews present a unique opportunity to reflect upon and explore your experiences as you progress through the year.

If you have any further questions, please contact either myself or Dr. Janet Donald at the Centre for University Teaching and Learning by telephoning 398-6648.

I, _____ have read the above statement and agree to participate in the study under the conditions stated above.

_____ _____

Signature of participant Date

I, as the researcher, agree to conduct the study and deal with the above-named participant according to the conditions stated above.

_____ _____

D. Brian Denison (Researcher) Date

Appendix E: Interview Guide for Initial Context Interview

PRELIMINARY INTERVIEW GUIDE – CONTEXT INTERVIEW

During this first interview, I'd like to try and get a more complete sense of who you are, where you come from, and how you came to be here. In a sense, I'll be asking you to expand upon some of the information you've provided in the various questionnaires thus far, and talk about some issues that weren't really touched on by those questionnaires.

Home community

To begin, I'd like to hear about where you're from? I know from the questionnaire you completed that you're from <province>. What city or town are you from? How long have you lived there? How big a place is it?

Family background

Next, I'd like you to describe your family for me. How many brothers and sisters do you have? How old are they? Have any of them attended university? If so, where, and what did they study? What about your parents? Do they have university degrees? In what subjects? Where did they go to university? What type of work do they do?

Educational background and experiences

I'd like to change the topic now to your educational background. Where did you go to school before coming to McGill? How long were you there? How big a school is it in terms of enrollment? What were your courses like? How easy or difficult were academics? What were your relationships with teachers like? What about relationships with other students?

Educational plans, motivations, aspirations, and influences

Now I'd like to shift the focus slightly and talk for awhile about your educational plans. Please tell me about some of your reasons for wanting to go to university. What are some of the things that you believe a university education will provide you with? As you think about this, what are some of the most important benefits of a university education from your perspective? How far do you see yourself going in terms of a university education? Do you see yourself going on to do another degree after the Bachelor's? In what area? What have been some of the influences on the general educational plans you've just described?

Nature of, and influences upon, educational choices

Choice of university

Now, I'd like to ask you about some of the more specific aspects of your educational plans. Perhaps we could begin by talking about why you chose to come to McGill rather than some other university? Was McGill your first choice or would you have preferred to go to some other university? What was it about McGill that appealed to you? What were some of the other influences on your decision to attend McGill?

Choice of program

Let's talk about your program choice now. Please tell me about how you came to choose this particular program? What was it about the program that particularly appealed to you? How did you come to learn about this particular program at McGill? What were some of the influences that encouraged or supported your choice of this particular program?

Choice of living arrangements

We've just been talking about the reasons behind your choosing to attend McGill and the reasons for choosing to enter this particular program. Now I'd like you to talk about your reasons for choosing to live where you do? How did you come to reach this decision? What other options did you consider?

Expectations of university life

Whenever we start something new in our lives, we have ideas or expectations about what it will be like. You've been a student at McGill for only a couple of weeks now, so some of those expectations are probably still fairly fresh in your mind. I'd like to get a sense of what you expected university life would be like. Could you begin by telling me in general what you thought McGill would be like? What did you think your courses would be like? What were your expectations about the amount of work you would have to do? What your expectations about what your professors would be like? What did you think your interactions with other students in your courses would be like? What did you think social life would be like? What did you think living in residence would be like? (or, What did you think sharing an apartment would be like?, or What did you think it would be like living at home and going to university?)

Initial experiences of university life

Now that we've talked about what your expectations were, I'd like to shift the topic to exploring what your first few weeks at McGill have been like. Take a moment and think back over what's happened since the academic year started (or since you arrived on campus)... Please describe for me what's happened during these past few weeks, the

types of things you've done, and how you've spent your time. I want to try and get a picture of what those weeks were like through your eyes.

Correspondence between expectations and experiences

Sometimes the reality lives up to our expectations, sometimes it exceed them, and sometimes reality fails to live up to what we had hoped for. You've described for me your expectations and you've described your experiences during the first weeks. Please describe for me the ways in which that reality has or has not lived up to your expectations. In what ways, if any, have you changed your assumptions about McGill, about your courses, about residence, about what it means to be a university student?

