Flowers of the daylily cultivar ‘Neal Berrey’.

The hybridizer of this variety is Sarah Sikes from Alabama. In 1995, this plant received a silver medal as the highest annual award for a cultivar. The flowers are five inches in diameter and 18 inches tall.
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INSIDE BACK COVER
A plant of the daylily cultivar 'Bandit Man', Don Stevens
Parenting teenage children is fast becoming the most difficult, stress-filled job of the 90's. As our kids are attacked from all sides by drugs, alcohol, crime, violence, sexual perversity and countless other lesser maladies, parents are increasingly seen with that blank look on their face, a mix of disbelief, second-guessing, fear and despair. What used to be a pleasurable pastime of raising children in a climate akin to the days of Leave It To Beaver has become a difficult and saddening chore with mom and dad uttering the battle cry of the times, “what's a parent to do?”

My wife and I have so far (emphasis on so far) been quite fortunate in raising our teenage daughters. There have been a few shouting matches, a few crying episodes, a few slammed doors and a few stern late night discussions, but nothing approaching the crisis management that so many parents have had to face as their son or daughter slips into illegality, ill health or ill will.

So why the apparent success in the Kryzanek household? Is it luck? Is it in the genes? Is it discipline? Is it religion? Is it love? Why have we been blessed, while other parents have those blank looks? It certainly isn't because we took a course in parenting, read Dr. Spock twenty years ago or listened to talk radio psychologists late at night. In fact my wife and I really jumped into this parenting business with little preparation and little thought, which upon reflection probably was not a very wise thing to do considering the problems and threats that are out there.

But after twenty years of doing whatever we are doing, there are a few observations about parenting that are beginning to rise to the surface. These little nuggets of wisdom are in no way meant to suggest all-encompassing answers to the ills of today’s youth, or are they presented as the first installment of a new parenting self-help book by the Kryzaneks. The observations, however, do point to what more and more “successful” parents are finding as the keys to getting families through those adolescent years.

1. Parenting by good example remains the rock solid foundation of raising good kids. Mom and dad can preach till they are blue in the face, but if their kids see them engaged in behavior that is contrary to the message being preached, then teens will automatically shut off those listening skills and follow in their parent’s footsteps. Good example may be an ancient and simplistic tool for behavior modification, but it still works.

2. The most injurious parenting phrase of the 80’s and the 90’s is “it’s not the quantity of the time I spend with my children, it’s the quality of the time.” Whoever first uttered those words ought to offer an apology. Parents who bought into that philosophy fooled themselves by thinking they could have it all and still assume the heavy burdens of being a full-time mom and dad. Thankfully, more and more parents are beginning to recognize that spending time with their kids and most of all being there when the kids need them is absolutely essential for their personal and moral development.

3. Effective parenting begins with effective teaching. Too often television, movies, advertising and now online computer services have become the sources for directing the lives of teenagers. Moreover, in this hustle and bustle world we live in, parents are too willing to have the teaching role taken up by the D.A.R.E. officer or the school principal or the parish priest. Teaching is a hard task; it requires time, communication skills, discipline and most of all love, but it remains the best tool in the arsenal of parenting.

Even with these simple suggestions, there is no guarantee of success. Many times young people make foolish decisions or are in the wrong place at the wrong time or take bad advice from friends. In these situations good example, quantity of time and teaching skills have little impact on saving a young boy or girl from crossing the line. But that should not stop parents from recognizing that they do have the ability to guide their teens through the “terrible teens.” It’s a tough and often thankless job, but our future as a civilized society depends upon good parents doing good work.

Michael Kryzanek is Editor of the Bridgewater Review
A DAYLILY AFFAIR

James R. Brennan

It was the summer of 1962 and I was participating in a National Science Foundation Summer Institute in Plant Evolution. The structure of the program, and the distinguished lecturers who had come to Vanderbilt University for those six weeks, provided plenty of information that could be carried back to undergraduate biology courses at Bridgewater. However, to a young faculty member only four years out of a PhD program, there was still something lacking from this total immersion in the academic role of a teacher. Every new PhD in the natural sciences is indoctrinated with the idea that their graduate degree is only the beginning. Research involving active laboratory or field investigations which contribute to scientific knowledge is the name of the game.

During the four years that had passed since leaving graduate school I had attempted to conduct active investigations in studies of plant structure, but this wasn't the same scene as my graduate research had been at Virginia Tech and the University of Maryland. In those places, there had been funds from the Agricultural Research Stations to support applied studies with peanuts and asparagus. There were other graduate students working day and night on intriguing small questions about the life of plants. There was a constant procession of classes and seminars led by well recognized botanists from large staffs. Equipment and supplies were available to do almost anything that was necessary to squeeze out the answers to all of those detailed questions that swirled around the laboratories. Above all, there was the pressure to produce a publishable thesis.

Suddenly, after five years of graduate school, I found myself with the skills, background and drive to conduct original studies, but with none of the encouraging atmosphere of graduate school. Norwich University in the late fifties had meager facilities for a plant cytologist and there were no other botanists upon whom one could try new ideas. There was little chance to solve problems at the cutting edge of botany, even though it was possible to find small questions that were relatively simple to solve, such as the unusual abscission patterns in English ivy leaves on the campus buildings. Unfortunately, I was just marking time, with no unified research goal developing. It was clear that an active research program, which would satisfy that overwhelming need of a new PhD in science to contribute new knowledge, could not long be sustained in this fashion.

Bridgewater State College held out more promise, with three other botanists on the faculty and a new science building about to be constructed. The list of furnishings for the new building promised modern equipment. There would be up-to-date microscopes and associated paraphernalia which would allow me to plunge into substantial studies of plant cell structure. Why, there was even an x-ray unit listed; a tool that would allow experimental mutations and chromosomal aberrations to be induced!

In the process of looking for an overall goal that will bring unity to a research program in biology, it is usually necessary to concentrate on one major aspect of the life of a number of different organisms, or, even better, to concentrate on several different aspects of one experimental organism. If one is to develop expertise in scientific research, it is necessary to zero in on a concisely defined area.

Thus, it turned out that in that summer of 1962 in Nashville, I stumbled onto what has now become, at the end of my career, the center of my research interests. A diversionary weekend visit to the Tennessee Botanical Garden and Art Museum at Cheekwood led me to a flower exhibition featuring daylilies (Hemerocallis). There was a single table with not more than thirty or forty cut flower stalks (scapes), each bearing a single large blossom. I was intrigued by the form and color of these members of the lily family and I knew at first glance that there was great potential for this plant as the subject of a research program.

Daylilies are perennial plants which are most often propagated by dividing the plants every three or four years. Thus, each distinct variety, known as a "cultivar," represents a clone; all individuals in the cultivar are genetically identical. It is also possible to propagate daylilies by cross-pollinating different cultivars, thereby combining varying characteristics.
into new hybrid cultivars. As more and more hybrids are created, some distinct characteristics become popular, creating a demand in the commercial market. Thousands of people throughout the country are actively crossing different cultivars and collecting seeds, in an effort to create new cultivars with what they think is the perfect combination of characteristics.

I returned to Bridgewater in the summer of 1962 and purchased my first three daylily plants. When we moved to another house two years later they went with us. Those original three cultivars are still in my garden someplace, and some of their genes are probably present in the breeding stock that I use to create new cultivars. How old fashioned and simple those first plants appear next to modern cultivars thirty years later! And how quaint and small that 1962 exhibition seems in comparison to the daylily shows of the nineties!

The research program that I envisioned centering around daylilies ran afoul of some roadblocks in the very beginning. As is often the case in state-funded projects, as the new science building neared completion, we found ourselves forced to cut about $300,000 from our equipment budget. The x-ray unit never arrived. This meant that I would be unable to create the gene mutations necessary to develop new characteristics. I tried for awhile to create mutations with ultraviolet irradiation of daylily pollen, but it was too slow. Without the more powerful x-irradiation, the prospects seemed dim. My research interests moved toward another plant named Tradescantia.

Tradescantia is a member of a plant family closely related to lilies, and is often used as a houseplant. The small flowers of Tradescantia last for only one day, just as daylilies do, but, unlike daylilies, some of the flower parts are covered with tiny hairs. These hairs are composed of columns of the most beautiful small cells that I have ever seen. By treating these cells with various chemicals, it was possible to learn some fundamental factors inherent to the development of plant cell shape.

Not long after my interests had shifted away from daylilies, Bridgewater State College obtained the funds to purchase an electron microscope. The high resolution and magnification of that instrument held out the promise of research into the mysterious fine structural microcosm of such things as Tradescantia hair cells. My colleague in the Biology Department, Walter Morin, had a grant from the National Institutes of Health and I had a grant from the National Science Foundation. The funds from these grants supplied the equipment necessary to prepare biological material for electron microscope studies, and we immersed ourselves in intense fine structural studies.

We were able to demonstrate the involvement of submicroscopic structures in various cellular functions. Walter followed the tiny structures involved in transmission of nerve impulses, while I observed the function of extremely small microtubules in plant cell elongation.

Because of my preoccupation with investigations of Tradescantia, I did not return to daylily studies until the early eighties. As a part of the return to what I consider the most attractive member of the plant kingdom, I became a member of the American Hemerocallis Society. I was mildly surprised to find so many people interested in a single plant, for so many different reasons. During the year of the fiftieth anniversary of A.H.S. in 1996, the society had over 10,000 members. A New England chapter meets monthly and there is an annual national convention. The practical knowledge among the membership astonished me and there was always a helping hand available. The influence of the society and its members had a profound influence on the emphasis in my research program.

The American Hemerocallis Society has been named the International Registration Authority for Hemerocallis, by the International Council on the Naming of Cultivated Plants. Nearly 40,000 different cultivars have been registered and their descriptions published in Check Lists.

I was not prepared for what had happened to daylilies since I first saw them twenty years earlier. I couldn't believe the great advances in floral features that had been accomplished. The old timers let me know that x-rays and ultraviolet light weren't needed to develop new characteristics, since the plants already possessed immense variability.

In some ways, this ideal research organism puts roadblocks in the way of solving basic problems. The very nature of the plant itself calls out to anyone familiar with it to get involved with hybridizing and creating new cultivars, and this activity eats into time that might be de-
voted to fundamental research. I have registered seven new cultivars. Three have been introduced into commerce, with another one due for introduction in Fall 1997 (Figs 1-4).

In spite of some commonly accepted views, I still don't accept the idea that all of that variation was there in the rather plain early plants. There are so many people producing so many seeds from so many crosses, that spontaneous mutations are certain to be the basis for many of the new forms, patterns and colors. What I had originally planned to do with X-rays is probably occurring naturally. With so many new combinations being created, many new characteristics are bound to appear.

While great leaps in the development of new forms have taken place, not enough fundamental work has been done with the anatomy, physiology and cytology of daylilies. My investigations went in several directions, as I tried to learn as much fundamental information as possible about Hemerocallis. There are a few centers of activity, such as the State University of New York at Stony Brook (tissue culture), University of California at Davis (genes controlling floral senescence), and several Universities in Japan and Korea (chromosomes and taxonomy). There is still a need for studies of almost all aspects of daylily basic botany.

Hemerocallis provides a veritable cafeteria of problems calling out to be studied. Before we can even begin to connect characteristics to genes in chromosomes, we must have an unambiguous description of the chromosome complement. It is well known that daylilies have eleven different chromosomes, but they are somewhat similar in shape and size. In order to understand the hereditary basis of the many cultivars, we need a clearly stained preparation to make the chromosomes of a single cell visible with a microscope. I have spent hours on the preparation techniques for this process, but it is obvious that the technique with Hemerocallis is more difficult than we hoped that it would be. Great progress has been made with similar studies of human chromosomes, but a satisfactory solution in daylilies remains elusive.

My classes in Biological Electron Microscopy have utilized the increased magnification and definition of our electron microscopes to study the structure of daylily leaf and root cells. While the results have not revealed anything really unusual, there are some noteworthy features of chloroplast structure and development which we have noted. The anatomical structure of the leaves is distinctive and may explain some things about the plants' well-known adaptability.

Zihang Zheng, while a Bridgewater graduate student in 1993, discovered the minute organelles that carry the yellow and orange pigments in flower petals. His electron microscope study developed from observations which we had made on the general location of colored substances in the petal cells. We had found that the water-soluble red, lavender and purple pigments were located only in a single layer of surface cells, while the fat-soluble yellow and orange pigments were seated more deeply in the tissues.

We have begun to take light microscopic photos in my lab of the minute details of both male and female reproductive cell development. None of these details have yet been published, but it is clear that some new information can be added to botanical knowledge.

Some daylilies have brown colored blossoms, a most unusual feature in flowering plants. I think that there is beauty in a chocolate brown flower, but it is sometimes difficult to find agreement on this. Brown pigment was difficult to explain, but I speculated that the overlay of lavender on orange would produce this effect. It could be shown with transparent watercolors or colored cellophane. In my confidence about this idea, based on our observations of pigment location, I wasn't prepared for the discovery of the real reason.

Hand cut sections of brown petals revealed something microscopically that had not been seen before in flower petals. I was shocked to see a large spherical, dark "glob" in each cell in the single layer of cells that normally possessed the red and purple pigments. In broken cells, the globs deteriorated into water soluble lavender pigment. It was apparent that the purple pigments were somehow concentrated and held in a brown, crystalline glob in each cell.

It proved unusually difficult to prepare these fragile features for electron microscopy. Last year, I managed to preserve some globs intact and I am only beginning to think about their fine structure and chemistry.
Time grows short, as in all aspects of life, and there are scientific questions about daylilies for which I will never see answers. But there are other distractions in the daylily world. Believe it or not, it is also possible to get involved administratively, to the extent that such activity interferes with basic and applied research.

In 1992 I was elected as a member of the Board of Directors of the American Hemerocallis Society from New England and New York. Since then, the time that I can spend thinking about daylilies has been overwhelmingly dominated by administrative work.

During the past year, I have chaired two national committees, Registrations and Scientific Studies. With about 1000 new cultivars being registered each year, it is clear that the oversight and decisions of a strong committee on registrations is necessary in matters of policies and procedures. The Registrations Committee constantly faces unexpected problems that require attention. The selection of new names and the rules governing their approval can be contentious subjects.

The goal of the society is "to promote, encourage and foster the development of the genus Hemerocallis." Thus, the Scientific Studies Committee is essential to the overall purpose of A.H.S. Among the functions of the committee are the administration of funds for scientific research. Papers for the Daylily Journal are solicited and refereed. There is always mail to be answered from the membership on scientific questions.

It is hard to imagine that one plant could be the focus of scientific research, a highly rewarding hobby and the source of so much time-consuming administrative work. Over and above all of these aspects, and possibly the biggest surprise, is that I have developed a very large number of lifelong friendships, on the basis of a common interest in a single plant.

While the discovery of daylilies as the focus of a research program has turned out to be a rewarding adjunct to my professional life, from my present perspective I see another great advantage. The promise of a pleasant and colorful garden is guaranteed during my retirement years.

James Brennan is Professor of Biological Sciences
HAPPY BIRTHDAY, CANADA? Some Reflections on 130 Years of Nationhood

Andrew Holman

On July 1, 1997, many Canadians will celebrate 130 years of nationhood. Other Canadians won’t. This anniversary is an important one. It comes at a time when divisions in the Canadian polity and society are acute and threaten the very existence of a united country. In recent years, nationalists and doomsday prophets alike - academics, journalists, broadcasters, and others - have reached diametrically opposed forecasts for the country’s future. Will Canada survive? Yes. But not because it is inevitable, preordained, or fated. Not even because it should survive. Canada will survive because unity offers the best of all available options for the majority of the country’s inhabitants. Pragmatism motivated Confederation 130 years ago; pragmatism continues to provide the national “glue” that holds the country together.

Canada is a peculiar nation. Its identity is rooted in one fundamental paradox: while Canadians inhabit the same geopolitical space, they do not all cling to one common sense of nationalism, nor to one sense of national purpose. Unlike most countries, Canada is a nation that makes a virtue of difference. It is one country composed of five climatic and topographic regions, ten provincial and two territorial governments, two official languages, dozens of thriving ethnic cultures, and even two national sports. While other countries, like the United States, have convincingly painted over the real socioeconomic and racial differences among their peoples that have the potential to divide them, Canadians have chosen to recognize and even celebrate their internal differences. The unofficial slogan of Canadian nationalism current in the 1960s betrayed this strange sense of being: “unity in diversity.” Canada has never had one unified, common sense of nationalism, former University of Toronto historian Maurice Careless argued almost thirty years ago. It has, instead, a series of “limited identities.” The results of this tendency, charming and commendable though they may be in the kinder, gentler and ostensibly more tolerant world of the 1990s, have been damaging to Canada. Canadians have an identity crisis. Their self-image has, in Robert Paul Knowles words, “a kind of indeterminacy.”

Trying to define Canadian nationalism is akin to nailing jelly to the wall and since the country’s founding in 1867, virtually all efforts to do so have foundered on the rocks of diversity. Limited identities have been the source of a number of challenges that the country has faced. The economic dominance of industrial central Canada over the West and the Atlantic provinces has created an enduring cleavage between “have-” and “have-not” regions, the results of which surface from time to time in political debate. Public concern over immigration, and the spectre of growing ethnic enclaves in urban Canada emerges and re-emerges in public discourse with disturbing regularity. Advocates of “multiculturalism” (an official government policy since 1971) and stalwarts of the traditional vision of Canada as a W.A.S.P. nation occasionally do battle, invariably to a stalemate.

The most apparent division in Canada, however, dwarfs all of the others. Canada is a nation rent by language. It is made up of a majority of English-speakers, most of whom reside in the nine provinces and two territories outside of Quebec, and a minority of French-speakers, most of whom reside inside Quebec. The territorial division reinforces the linguistic one. Quebec is the ancestral homeland of Canadian francophones and in recent years has become the object of a vocal and aggressive movement for separation from the rest of Canada. Many quebecois have come to see themselves as a powerless colony of English Canada, stigmatized by their differences in lan-

Canada’s Entente - a depiction from the late 19th century.
language and culture. For them, separation from Canada is a panacea. Free to determine their own cultural, economic, and international policies, quebecois can themselves become at last their own distinct and mature nation. In two province-wide referenda, in 1980 and in 1995, the question of separation from Canada was put to the Quebec electorate, resulting in only a narrow defeat of the separatists' request to pursue more independence. The current Quebec provincial government promises another referendum, moreover, by the year 2000. This issue, clearly, is the most salient one now facing Canadians and, arguably, the most serious test that Canada and Canadian nationalism have ever encountered.

The Quebec question is, plainly, a political question and, not surprisingly perhaps, discussions on this issue have been dominated by those mavens of all things political: journalists and political scientists. Their discussions have been very useful and insightful. Journalists, on one hand, have focused their analyses most profitably on the idiosyncrasies and personal philosophies of the main players in this conflict: the various Prime Ministers and provincial premiers whose jobs it has been to navigate through these rough waters. Political scientists, more objective and distant, have aimed their questions at current political structures. Will Canada’s Constitution allow Quebec to separate? Can federalism be rebuilt to satisfy Quebec’s demands? What would Canada look like after Quebec’s departure?