Anticipated changes and challenges

One final topic before we finish. As you look ahead over the next few weeks or months, what are some of the changes you see yourself as having to make in how you function as a student? What are some of the issues, tasks or concerns you see yourself as having to deal with in upcoming weeks?

Unaddressed issues

We've really covered a lot of ground in this interview and I think I've learned a lot about your early experiences of McGill and being a university student. If there is anything we haven't talked about that you think would help to give me a more complete and accurate picture of your thoughts and experiences, please feel free to bring them up now.

Permission to contact student by telephone

During the next day or two, I'll be reviewing the audiotape of this interview to make sure I have a clear understanding of everything you've told me. If there is something I'm unsure about, I'd like to telephone you and get your help in clearing up my confusion or uncertainty. I hope that will be all right with you?

Thanks for a great interview. You've provided me with a lot of useful information. Before you leave, I'd like to tentatively arrange an appointment for our next meeting.

Appendix F: Interview Guide for Experience Interviews

PRELIMINARY INTERVIEW GUIDE –EXPERIENCE INTERVIEW

Typical routine: weekday and weekend

During this part of the interview, I'd like to get an idea of what daily university life has been like for you during the past few weeks.

Before we begin, I'd like you to take a moment and think back over the past two or three weeks... As you do so, I'd like you to focus in on what you would consider to be a typical day of classes...

Now, I'd like you to describe what that day was like, what sorts of things did you do, with whom did you do them, how you spent your time, and so on. What I'm trying to do here is get a picture of what that day was like through your eyes.

Perhaps, you might begin by talking about when you got up in the morning.

<If you can't think of a typical day, perhaps you could talk about some of the ways in which each day was different>

That gave me a really good picture of what a week-day was like. Now, I'd like you to think about your weekends during the past two or three weeks... Try to focus in on what you would consider to be a typical weekend...

What I would like you to do now is describe that weekend for me in the same way that you described a typical week day.

<If you can't think of a typical weekend, perhaps you could talk about some of the ways in which each weekend was different>

Experiences and challenges (perceptions of self-in-situation)

In this next part of the interview, I'd like to shift the focus to exploring what's been going on in various areas of your life -- in the areas of academics, residence or home life, social life, etc.

Academics

Let's begin by focusing on academics... Take a moment to think about what you've been doing in your classes and studying during the past few weeks...

I'd like you to give me an overview, if you would, of what's been happening in this area and how you've been dealing with it. If there are particular issues or events that you don't feel comfortable in sharing with me, that's quite all right -- you can talk about whatever you feel comfortable with sharing.

Some of the things you might focus on are

- the types of topics you've been covering in your courses,
- the types of homework or other academic assignments you've had,
- any tests or exams you've had,
- experiences or relationships with your professors,
- experiences or relationships with other students in your courses.

As you think back over the things you've just talked about, what experiences stand out in your own mind?

What were some particularly positive experiences or events? What made them positive?

What were some of the not-so-pleasant experiences? What was it about these experiences that made them negative?

Have any of these experiences presented 'problems' or 'challenges' that have meant you have had to make changes in your typical way of doing things?

In what ways have your academic experiences during the past few weeks affected your educational plans, either by changing them or by reconfirming them? I'm thinking here of potential influences on your plans about both your major and about studying at McGill.

Social

Let's shift now to what's been going in your life outside of academics (i.e., courses and studying) during the past few weeks.

What sorts of nonacademic things have you been doing?

Who have you been interacting with?

What sorts of things have you been doing for fun?

What sorts of things have you been doing with your friends?

Have you made any new friends in recent weeks?

Have you had any interesting conversations or experiences with other students?

As you think back over the things you've just talked about, what experiences stand out in your own mind? What were some particularly positive experiences or events? What made them positive?

What were some of the not-so-pleasant experiences? What was it about these experiences that made them negative?

Have any of these experiences presented 'problems' or 'challenges' that have meant you have had to make changes in your typical way of doing things?