These are essential perspectives and questions to consider. What they lack, however, is context; the kind of context (I’ll state here with unabashed immodesty) that really lies only in the realm of history. Unfortunately, Canadian historians until very recently have been AWOL on the question of Canadian nationalism and Quebec separation. “At a time when the country needed them most,” historian Michael Bliss noted in 1992, “Canadian historians were occupied elsewhere, studying topics and agendas not related in the slightest way to the crisis with which most of the nation was wrestling.” But it is in Canada’s history, that perhaps the most illuminating evidence exists for the study of the Quebec question.

Canada is many things, but above all it is a pragmatic country that was formed for pragmatic reasons. This statement, as simply put as it is, has profound meaning for the Quebec question. The French language and culture in Canada has survived and thrived because of the efforts of French-speakers to preserve and maintain them, but also because it was eminently impractical to do away with them. How did they get into this mess? Might understanding the history of French-English relations hold some clues to the nature of the problem? Perhaps a little context is in order.

The French were the first white Europeans to settle successfully and permanently in the part of North America that became known as Canada. The voyages of explorers Jacques Cartier (1534-35; 1541) and Samuel de Champlain (1605, 1608) laid claim to this territory for France and set the foundations for the establishment of a formal French colony in the New World. From 1663 until 1760, the forefront bears of Quebec’s current francophone population established a prosperous economy and a series of flourishing communities on the shores of the St. Lawrence River - New France, an official province of France. The timing of their arrival and the depth of their accomplishments have important meaning in the current debate. As the first European implant in that part of the world, to many the French language and culture deserve protection and its precedence must be observed.

In 1760, the aims and hopes for a French-governed nation in North America came crashing down heavily with the fall of New France to the British during the Seven Years War. This part of the war has been memorialized (mostly by anglophone writers) in histories of the valiant fighting in the Battle of the Plains of Abraham and in Benjamin West’s famous painting of the fallen British hero, James Wolfe, cut down cruelly while leading his men to victory over the French and canadiens. More significant was another fact: after 1760, Quebec - a series of settlements dotting the shores of the St. Lawrence and numbering about 55,000 souls, 95 percent of them French-speaking - was now a British possession and the French canadiens were a conquered people.

La Conquête - the conquest of New France - was perhaps the most significant and formative event in Quebec history and it bears considerable meaning for the current crisis. It ushered in the first British effort to assimilate the French. Quebec’s first British Governor, James Murray, was given a directive from the King to make the colony’s official language English, outlaw the Roman Catholic Church and French civil law, and destroy the inhabitants’ traditional feudal land tenure system. By the late 1760s, however, it became apparent that the canadiens would not be dispossessed of their language and culture so easily. In these years a passive resis-
tance to British efforts to assimilate them emerged, a spirit which historian Michel Brunet dubbed la survivance. Moreover, the expected arrival of British colonists from Britain and New England - the tide expected to "flood the French" - never flowed. Assimilating the French, quite simply, was not practical; so much so that the British government formally reinstalled the use of French language, feudal land tenure, and French civil law through the passage of the Quebec Act in 1774. Contended with this good judgment, the canadiens spurned in the following year the overtures of American revolutionaries to join them in their quest to throw off the yoke of British oppression. From a very early date, the French-speaking canadiens and their British neighbors and governors established and lived under a fair and lasting cultural entente.

It is this entente which has weathered numerous political storms over the last two hundred years but has survived, happily, because of the inherent pragmatic logic of cultural coexistence as opposed to assimilation or any sort of "melting pot" notion. In the 1830s, hundreds of French-speaking inhabitants in Quebec (then called Lower Canada) took up arms in rebellion against the autocratic, English colonial government in an attempt to wrestle more real power for their elected (and largely French-speaking) legislature from the appointed (and wholly English-speaking) executive branch. The rebellion was easily quelled but created enough concern in the mother country to warrant a special government commission, led by John George Lambton, the Earl of Durham. "I expected to find a contest between a government and a people," noted "Radical Jack" in his influential but perfunctory 1839 report. "I found two nations warring in the bosom of a single state." His solution - a foreign solution - was to unite the mostly French colony of Lower Canada with its English-speaking neighbor, Upper Canada (now Ontario), in a vain return to the assimilationist policy of the early 1760s.

United into one province (the United Canadas, 1841-1867), with one legislature and with increasing numbers of British immigrants arriving, surely it was only a matter of time before English-speakers would swamp the French, and the colony became unicultural - right? Wrong. Durham and other British thinkers failed to understand the practical considerations of colonial politics on the ground. Morally, in the heady days of "democratic rage," it would be unconscionable to govern a population (still a majority throughout the 1840s) against its wishes. Practically, with French-speakers holding over 40 per cent of the legislature's seats, it would be virtually impossible to pass legislation without at least some French support. The lesson was plain. The French fact had to be recognized as a permanent presence and incorporated into the structures of political power. By 1850, government cabinets included French- and English-speakers, the capital city rotated between French and English locations, and both languages were employed in public discourse. The entente vindicated, pragmatism once again won the day.

Even more profound and symbolic, however, were the circumstances surrounding the birth of Canada as an independent, self-governing Dominion in 1867. Here, too, it was practical considerations, not an attachment to abstract theory nor "universal" principles that motivated the union of British North American colonies into a distinct political entity. Canada had no Paine, no Jefferson, no Hamilton. Its statesmen were not the clear-thinking, enlightenment idealists of the eighteenth-century, but practical, workmenlike managers of the stolid mid-Victorian era.

The Dominion of Canada was formed by the union of three former British colonies - New Brunswick, Nova Scotia, and the United Canadas. They were moved to do so not by the "Laws of Nature" nor by reference to "self-evident truths," but by more immediate and pressing concerns: a need to secure markets and resources in a world committed precariously to "free trade"; and a concern for military defence, at a time when some American "hawks" wished the Union to turn its army northward after it had finished off the Confederacy and when British officials threatened repeatedly to withdraw its military commitment to its colonies. Confederation was motivated, moreover, by political deadlock in the United Canadas: increasingly, legislators in English-speaking Upper Canada and in French-speaking Lower Canada each desired the freedom to pass laws specific to their locations without interference from the other side. Confederation was, as such, both a marriage and a divorce. It had the tenor, more specifically, of an arranged marriage, and the Canadian Constitution (passed on July 1, 1867 as the British North America Act), unlike its American counterpart, reads very much like a pren-
uxtaposition agreement. It contains very little prefatory prose, and focuses on brass tacks - the terms of union and the specific powers granted to national and provincial governments. With very little variation, these arrangements were accepted by all of the colonies that subsequently chose to enter the marriage: Manitoba (1870), British Columbia (1871), Prince Edward Island (1873), Saskatchewan and Alberta (1905), and Newfoundland (1949).

In other ways, Confederation was a divorce. It was most apparently a practical separation agreement between Britain and her colonies, and one that allowed for the Dominion to exercise a good deal of freedom. In addition, it was a formal break-up between Lower Canada and Upper Canada, each of which became their own separate provinces (Quebec and Ontario, respectively) in the new Dominion. As a province, Quebec hereby gained the means to preserve and protect its language and culture. The entente was extended and codified in the country's Constitution. And it is under these conditions that Quebecers and Canadians have lived ever since.

Given this background, then, what does Quebec want? Why upset this seemingly blissful apple cart? These questions are important ones and have baffled even the most insightful thinkers on the subject. No one answer can be given, and for good reason. Quebecers, as a whole, do not want one thing; they want different things.

Some Quebecers - an important, and particularly vocal minority - want to be freed of their commitments to and relationship with the rest of Canada. These folks - the separatists - have been remarkably successful in the past thirty years in getting out their message: French Quebec is itself a distinct nation, and for all the guarantees of linguistic and cultural protection it enjoys within Confederation, their full potential as a community will not be realized until they have established their own separate state. In the impetuous days of the 1960s, many of these Quebecers likened their case to post-colonial regimes in Africa and Asia, and sought similar independence from its own "foreign" oppressor; to become maîtres chez nous - masters in our own house. The cause was appealing, and gave birth in 1966 to a perennial separatist political party - le parti québécois (PQ) - which under the guidance of its originator, René Lévesque and its current leader Lucien Bouchard, became and remains the main vehicle and the loudest champion of French language rights. To sustain the movement for separation, however, the PQ has construed the situation in Quebec as a crisis; one which must be solved now (even though "now" has lasted over thirty years).

Other Quebecers are not so convinced. French Quebecers and English Canadians don't always understand one another. That fact is clear. But most have come to respect each other's differences. Confederation, born of and sustained by pragmatism, has become comfortable for many. This sentiment has been made plain by the many public opinion polls that have surveyed the views of French-Canadians towards English Canada, and vice-versa, with nauseous repetition since the 1960s. Some of the most recent ones report telling results. A poll in February 1996, for example, reported that almost 80 per cent of Quebecers identify themselves as Quebecers and as Canadians. Confederation for Quebec has, moreover, become profitable for most. More to the point, it has been profitable for francophone businessmen since the 1960s, and not just for the handful of prominent entrepreneurs like Paul Desmarais of Power Corp. but for myriad small business owners as well. French Canadians are in control, in Quebec, of a thriving, modern, industrial economy.

Recently, the question of Quebec's potential secession has been referred to the Supreme Court of Canada to test the assumption that the province can legally part company with Canada if it wishes (Canada's Constitution has no formal provision for secession). The reference, however, may be moot. The current federal government position on the issue is straightforward: Quebec can separate, provided a majority of Quebecers express the desire to do so in a clearly-worded referendum. The wording of the past two referendum questions was patently unclear: one in five Quebecers who voted in favor of negotiations towards separation had the misconception that a sovereign Quebec would remain a province of Canada! Eighty per cent believed that Quebec could continue to use the Canadian dollar as its currency. If the question is to be considered fairly, all of the cards must be placed on the table. But when they are, when the next referendum comes, and it will soon, separatists will once again be facing a formidable opposition: a body of pro-union voters and supporters ardently against separation and a tradition, centuries old, of cultural understanding and tolerance.

History can explain many things, but it is not a predictive art. Even so, there is reason to have confidence in the continued unity of Canada. Educated nations, like elephants, have long collective memories. The erasure of the long history of cultural entente in Canada would involve a considerable amount of whitewash, and a rather large brush. The De-confederation of Canada is unlikely to take place because it defies the historical logic that has held the French and English together in Canada for so long. These thoughts, certainly, are the ones that I will be celebrating on July 1, 1997.

Andrew Holman is an Assistant Professor in the Department of History and a Member of the Canadian Studies Program.
INTERNATIONALIZING BUSINESS EDUCATION
by D. Steven White

The internationalization of the U.S. economy is now evident. By internationalization, I mean a global framework that integrates the multinational and the cross-cultural dimensions of economic forces. Significant domestic business decisions have international implications; likewise, shifts in global markets affect American companies. The domestic-international distinction is blurring because of the emerging global perspective which assumes that the world economy is an integrated marketplace. The American collegiate business community, however, has been slow to respond to this new reality, and most efforts to internationalize business education have achieved limited success.

Against all logic, the international aspirations of business schools are not extraordinarily high. The primary strategy used to internationalize business education in the United States is “curriculum infusion,” which integrates international topics and cross-cultural perspectives within an existing course structure and across a standing academic curriculum. Infusion is a status quo strategy. It does not require new courses, new faculty, structural changes, changes in class size, or deep faculty internationalization. The results, predictably, have been poor. The majority of business students at all educational levels receive little or no exposure to international business topics.

In this new economic age, a customer first orientation is a necessity. An irony is that American business schools today do not conform to the best practices that guide industry. In Out of the Crisis, W. Edwards Deming argues that only the customer can define a product’s quality; thus the customer is the most important part of any production line. Business schools, however, have not translated Deming’s insights to their own product development process. Customer involvement typically is an afterthought. It takes place just before or even after a curriculum is adopted, when it is too late. A process that ignores customers produces a low-quality product: witness the infusion approach used to internationalize business education.

The failure of the collegiate business community to integrate the voice of the customer into its curriculum-design process yields a mismatch between what graduates are trained to do and what employers need in practice. Harlan Cleveland, a former university president, argues that academe’s structure discounts the world of practice. Inherent in universities is an institutional bias against involving “outsiders” in discussions of educational policy. Curriculum design is left to academicians within a narrow field, who end up talking primarily to other academicians within the same discipline. The teaching preferences and the research interests of a faculty are the primary forces shaping a curriculum. Given that no real world problem can be fitted into the jurisdiction of any single academic department, the emergent educational product enhances (or protects) the “insiders” instead of serving a professional community.

Lyman W. Porter and Lawrence E. McKibbin, authors of Management Education and Development: Drift or Thrust into the 21st Century, describe the conventional wisdom concerning an academic curriculum:

“The curriculum specifies what is taught to students and in what order or sequence. Thus, the curriculum provides the structure for the educational delivery system of an institution. If the faculty can be thought of as the “senders” and the students as the “receivers,” then the curriculum, along with teaching can be considered an essential part (the structure) of the “transmission” process. The nature of the curriculum content and design, along with, of course, the abilities and qualifications of the faculty, therefore has a significant impact on the quality of education that students receive.”

In this view, a curriculum organizes topics that the faculty has decided are important. The first step in the traditional curriculum design process is to ask faculty what subjects should be taught. Driven by faculty expertise, the curriculum is subject-centered and the transmission process is unidirectional. A subject-centered curriculum, though quick, easy and inexpensive to implement, is not customer-centered. Its most serious disadvantage is that it only appears to match instruction to the needs of a profession; subject-centered instruction obliges customers (and students) to fit the curriculum.

Designing an academic curriculum that is customer-centered cannot be accomplished without the input of external constituencies. Graduates of business schools are more successful when the outcomes of their educational process closely match the outcomes desired by the business community. If higher education is to help corporate America compete internationally, faculty must begin by understanding the kind of graduates these corporations need and the implications of such an understanding for curriculum development in their own institutions.

A recent survey conducted by Vera
Partner with the Business Community

It is becoming increasingly important for business schools to partner with the business community to insure the survival and success of both. Failure to do so leads to an incongruence between what business school graduates have the skills to do, and what employers need in practice. This incongruence, as it exists today, fosters allegations that business schools are out of touch with the business community.

To best serve the needs of regional businesses, regional comprehensive colleges such as Bridgewater State, must determine what companies expect students to know when they enter the workforce and design a customer-focused curriculum to satisfy those needs. This type of public-private cooperation is consistent with the college’s mission and would maximize the regional economic impact of the newly founded School of Management and Aviation Science to the benefit of all stakeholders.

S. Tamer Cavusgil, Director of the Center for International Business Education and Research at Michigan State University, has conceptualized the process of internationalizing business school curriculum as containing three components: inputs, value added process, and outputs. Table 1 presents the average aggregate response per category.

Two fundamental shifts in the status quo of business education are needed to address the changes brought about by the globalization of the world economy: first, business schools must solicit the input of their stakeholders in order to develop a curriculum that is responsive to needs of the community; and second, business schools need to develop interdisciplinary curricula.

Table 1

<table>
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<tr>
<th>Weighted Average Response to Question 7 of the Vogelsang-Coombs Study</th>
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<tbody>
<tr>
<td>Please indicate the relative value your company places on an employee with skills in the following areas (use percentages - total should equal 100):</td>
</tr>
<tr>
<td>34.07% Basic Business Skills in an International Context (e.g., international marketing, international accounting, international finance, banking, risk management, international trade theory and practice, total quality management, macro and micro economics, computer proficiency, etc.)</td>
</tr>
<tr>
<td>25.97% Leadership and Human Relations Skills in an International Context (e.g., communication, corporate responsibility, systems thinking/problem solving, collaborative decision making, team work, negotiation/conflict resolution, theories of motivation, managing a diverse workforce)</td>
</tr>
<tr>
<td>21.87% Cultural Adaptivity and Language Skills (e.g., study of history and contemporary scene of a country or region, knowledge of religious and cultural traditions of the country or region, appropriate foreign language proficiency)</td>
</tr>
<tr>
<td>18.09% Comparative Business, Legal, and Political Skills (e.g., U.S. foreign economic policy, comparative state-market relations, comparative labor relations, comparative commercial law, international law, political, economic and financial treatment of U.S. corporations abroad, import/export regulations, technology transfer and licensing, comparative national treatment of foreign direct investment)</td>
</tr>
</tbody>
</table>
emphasize a cultural connoisseur perspective rather than emphasizing practitioner needs. Thus political science courses need to focus on the dimensions of government-business interaction rather than such topics as political parties, constitutional law, and political culture. Language instruction should emphasize learning business vocabulary and forms of business discourse and de-emphasize literature. Anthropology should deal with the impact of culture on various aspects of business operation rather than trying to give an overview of major social institutions in a country. From this perspective, the primary utility of liberal arts disciplines for a business education is learning the critical factors which influence local and regional markets for labor, money and consumer goods and employee behavior within corporate organizations.

As mentioned before, most business schools have taken a limited infusion approach to internationalizing their curricula. American business demands a much more comprehensive approach. Knowledge from the functional areas of business education (e.g., accounting, finance, management and marketing) must be integrated into a program which also involves area studies and language instruction. This approach requires that liberal arts and business faculties cooperate in the design of the curriculum. In the United States, the American Graduate School of International Management (more commonly known as Thunderbird in honor of the former U.S. Airforce base on which it stands) pioneered this approach after World War II. Approximately 20 other schools have adopted such an interdisciplinary curriculum. The extent of subject matter covered varies greatly. For instance, some programs require no language, while others vary in the level of fluency they require. The requirements for Thunderbird's Master of International Management degree are presented in Table 4 to provide the reader with a glimpse of an integrated curriculum.
A review of these advanced international business programs leads one to conclude that almost all suffer from one of two problems. One group lacks a sufficiently extensive business education. Graduates are not required to take a broad range of technical business subjects, and they need not develop a specialization. At the graduate level, this type of institution accepts a considerable number of students lacking minimum business education and/or experience. As a result, the business curriculum begins at a lower level. Liberal arts faculty tend to have a greater influence over curriculum requirements, and they sometimes resist increasing the amount of business knowledge mandated. These institutions offer masters level curricula which take less than two academic years to complete. So, within this context the necessary time does not exist for concentration in a specialized area of business knowledge.

Within a second group, international business programs emphasize technical business subjects but lack a coherent and integrated approach to the liberal arts disciplines. At the masters level, such programs almost always require more than two academic years of course work because non-business instruction must be taken in addition to the traditional MBA program. With few exceptions, students enroll in their social science and language courses and engage in overseas experiences (only some of which are internships) during summer terms, so as to not interfere with their regular MBA courses. Very little attempt is made in their business courses to build on or integrate knowledge acquired in liberal arts courses. In most schools using this model, business faculty have very little sense of the content of liberal arts courses in their international business curriculum. Compounding the problem of integration, area studies and language faculty are free to pursue their own interests, which in many cases leads to focus on topics marginal to the context of international business. For instance, a number of schools in this group depend on language instruction which has little concern for business needs.