In my own mind, I've been thinking about this topic of conversation as being a discussion of your social life. Is that how you think of it, or do you have another term for it?...

O.K. In what ways have your social life experiences influenced your academic experiences? In what ways have your social life experiences influenced your feelings about being a student at McGill?

Living arrangements

Let's shift our focus to what's been going on with your experiences at home (or in residence). Some of this may overlap with things we've already talked about. That's OK... what I'm trying to get a sense of is what it's been like living where you do.

As you think back over the things that have been happening, what experiences stand out in your own mind? What were some particularly positive experiences or events? What made them positive?

What were some of the not-so-pleasant experiences? What was it about these experiences that made them negative?

In what ways have your experiences at home (or in residence) influenced your academic experiences?

In what ways have these experiences influenced your social life?

In what ways have these experiences influenced your feelings about being a student at McGill?

Assessment of experiences

I'd like to take a moment to review what we've done in this interview. We started off by talking about what a typical weekday and weekend has been like for you. We then explored, in fair detail, what your experiences have been like in various aspects of your life as a student.

What I'd like to do now is get a sense of how you would evaluate your experiences as a student at McGill since the last time we spoke...

In general, has it been a positive experience, a negative one, or a combination of the two?

What have been the most significant aspects or highlights (either positive or negative) of your overall experience during this period?

In what ways do you see yourself as having changed during this period?

Anticipated changes and challenges

As you look ahead over the next few weeks or months, what are some of the changes you see yourself as having to make in how you function as a student?

What are some of the issues, tasks or concerns you see yourself as having to deal with in upcoming weeks?

Wrap-up

Before we conclude the interview, I want to make sure that you have had an opportunity to discuss everything you think is important about your experiences during the past few weeks. If there are any topics we overlooked, please feel free to bring them up now. During the next day or two, I'll be reviewing the audiotape of this interview to make sure I have a clear understanding of everything you've told me. If there is something I'm unsure about, I'd like to telephone you and get your help in clearing up my confusion or uncertainty. I hope that will be all right with you?

Thanks for a great interview. You've provided me with a lot of useful information. Before you leave, I'd like to tentatively arrange an appointment for our next meeting.

Appendix G: Schedule of Classroom Visits

Date of Visit	Course Visited	Participant(s) Involved
Mon., 16 Nov.	Calculus I (Mathematics 189-120A)	Ruth, Sarah
	Mechanics & Waves (Physics 198-131A)	Ruth, Sarah
	General Chemistry (Chemistry 180-120A)	Ruth, Sarah
	American Literature I (English 110-225A)	Eva
Tues., 17 Nov.	Introductory Organic Chemistry (Chemistry 180-212A)	Jason
	The Art of Listening (Music 210-211A)	Susan
	Survey of English Literature I (English 110-200A)	Susan, Adam
Wed., 18 Nov.	Canadian Literature I (English 110-228A)	Eva
	Molecular Biology (Biology 177-200A)	Jason
	Mechanics & Waves (Physics 198-131A)	Jason
	Special Relativity and Modern Physics (Physics 198-260A)	Pierre
	Introduction to Greek Mythology (Classics 114-203A)	Adam
Thurs., 19 Nov.	Advanced Calculus I (Mathematics 189-248A)	Pierre
	Ordinary Differential Equations (Mathematics 189-325A)	Pierre
Fri., 20 Nov.	Classical Mechanics I (Physics 198-251A)	Pierre
Mon., 23 Nov.	History of Communications (English 110-277)	Mark
	Departmental Survey of English Literature (English 110-202A)	Eva, Mark
	Introduction to Psychology (Psychology 204-100A)	Susan, Adam
Wed., 25 Nov.	Calculus A (Mathematics 189-150A)	Jason
	European Civilization (History 101-215)	Adam
	Introduction to Drama (English 110-230D)	Mark
Thurs., 26 Nov.	Vectors, Matrices & Analytic Geometry (Mathematics 189-221A)	Ruth
Mon., 30 Nov.	Communications & Literature (English 110-275D)	Mark