To offer the mix of international business and business-driven liberal arts courses desired by the business community calls for more than can be produced within the constraints of traditional business school programs. An opportunity exists for a college such as Bridgewater State to take the lead in bringing about the integration of business and liberal arts curricula for the benefit of its students and their future employers. The integrated international business curriculum should focus on creating an opportunity for students to develop: 1) a high level of international business expertise including a specialization, 2) a high level of linguistic proficiency, 3) an ability to function effectively on an overseas assignment, 4) a capacity for critical thinking about business problems, and 5) leadership skills.

Bridgewater State College is particularly well-suited to launch such a program for two reasons: first, the School of Management and Aviation Science is newly founded (as of January 1, 1997). Therefore the institutional walls that inevitably develop between different schools of a college have yet to be built on our campus. The building of these walls is a function of the perceived competition for scarce, and even more problematic, dwindling resources between the schools. Developing interdisciplinary programs produces benefits that may be shared across disciplines and thus proactively inhibits the building of barriers between the schools; and second, all of the schools within the college will be operating under the direction of new deans as of the Fall of 1997. Having all new deans is beneficial because it means that no one dean is more entrenched than the others. This, in and of itself, makes for a more favorable climate for launching cooperative interdisciplinary ventures.

Underlying the above critique of existing international business education programs is the belief that two basic changes are essential for upgrading international business education in the United States. First, the current disjunction between the needs of the American business community and American higher education must be surmounted. Particularly critical is that educators work in a context in which there is regular interaction with corporate leaders to determine the needs of the business community. Second, business and liberal arts faculty must cooperate in mobilizing their collective instructional capacities. Business faculty must begin to think of international business education as including a wide array of liberal arts topics. On the other hand, faculty in the social sciences must refocus their instruction to deal with their subjects in a way which facilitates analysis of business problems, and language faculty must make business communication a primary objective.

After World War II, the emergence of the United States as one of the two superpowers was accompanied by a surge of new area studies and international relations programs which educated the future leaders of government, private voluntary organizations and even international organizations. All were interdisciplinary and independent of traditional college structures. These programs (e.g., at Johns Hopkins, Tufts, Princeton and Columbia) combine economics, political science, international studies and international relations synergistically to train foreign service scholars and specialists from around the world. The internationalization of the United States economy requires a similar innovative response with regard to international business education.

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**Table 4**

**Thunderbird's MIM Requirements**

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<tr>
<th>Requirement</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Integrative Foundations Semester (International Studies and World Business)</td>
<td>16 hours</td>
</tr>
<tr>
<td>International Studies</td>
<td>8 hours</td>
</tr>
<tr>
<td>Modern Languages (ML waiver reduces MIM requirements)</td>
<td>16 hours</td>
</tr>
<tr>
<td>World Business</td>
<td>16 hours</td>
</tr>
<tr>
<td>Electives (Any department)</td>
<td>8 hours</td>
</tr>
<tr>
<td>Total credit hours for MIM degree</td>
<td>48-64 hours</td>
</tr>
</tbody>
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Steven White is Assistant Professor of Marketing and Global Management
A long time fascination with Japanese design enticed me to visit Japan in the fall of 1995, where in addition to studying prints, screen paintings, and textiles, I encountered the quiet beauty of the Japanese garden.

Although modeled after nature, the gardens in Japan surpass the beauty of the country's natural landscape. The garden designers have achieved a heightened aesthetic awareness of the natural world and have condensed this sensibility in their gardens.

Of the many design features and aesthetic ideals found in Japanese gardens, two in particular, wabi and sabi, can be observed in the accompanying photographs. Wabi is best understood as the austerely simplicity exhibited in these gardens – their rustic and plain, yet exquisite and precise layouts, while sabi is observed in the appearance of the process of aging, the patina of use, the irregularities and imperfections of nature. Whether in stroll, tea, or meditation gardens, the concepts of wabi and sabi have guided these Japanese designers in achieving a natural world artfully as well as spiritually crafted.
Dry garden at Nanzen-ji Temple, Kyoto, Japan

Grounds of the Imperial Palace, Kyoto, Japan
Stroll garden at Katsura Imperial Palace, Kyoto, Japan

Joan Hausrath
Professor of Art

Professors Hausrath's travels and studies in Japan were supported in part by a grant from the Center for the Advancement of Research and Teaching.
FACULTY PROFILE

Rebecca Leavitt

Professor Rebecca Leavitt, the Chair of the Social Work Department, has become something of an expert on dealing with the stress caused by heading a popular program of study. Currently, Social Work is enjoying new interest with approximately 260 majors and mushrooming job opportunities in both the public and private sectors.

Part of the reason for the popularity of Social Work is that Bridgewater is one of two accredited Social Work programs in the state college system (the other is at Salem State). The larger reason for the popularity of Social Work is that Professor Leavitt and her faculty colleagues have a proven track record of preparing majors in this growing profession.

While the rush of students to Social Work is gratifying, the Social Work faculty has had to establish rigorous admission policies in order to maintain the integrity of the program. Professor Leavitt and the faculty are ever conscious of the quality and the commitment of the young men and women who chose social work, become licensed as beginning professional social workers and who carry the credentials of Bridgewater State College into the workplace.

To add further challenge to Professor Leavitt's professional life are the demands associated with next year's accreditation process conducted by the Council on Social Work Education. This semester, she and her faculty colleagues are putting together a large document that reflects new accreditation standards and restructures the social work curriculum. As part of this restructuring, Professor Leavitt has recommended the value of a community service component in the social work curriculum. The faculty are also considering new ways of integrating research projects into the major which allows for a capstone course in the senior year building upon knowledge and competencies acquired in the junior year.

Despite the stress related to student demand and program evaluation, Professor Leavitt is optimistic about the prospects for social work majors. Career opportunities with the State Department of Social Services, hospital and nursing home facilities and adolescent and aging programs are increasingly available to those interested in directing their work energies toward helping others.

Besides the heightened employment prospects in the field of social work, Professor Leavitt is also excited about the possibility of collaboration with Salem State College in which Bridgewater would serve as a site for a Master's degree in Social Work. Although this possibility is at least a few years away, Professor Leavitt realizes that with the growing population of alumni and other workers in southeastern Massachusetts, coupled with the increased demand for social workers, the Masters program is a critical need for the college and the region.

When Professor Leavitt is not involved with a myriad of administrative challenges, she devotes considerable attention to her teaching and is a regular instructor in the Women's Studies program. Her course, Psycho-Social Development of Women, examines psychological, social, political and economic factors affecting women's development, and is a popular offering in the program. Professor Leavitt hopes to use the course as a starting point for a new edited book which will explore the internal and external forces that influence women's development.

Professor Leavitt's expertise in social work curriculum and social work accreditation have taken her to Beijing, China to address the Urban Institute, which was beginning its first social work program in that country. She has also been an Earthwatch volunteer in Zimbabwe where her group examined first-hand the maternal and child health needs of women in rural villages. At home, she has had the special opportunity to attend the HERS program at Bryn Mawr on Women in Leadership in Higher Education. She also is an active member of the National Association of Social Workers, serving on their executive committee, and as a presenter at workshops dealing with women's growth and women's support groups.

One of Professor Leavitt's more recent interests is in becoming certified in non-western healing practices. She is in the second year of a three year program of the Institute for Visualization Research which she began in the continuing education program at Smith College School of Social Work. This approach uses animal imagery and visualization as part of the healing process. Professor Leavitt believes that through meditation, clients can be taken on a journey that helps them discover new aspects of themselves. Professor Leavitt has used these techniques successfully with her own clients. After completing her three year training, Professor Leavitt intends to inform others about the benefits of this non-western approach to healing. She also has published on the therapeutic benefits of creative writing.

But as she readily admits, the challenges and opportunities associated with the Social Work program are her first concern. This is a time of great interest and excitement in Social Work at Bridgewater and Professor Leavitt is in the forefront working to ensure that the college meets the demands so that students can benefit from the opportunities.
Using Computer Technology for Teaching and Learning  
by Barbara Apstein

In 1972, Professor Sutherland signed up to study BASIC and FORTRAN at a National Science Foundation-sponsored summer institute held at the University of Illinois. During the academic year that followed, 1973-74, he offered a course called Introduction to Programming in BASIC, thereby becoming the first Bridgewater faculty member to teach a credit course using the computer. Since computer science was in its infancy, Professor Sutherland had no course outlines, syllabi or textbooks to work with. Fortunately, he had the assistance of two faculty colleagues who had also become interested in computers: Professors Henry Daley of the Chemistry Department and Murray Abramson of Mathematics, both of whom had attended training sessions offered by the Digital Equipment Corporation.

The computer Professor Sutherland used to teach his course — the only one the College had for academic purposes at the time — was a Digital PDP-8/1 machine. It was about the size of a large refrigerator and had 8,000 bytes of memory (by way of comparison, a modest 1997 desktop computer has 16 million bytes). It was also exasperatingly slow, printing 10 characters per second (compared with hundreds in today's machines). Programs were loaded by paper tape.

Problems arose. The paper tapes upon which the programs were encoded were coated with a thin layer of wax, which melted in very warm weather. Students who left the tapes in desk drawers occasionally returned to find their rolls of tape sitting in puddles of wax.

In preparing for the class, Professor Sutherland remembers spending many hours trying to anticipate the programming mistakes his students were likely to make. "I spent lots of time generating crazy mistakes," he recalls. "Then the first student who came in had a problem I had never seen before. So I gave up trying to figure out what might go wrong ahead of time."

Several of the students who enrolled in the Introduction to BASIC course went on to pursue careers involving computer science. Joseph Martin, for example, a 1970 graduate who was teaching mathematics at Taunton High School, returned to Bridgewater to pursue an M.A.T. in mathematics. Building on the foundation of Professor Sutherland's BASIC course, Joe enrolled in additional computer-related courses and workshops and, as a result, moved into a series of administrative positions involving increasing levels of responsibility within the Taunton School System: he was named Computer Specialist for grades K-12, then Director of Information Services, and in 1991 was appointed to his current post, Assistant Superintendent for Administration and Finance.