Appendix H: Sample Notes from Classroom Visit

RECORD OF CLASSROOM SITE VISIT

COURSE:	Art of Listening (180-120)
DATE:	17 November 1992
SCHEDULED TIME:	13:00 - 14:30
LOCATION:	F. D. Adams Auditorium
PARTICIPANT(S) INVOLVED:	Susan (U0EF)

TIME	OBSERVATIONS
12:49	• Arrived outside lower left entrance to FDA auditorium • Preceding class still in session • Handful of students have arrived and are waiting outside doors: 3-4 are sitting individually (2 of them reading campus newspapers); other group of 4 are standing together, chatting about nonacademic issues
12:51	• Group of 4 have entered auditorium as students from preceding class begin to exit
12:55	• Entered auditorium and took seat at rear left (just to right of aisle) • Students entering in small groups and taking seats • Outer seats to right and left of inner aisles seem very popular with group of students beginning to take seats in lower center • A number of conversations are taking place among small groups of students seated together in various locations throughout auditorium
13:00	• Some students are eating lunch, others reading campus newspapers, some reading class notes and books • Students continue to arrive, primarily from lower left and right — no sign of prof • Lower left of auditorium is beginning to fill up, with much smaller # of students (≈ 20) selecting seats right near back of auditorium • Noise level increases with number of conversations — impossible to ascertain topics being discussed

TIME	OBSERVATIONS
13:04	• One visually impaired student is among those entering the auditorium — he takes a seat front center • As seats in lower half are filled up, more students are taking seats in back half of auditorium — no sign yet of U0EF (Susan) or of prof
13:07	• Still no sign of prof • Auditorium is rapidly filling up and becoming quite noisy • Most students have taken out notebooks or notepads — only a few have taken out their textbooks • Conversations among students seated near me are about non-academic issues (e.g., whether or not to go to a movie later in the week)
13:09	• Prof arrives and dims lights somewhat • Noise level diminishes slightly as prof organizes her materials
13:10	• A couple of students approach prof as she is getting organized and speak with her briefly • Numerous conversations continue throughout auditorium
13:14	• More students enter • Prof picks up throat mike — room gradually quiets down • Prof apologizes for being late (because of rehearsals) but indicates she had forewarned people during last class • Indicates that someone should be here today from "Amadeus" production — today's topics: Webern, Berg and one other composer • Asks class how they would describe difference between work of Schoenberg & DeBussy — only a few students offer responses
13:18	• As a few more students enter, prof asks if people have thought about differences between French and German music at beginning of century — uses food from the two countries to illustrate differences • Introduces Webern • Most students are attending closely to prof and taking notes, some referring to textbooks • Student at rear of class asks about where Schoenberg & Webern would fit in to today's scene if they were still alive and working

TIME	OBSERVATIONS
13:25	• A number of conversations, primarily among male students, are taking place at rear of auditorium • Prof seems to be very much aware of what is going on in class • Prof asks students a question to think about as she begins to play a piece of Webern's music • A few whispered conversations take place as music is playing — I can hear a number of "Sshh's" from nearby students
13:34	• A couple of students enter from rear, including one M in wheelchair
13:35	• Nearly all seats in auditorium are taken • Fair bit of interaction, I —> S and S —> I, as piece of music is discussed • Prof replays parts of piece
13:44	• A number of low conversations are taking place in back rows as prof is talking • Prof introduces next composer, Berg, and background of piece of music from opera "Wozzack" (?) • In the background, I can hear the sound of machines — some form of construction going on
13:50	• Some students appear to be tuning out: • One group of 4-5 males, 2 rows in front of me, have been conversing throughout much of lecture thus far • Female student in front of me is reading article on "Release of Chemical Transmitters"
13:52	• Prof reacts to noise from conversations and asks people to please not talk, particularly in light of what needs to be covered before end of classes
13:56	• One student gets up and leaves from rear as piece of music is playing • Female student has moved from left rear to sit beside Female student in front of me (same one who had been reading article) — they are now carrying on a conversation in low voices