The Introduction to BASIC course attracted growing numbers of students, especially those majoring in the sciences, and eventually the College hired additional instructors who had formal training in computers.

Professor Sutherland drew on his experiences teaching computer programming to write a textbook, This is BASIC, as well as co-authoring a trade text, This is VIC-20 BASIC, both published by Macmillan in 1984. (The VIC-20, one of the earliest personal computers, made by Commodore, was the first personal computer to sell one million units). In 1988, having mastered a newer programming language, he co-authored Problem Solving with Pascal.

Professor Sutherland has been generous about sharing his expertise with other faculty members, both formally and in CART-sponsored training sessions. Under the auspices of CART, he has offered introductory workshops in Wordperfect, Authorware, and in WEB page design. These workshops are always conducted with a certain wit and style, as well as with enormous patience. At the same time, Professor Sutherland continues to develop his own expertise by taking multimedia courses in graphic design and WEB page design at UMASS-Lowell.

One of Professor Sutherland's current projects is to build a multimedia application for a GER course he teaches, Math 105: Selected Topics in Mathematics. During his recent sabbatical, he developed two new courses, Introduction to Multimedia, which should be of particular interest to students majoring in Education, Management Science and Art who wish to learn techniques of making presentations electronically, and The Internet and the WORLD WIDE WEB. Both courses will be offered in the Fall, 1997 semester.

The twenty years since Professor
Sutherland began experimenting with computers, and particularly the past five years, have seen explosive growth in electronic teaching and learning at Bridgewater. The opening of the Moakley Center in 1995 made a state-of-the-art technological resource available to students and faculty. CART, which had previously been housed in a tiny office in a remote corner of the library, moved into spacious new quarters in the Moakley Center. CART continued to increase and upgrade the inventory of hardware, software, and self-training and reference manuals which it made available for faculty to investigate. The decision of then-Provost John Bardo to provide desktop computers to all faculty members led to increased demand for the workshops, training sessions and tutorials offered by Information Services and Academic Computing. All students were provided with e-mail accounts. A survey conducted in the fall of 1996 by Professor John Marvelle of the Department of Elementary Education and Early Childhood revealed that faculty and librarians have discovered a wide variety of ways in which computers can enhance teaching and learning. Some examples:

(1) E-MAIL has become a routine way of keeping in touch with students, easier and more convenient than the telephone for responding to their individual problems and questions about course assignments.

(2) ELECTRONIC BULLETIN BOARDS: Like their real-world counterparts which hang on the walls of corridors, electronic bulletin boards are places where professors and students can leave messages meant for the entire class to read. Faculty may post specific assignments or use the board to encourage informal academic conversations. Students who are uncomfortable speaking before a classroom group often enjoy being able to express their ideas on-line.

(3) SOFTWARE PROGRAMS such as the spreadsheet EXCEL and SPSS statistical software are widely used in a variety of courses, especially the social and natural sciences. Chemistry students use molecular modeling and chemical analysis programs; geology students analyze their data using G.I.S. (Geographic Information System) mapping software. In the Art Department, Professor Joan Hausrat's Weaving class uses SWIFT WEAVE, a program which enables students to design woven fabric structures and patterns in color, a process previously performed using graph paper and colored pencils.

(4) CD-ROMS and DISKS: Many new textbooks now offer companion CD-ROMS and disks. In addition, faculty members use CD-ROMs which are commercially available. For example, Professor Harold Silverman of the Department of Management Science has acquired an electronic law library on federal taxes which students in AP 365, Federal Income Tax I, utilize to answer research questions.

(5) INTERNET AND WORLD WIDE WEB: Many faculty have designed research projects using the internet. Just prior to the 1996 Presidential election, the students in Political Science Professor Victor DeSantis' American Government class were assigned a paper analyzing the presidential candidates' Web sites.

(6) NETWORKED CLASSROOMS provide an ideal setting for collaborative work and encourage the de-centering of instruction. English Professor Karl Schnapp pioneered the use of networked classrooms to teach composition; currently, Professors Judy Stanton and William Smith are working with Dedalus software in the freshman writing course.

(7) LIBRARY: No part of the College has been more thoroughly transformed during the past five years than the library. The card catalogue has disappeared; instead, students log onto the On-line Public Access Catalogue (OPAC), which helps them locate books at UMass Dartmouth as well as Bridgewater. Instead of leafing through hefty published volumes of reference sources like the Reader's Guide to Periodical Literature, students search CD-ROM databases which can mark and print citations and, in some cases, the entire text of articles.

To point out that computer technology is changing the way we teach and learn is, in 1997, to state the obvious. In addition to using computers to enhance their teaching, however, many Bridgewater faculty members have clearly become convinced that part of their responsibility as college educators is helping students develop confidence and expertise in using the new technology.
But it also serves as a year round laboratory for scientific study. Suspended a few feet below its surface is a package of scientific instruments that monitor the characteristics of its water quality, such as levels of dissolved oxygen, pH, conductivity and temperature. This Water Quality Monitoring Sonde collects and records the data for analysis by researchers from the college’s program in environmental biology and also, thanks to grants later obtained by Dr. Kevin Curry of the Biology Department, by teachers and students from a number of area schools.

The threats to the water quality in places like Carver Pond can be divided into two types. Point source pollution is the type in which a specific polluter can be identified as the cause of the problem. For example, a manufacturing plant located upstream from the pond might fail to treat its waste products, then allow them to flow into a stream on its property, and so, into the pond. By comparison, non-point source pollution is the type in which a wide variety of pollution sources, such as runoff from road salting, inefficient or faulty home septic systems, acid rain and widespread use of fertilizers each contributes some measure of pollution to a collective degradation of the water quality in an entire watershed system. In this case, no single source of pollution is likely to cause enough damage to a watershed to draw much attention or concern, and no source is likely to be easily detected. While point source pollution is usually dramatic and often leads to legal cases aimed at specific remedies, non-point source pollution is more systemic and incremental. Remedies are, necessarily, more difficult...
since the origins of the pollution are so varied and buried in the systems with which we have lived for generations. Lastly, the study of non-point source pollution requires different tools and techniques than does the study of single point source pollution.

The Taunton River Watershed, which includes bodies of water in the Bridgewater area such as Carver Pond, the Taunton and Town Rivers and the marshes and ground water between and beneath them, has, along with a number of other watersheds, become the subject of intense community and state interest. In order to protect watersheds from non-point source pollution we must understand how they work. Programs for the study and reduction of non-point source pollution have developed in many areas across Massachusetts. Like many such community organizations, they have depended for their operation on a combination of resources such as the contributions of time and money from volunteers, and on funding from both state agencies and private corporations. In the Bridgewater area, studies of the Taunton River watershed have also benefitted from the participation of faculty members in Bridgewater State College’s degree program in environmental biology.

In 1994 the Taunton River Watershed Connections Project was started with funds from the Massachusetts Environmental Trust to help train local teachers how to study and teach about water quality issues in their schools. Dr. Curry, who came to Bridgewater in 1994 to help develop a concentration in environmental biology, soon began volunteering his time and expertise along with other students and faculty members testing water quality for the Taunton River Watershed Connections Project. He quickly saw the need for more modern equipment to advance the teacher training project, so he wrote a grant to the National Science Foundation that funded the purchase of the computerized water quality probes described above, and for other equipment such as a flow meter and nutrient analyzer. Focusing on data collected from Carver Pond and the Nemasket River, the new equipment has been used in the teacher training program, and in a variety of environmental biology courses at Bridgewater State. By the end of the Taunton River project in 1996, 55 teachers from communities in the Taunton River Watershed communities had been trained how to bring issues of non-point source pollution back to their classrooms.

The Taunton River Watershed project made clear to those involved that teachers who went through the program were still missing some important tools they would need to use their newly developed skills and ideas in teaching about water quality in their schools. This led Dr. Curry to write an additional grant application to Raytheon Corporation for equipment to establish on the Bridgewater campus a Watershed Access Lab. The lab would improve teaching about water quality in a number of ways. For example, area teachers would be able to bring their students to the campus to study water quality issues using the appropriate equipment. In addition, teachers who are trained in the lab in the use of the new equipment would then be able to sign it out to work in their own schools on water quality projects of their own design.

These projects, supported by the Department of Environmental Protection and the Executive Office of Environmental Affairs, are intended to help communities to organize to promote active stewardship of their local watersheds. As a cap to the teacher training project, teachers, their students, state and local officials professionals in environmental studies and project volunteers will return next spring to the Moakley Center for a day seminar in which they will report the findings of their research and share experiences made possible by the establishment of the Bridgewater lab.
BOOK REVIEW

UNSURPASSED FAIR FLORENCE

Charles Angell


Dusk and light mist. The tour bus stopped, our friend and tour leader John Heller cautioning that we had only a few minutes. Across the busy Viale Galileo Galilei and onto the Piazzale Michelangelo. There below bathed in diffused light rise Brunelleschi's Duomo and Giotto's Campanile tower, symbols of renaissance Florence, a city at once familiar from films and literature, yet still exotic, filled with artistic and architectural masterpieces reproduced in every art history text, all set amidst shops, markets, and trattoria that draw one along cobbled streets to some new wonder, some unexpected astonishment. Having walked, albeit too briefly, the streets of this city of enchantments, I enthusiastically began Michael Levey's Florence: A Portrait which he tells us will "try to seize something of that entity and trace its evolution over the centuries, from medieval times into the full nineteenth century." His portrait will be neither art or political history, or even a guidebook, but an amalgam which will try to answer: what is Florence?

Seizing Florence as an entity proves no small undertaking. Machiavelli tried it with interesting, though inconclusive results. His contemporary Francesco Guicciardini had better success writing that Florence "was sustained both by its abundant supplies and its flourishing and well-established business enterprises; men of talent and ability were rewarded through the recognition and support given to all letters, all arts, all gifts." The casual visitor certainly desires to know why this small and, in its time, rather isolated city nourished so much genius, produced so much that is memorable. Levey explains that in its earliest times, Florence was probably best known for its streetfighting and family vendettas which grew into the prolonged partisan struggles between Guelph and Ghibelline. This unruliness did not prevent the city from prospering and inculcating in its residents a pronounced anti-monarchist sentiment.

The trecento saw the Florentine Commune start the Duomo and Campanile as testimonials to the city's wealth and status. Streetfighting, Levey suggests, may in time have transformed itself into artists competing for commissions; when the Guild of the Calimala wanted bronze doors for the Baptistery, they ordered a competition for which Ghiberti and Brunelleschi among others submitted panel designs of Abraham's sacrifice of Isaac. Ghiberti received the commission and crafted the doors; Brunelleschi's designs, no less remarkable in their dynamism, grace the Bargello.

More than half of Levey's sumptuously illustrated portrait covers familiar ground. The great churches and chapels—Santa Croce, San Lorenzo, Santa Maria Novella, San Miniato—all receive their full discussion. Michelangelo's Medici Chapel, Levey tells us, "speaks not of incompleteness but of accomplishment which never ceases to astonish and awe, though also to disturb." Standing before the sinuous and dynamic marble figures, the spectator knows Death remains present in the chapel, and in their constrained facial expressions, understands its torment. Difficult to believe that the creator of these figures was also asked by his Medici patron to construct a snow sculpture in the Medici palace courtyard. Levey helps us understand these contending commercial and religious forces that powered Florentine art into the world. Speaking of the bust of Niccolo da Uzzano attributed to Donatello, he says "the longer it is studied, the more apparent becomes the fact that this bust is more than a piece of skilful realism .... Associations of heroism and patriotism accumulate around a likeness in no sense overtly heroic or handsome. Ultimately, [Niccolo] exists in a bifocal perspective: this is how he looked and that is what he stood for." Describing Donatello's much better known statue of St. Mary Magdalene, Levey terms the image one "of a wretched, reduced woman who might have been found in actuality begging on a street corner in Florence" and as such "compels anyone, learned or ignorant, so-
phisticated or naive, to recognize how closely art—contemporary art—can now mirror humanity and deepen awareness of the human condition." Levey demonstrates in *Florence: A Portrait* how the Florentine citizens commissioned and Florentine artists painted, built, and sculpted work that spectators encountered as they conducted their daily business. These encounters still occur when tourists, Blue Guides and Baedekers in hand, find themselves immersed in the art and the living subjects it represents.

Guidebooks are ubiquitous in Florence’s churches and museums and have been so since 1510 when Francesco Albertini published his *Memoriale* (“not not only notably accurate yet highly significant,” Levey comments) to assist the traveler’s understanding of what at the time passed for modern art. Florentines knew early that their city possessed treasures that drew visitors from all over Europe and ultimately the world. Their guidebooks became increasingly sophisticated and recorded the changing fashions of these historical encounters. Today, for example, the *Eyewitness Travel Guide to Florence and Tuscany* offers the traveler information about art, fashion, flora, fauna, accommodations, and almost every contingency the visitor might hope to encounter.

Yet, more than two-thirds along in his portrait Levey guides his readers to baroque and later Florence which he claims visitors must pretty much seek on their own. This Florence, he says, refuses to conform to the “tidy pattern-making desired by art history.” Indeed, Levey’s final four chapters exude an enthusiasm he can’t quite seem to muster for the more familiar Renaissance ground. Though he labels Cosimo I de Medici an unprepossessing and perhaps too bureaucratically inclined Grand Duke of Tuscany, Levey admires the work Cosimo accomplished to normalize and regulate Florentine politics and foreign affairs. It was Cosimo who transformed the Uffizi into an art gallery to display the Medici treasures. The treasures of these more recent centuries give the visitor a sense of the city’s continuity and stability as it survived the dynastic struggles that swept over Europe in the seventeenth- and eighteenth-centuries. The art of these centuries resulted more from collaboration than from the vivid personalities that define the high Renaissance. Nonetheless, artists like Buontalenti, Giambologna, and—later—Gherardo Silvani left their marks on the city’s sculpture and architecture. Search these treasures out, Levey tells us, and encounter another Florence, equally as complex and rich in its affiliations.

But that is the problem that even a brief visit impresses upon the tourist; Florence has many incarnations, so many that one becomes distracted. Looking at one great work, one suddenly confronts another. Walking down one narrow street, one finds a side alley with something marvelous tucked away in a niche. To some extent, *Florence: A Portrait* finds Levey gazing here, then there, trying to gather it all in for us, a literary companion to the view from the Piazzale Michelangelo. As good a guide as Levey is, he hardly substitutes for reseating oneself on the bus, descending the Viale Michelangelo, crossing the Arno, and lodging oneself in a room with a view.
Cultural Commentary

Renaissance News

by Barbara Apstein

One of the best-known periods in history, the Renaissance ended more than 400 years ago, but the ideas and works of art it produced are all around us. The images of the Mona Lisa, Michelangelo’s David and Raphael’s child-angels are, ironically, more familiar to modern Americans than they could have been to fifteenth-century Italians. In magazines and on billboards, we find pictures like that of the Mona Lisa, equipped with head-phones, advertising Audio Books, while Leonardo’s “Madonna and Saint Anne” sells “classic” Bertolli olive oil. Botticelli’s Venus beckons the prospective buyer to Adobe Illustrator software and, in another ad, models eyeglasses. These and other Renaissance reproductions are familiar from book jackets, greeting cards, t-shirts and refrigerator magnets.

Like the images they created, the names of the great Renaissance artists have also become familiar through commercial exploitation. Michelangelo and Donatello, reincarnated as mutant Ninja turtles, became household names a few years ago; more recently, Bruegger’s Bagel store wittily introduced a Leonardo da Veggie sandwich.

Even the word Renaissance has become ubiquitous, having displaced the more prosaic “revival.” In an informal survey conducted over the past few weeks, the following examples (among others) surfaced: the American novelist Edith Wharton is currently undergoing a Renaissance, as are Boston’s Chinatown and New Jersey’s Atlantic City.

People who write about the future seem to adore the word renaissance. Computers, they predict, will spark a renaissance in education, making learning “fun,” and e-mail will lead to a renaissance in letter-writing. The author of a new book expressing a positive economic outlook rejected a no-nonsense title like The Future Looks Good; instead he called it The Coming American Renaissance.

Such is the aura of the word Renaissance, that, in the worlds of politics and advertising, it can be divorced from its literal meaning, rebirth. A new ice cream flavor, “Dark chocolate almond Renaissance” was recently added to the Stop and Shop Supermarket’s freezer case, costing, not surprisingly, 75 cents more than ordinary chocolate. President and Mrs. Clinton call their annual vacation at Hilton Head Island, with activities that include walks on the beach and strategy sessions with friends, a “Renaissance weekend.” Nor has the Renaissance been overlooked by the people who think up names for new business ventures. There is a Renaissance Beauty Salon (on Newbury Street, where else?) as well as a Renaissance Computing Company, a Renaissance Property Corporation and Renaissance Studios. There are Renaissance cruises and Renaissance house painters as well as a chain of Renaissance hotels. Boston has a Renaissance charter school. I can pay my bills with “Renaissance” checks, featuring “the artistry of marbled paper with a delicate gold foil accent,” — unless I prefer wild ducks, lighthouses, or pictures of the Simpsons. In these contexts, Renaissance has become what linguist S. I. Hayakawa called a “purr-word,” the human equivalent of purring or wagging one’s tail. With its connotations of elegance, culture and aristocratic refinement, the word Renaissance can sound good without actually meaning anything.

By far the most popular Renaissance writer in the English-speaking world is Shakespeare, whose poems and plays continue to sustain hundreds of academic researchers while at the same time attracting popular audiences. On stage and screen, new Shakespearean productions are always in the works. Film versions generally dispense with most of the Elizabethan dialogue to make room for mood-enhancing music and special camera effects, such as close-ups of galloping horses, and luxurious backgrounds. Kenneth Branagh’s recent film version of Hamlet, however, retains the full original text and the Academy of Motion Picture Arts and Sciences paid homage to Shakespeare’s genius as well as to his continuing box-office success by awarding Hamlet an Oscar nomination for “best screenplay.”

So powerful is the conviction that Shakespeare’s work is truly universal, that...
he speaks to the contemporary world, that his plays have a role in one of Hollywood’s most durable inspirational narratives, the one about the great teacher who changes students’ lives (think of Robin Williams in Dead Poets’ Society or Michelle Pfeiffer in Dangerous Minds). The transformative power of studying Shakespeare is one of the premises of the recent film Renaissance Man, starring Danny DeVito. The DeVito character is assigned to teach a group of army recruits who are in danger of failing basic training. The recruits, known as the “double d’s” (for “dumb as dogshit”), are initially surly and hostile, as is traditional in this genre. Upon being introduced to Hamlet, however, they quickly realize that “Shakespeare is cool.” Tossing away their comic books and Sports Illustrated, they discover the intellectual pleasures of discussing Claudius and Gertrude, ultimately even composing and performing a lively “Hamlet rap.” By the end of the film, the recruits are spending their day off going to a performance of Henry V and tossing out quotations from Shakespeare’s plays. Needless to say, they pass basic training with flying colors.