TIME	OBSERVATIONS
14:03	• 3 conversations going on in front of me make it difficult to hear comments from students in lower half of auditorium as piece of music is discussed
14:05	• Prof indicates that students can pack up early as person who was to speak on "Amadeus" can't make it • Prof asks people to stay put as she has a couple of announcements • A lot of noise and shuffling around • Student asks when class will get to jazz pieces — prof responds • Prof describes last class assignment and indicates how it will provide excellent practice for the "listening final" (component of final exam)
14:09	• Prof dismisses class • Small group of students moves to front of class to speak with prof • Interestingly, one of the students speaking with prof is a male who had been engaged in many of the conversations noted earlier
14:12	• Only 20 students left

Appendix I: Comparison of Verbatim and Edited Transcript Versions

VERBATIM TRANSCRIPT	EDITED TRANSCRIPT
EVA: Yeah, well, a lot of the things that have happened seem... they seem, to me, so small...	EVA: Yeah, well, a lot of the things that have happened seem, to me, so small, you know, and trivial, that it's hard to know what you would consider important for this sort of thing. I mean, because for me, you know, really, doing the work and that sort of thing isn't hard. But things like knowing where to return a book in the library, for me, is, heh, "Oh God. Where am I going?" That's the kind of things that I panic over. You know? And they seem kind of small.
BRIAN: Mhm mhm.	BRIAN: And have there been other types of little hassles or things like that?
EVA: ...you know, and trivial, that it's hard to know what... you would consider... important for this sort of thing. I mean, because for me, you know, really, doing the work and that sort of thing isn't hard. But things like... knowing where to return a book in the library...	EVA: Well, let's see, what else was there? There was that; that was an actual thing that I didn't know what to do. Heh heh. (P)
BRIAN: Mhm mhm.	EVA: Well, I don't know, it's hard to remember. Heh. (P)
EVA: ...for me, is... heh... "Oh God. Where am I going?" That's my... heh... thats the kind of things that I panic over.	EVA: Well, there's little things like, you know, going to Dawson Hall and asking questions about certain things. And them telling you, "Well, I can't answer you here. Go somewhere else." "Oh God. Where is this other place?" And that's — those are the little kind of things that make me cringe and get all nervous. "Okay, where do I find this other building? Oh no. I don't know where I'm going." That sort of thing, as opposed to, you know, the more general "getting the work done" problems.
BRIAN: Mhm mhm.	BRIAN: Well, those things are... Yeah, I think they're just... in some ways, they're just as important as the other ones, because they're the sorts of little things you have to deal with every day?
EVA: You know? And they seem kind of small.	EVA: Yeah. It keeps you from feeling really comfortable in where you are. And for me, that's — if I don't feel comfortable in the place where I have to work, then work is just not gonna happen. So. But I guess I got over those things. Well, most of them. Yeah.
BRIAN: And have there been other types of little hassles or things like that?	
EVA: Well... um... let's see, what else was there? There was that. That was an actual thing that I didn't know what to do. Heh heh. Ah... (P) Well... I don't know, it's... it's hard...	
BRIAN: Mhm mhm.	
EVA: ...hard to remember. Heh. (P) Um, well, there's little things like... you know, ah, going to Dawson Hall... and asking questions about certain things. And them telling you, "Well, I can't answer you here. Go somewhere else." "Oh God. Where is this other place?" And that's... that... those are the little kind of things that...	
BRIAN: Mhm mhm.	
EVA: ...that make me... cringe and get all nervous. "OK, where do I find this other building? Oh no. I don't know where I'm going." That sort of thing... as opposed to,	

VERBATIM TRANSCRIPT	EDITED TRANSCRIPT
you know, the more... general... "getting the work done" problems.	
BRIAN: Well, those things are... yeah, I... I... I think they're just... in some ways, there just as important as the other ones, because they're... they're the sorts of little things you have to deal with every day.	
EVA: Yeah. It keeps you from feeling really comfortable in where you are. And for me, that's... if I don't feel comfortable in the place where I have to work, then... work is just ...	
BRIAN: Mhm mhm.	
EVA: ...not gonna happen. So. But I guess I got over those things. Well, most of them. Yeah.	