The use of the word Renaissance to refer to a specific historical period has a curious history. The sixteenth-century art critic Giorgio Vasari employed the Italian word “rinascita” in his Lives of the Artists to denote the revival of classical antiquity in the works of such painters as Botticelli, Leonardo da Vinci and Michelangelo. Vasari’s meaning, the revival of classical antiquity, is clearly no longer the primary meaning of the word as it is generally understood. It was a Swiss historian, Jacob Burckhardt, who, three centuries later, described the “Renaissance” in the terms which have become most familiar to modern readers in his book The Civilization of the Renaissance in Italy.

For Burckhardt, the important feature of the Renaissance was not the revival of classical antiquity but the development of the individual. Medieval people, in Burckhardt’s view, identified themselves only as members of a group — a race, a people, a family or a guild. In contrast, Burckhardt found the essence of the Renaissance in the spirit of individualism common to all aspects of its culture, a quality reflected in life, thought, religion and art. The Civilization of the Renaissance in Italy helped define the historical periods in ways which are familiar to modern students: the Middle Ages was a time of intellectual stagnation; the Renaissance, a period of rebirth.

Despite its influence, many historians have criticized Burckhardt’s theory as oversimplified. They argue that his vision of a single “spirit of the age,” implying that all aspects of a culture are interconnected, led him to emphasize those aspects of the culture that “fit” the predetermined “spirit” and ignore others. Thus, some historians argue, Burckhardt exaggerated the sharp break between the Middle Ages and the Renaissance. The Renaissance was not, in fact, a total break with the past, nor was the Middle Ages a time of unmitigated darkness and superstition. Interest in learning and study of the classics continued throughout the medieval period; there were medieval individualists and, despite the domination of the Church, men and women with strong secular interests.

Adding to the problematic nature of Burckhardt’s concept of the Renaissance is the fact that the term refers to events and movements occurring in all the major countries of western Europe over a period of several hundred years. It is usually defined as beginning in Italy in the late fourteenth century but not reaching England until the late sixteenth and early seventeenth centuries. Thus if the poet Chaucer, who died in 1400, had been Italian, he would be classified as a Renaissance writer, but since he was English, he is labelled a medieval writer. And when did the Renaissance officially end? Some scholars argue that it includes the Reformation, others that it continues into the Baroque period.

However inaccurate the word may be in a historical sense, the idea of the Renaissance as Burckhardt defined it has clearly taken hold. The Renaissance celebration of individualism speaks powerfully to contemporary men and women, as does the tantalizing possibility of re-making one’s identity. In his book Renaissance Self-Fashioning, scholar Stephen Greenblatt characterized the period as one of increased self-consciousness about the fashioning of human identity as a manipulable, artful process, citing, among many examples, Renaissance instructional manuals like The Book of the Courtier.

This description fits our own time equally well, although Renaissance men and women could never have imagined some of the forms that self-fashioning has taken at the end of the twentieth century. Today’s “makeovers” tend to emphasize the body rather than the spirit: plastic surgery (including hair replacements, tummy tucks, and liposuction) lures consumers with the promise of restoring youth and beauty, and instructional videos offer viewers a revitalized sex life. Yet Americans also have a deep faith in the human potential for intellectual, emotional and moral growth, and the possibility of “re-inventing ourselves.” Because it has become identified with a cultural idea which is highly valued at the present time — the individual’s capacity for self-fashioning and self-renewal — the word Renaissance continues to evoke a powerful positive response.
Cultural Commentary

I'm O.K. Who Are You?

William C. Levin

We humans spend a great deal of time figuring out where we stand. For example, put the average American into the center of a totally dark room and, after a few moments he or she will start to cautiously shuffle around, gropping with extended hands to survey the size and contents of the place. Why risk barking your shins on an unseen coffee table in order to explore like this when it would be safe to stay put? It seems to be a fundamental survival strategy to always feel oriented, to learn where you stand so you'll know what the threats and opportunities are. We do this constantly in our day-to-day lives. A little girl strains to see how tall she is compared to her classmates. A college student wants to know how well he did on his exam relative to others in the class. My uncle George learns the location of all the gas stations in his area so he'll know where to go if his gas gauge drops below half empty. Satchel Paige may have said that you should "never look back because someone may be gaining on you", but the rest of us usually want to know as much as possible where we stand.

I think it is one of the good qualities of American culture that we seem to be pretty much unafraid of finding out what is "out there" that might hurt us. We keep track of all the foods that are bad for us, the murderers in our midst, the bad weather that is sweeping our way, and the fluctuations in the value of property that threaten our financial futures. Not only are we usually well informed about the dangers around us, but we also do an excellent job of attending to our opportunities. We pay attention to where the bargains can be found (try leaving a decent looking toaster oven on your sidewalk on trash day), to chances for moving up at work, to the opportunities for fun that are being invented all the time and to ways of saving money at tax time. In short, we seem to do a pretty good job of getting the "lay of the land" to help us in our lives.

But I do think that there is an area of our "orienting" practices in which we fall way short of where we should be. We seem to pay almost no attention to the world beyond our immediate surroundings. Specifically, we have no good idea of where our country stands relative to the rest of the world. This fact is reflected in the terribly low rates of foreign news reporting in our newspapers, and on our television broadcasts. Recent media watch studies have counted the percent of print space and news time devoted to the reporting of events in other countries, and found that it has always been low, and since the 1950's it has declined by more than half in most of our newspapers (with the exception of the largest city papers like the New York Times), and by more than seventy percent on network news broadcasts. There are lots of reasons given for this trend, such as the loss of a clear enemy with the end of the cold war, the relative isolation of the United States from dangerous neighbors and differing cultures, and the deeply held belief of most Americans that our fates are (and should be) in our own hands. But whatever the reason for our unconcern with what is going on in the rest of the world, it is clear that on the international scale, we are like a person in a darkened room who isn't in the slightest interested in finding out whether the place is filled with snakes or Snickers. Perhaps it is time to do a little grooping about for information about the larger world.

How about trying a little quiz. Let me dig up a few numbers that place the United States next to other countries and see if they surprise you. They surprised me. To do this I will just flip through the all-time champion single-source of data about the United States, a publication of the U.S. Bureau of the Census called the Statistical Abstract of the United States. This massive listing of vital statistics has been compiled annually for the last 116 years and is my favorite dictionary of numerical gee-whizzers. It is in the reference section of your local library, or you can buy it from the Government Printing Office or in a much less expensive version called The American Almanac from Hoover's Incorporated. The following startling bits of information, listed by topic...
for your convenience, are from the most recent edition, the 116th.

Tax Revenues, by Country

Let’s start with everyone’s favorite, taxes. How do we stand compared with the rest of the world for taxes paid? (Table 1343, page 840 of the American Almanac). In 1993 the United States’ tax revenues amounted to $1.836 trillion. That is about 30% of our gross domestic product, which is the dollar value of all the goods and services produced by our labor and property. If that high? It turns out to be a higher rate than in Australia (29% of GDP), Japan (29%), and Turkey (24%), but not higher than any of the other industrialized countries listed in the table. For example, higher tax rates exit in Austria (44% of GDP collected in taxes), Norway(46%), Belgium(46%), Italy(48%), and Sweden(50%). By the way, in case you are thinking about moving to Turkey to take advantage of the lower tax rates, be careful. They only collected $41 billion in 1993 ($688 per citizen), so don’t expect much in the way of public services.

Prices of petroleum products by country

Did you ever listen as your cousin Ralph complained about the cost of gas in the United States only to hear aunt Harriet counter that fuel is much more expensive in Europe? Well, according to the American Almanac, 116th edition,Table number 1359, the price of premium gasoline was $3.34 in Germany, $3.46 in Italy and $2.96 in Ireland. (Right you are, Harriet!) But there is really more. The average price of a gallon of gasoline in 1994 was just 41 cents in Russia and a paltry 18 cents in Venezuela. No other countries are even below a dollar a gallon. Go figure.

Trade surpluses and deficits with various countries

In Table 1305 on page 800, plain as the nose (etc.) are the U.S. Exports, Imports and Merchandise Trade Balance, by Country 1991-1995. Of course, anyone can tell you we have a negative balance of trade with Japan. But our economic standing in the world is a good deal more interesting than that. In 1995 the trade deficit we ran with Japan was just over 59 billion dollars, about one third of the total 158 billion dollar deficit we ran with the entire world. Next closest is China at 33 billion and change. After that competition drops way off to 18 billion (Canada), 15 billion (Mexico) and 14 billion (Germany). So what countries buy more from us than we buy from them? Well, the winner (or loser, depending on your point of view) is the Netherlands with a trade deficit with the United States of over 10 billion dollars. I guess they buy more blue jeans than we buy tulips.

Life expectancy for people born in 1996

An American who was born in 1996 can, on average, expect to live for 76 years. Pretty good, considering that the average life expectancy in 1970 was less than 70 years. Is our rate higher or lower than other countries? Well, it’s a great deal higher than in some, such as Cameroon (53 years), Niger (41), Rwanda (40), Zaire (48 years), Zimbabwe (38) and Uganda (38). Does this give you a sense of what life (such as it is) is like in Africa? But our life expectancy is actually lower than in other countries such as Belgium (77 years), Australia (79), Denmark (77), France (78), Italy (78), Japan (80), and Hong Kong (the champ at 82). That means the average African lives half as long as the average Japanese citizen. Perhaps that little fact will help us get oriented, meaning (literally) to face east.

I understand that there is a great deal more to understanding conditions in the rest of the world than can be conveyed with any number of statistics, much less from this handful. But given the rate at which the world is shrinking in political, economic and even geographic terms, it is about time that Americans peek over the walls of self interest and complacency that threaten to leave us stranded with knowledge of only ourselves.
FACULTY
PROFILE

Carl W. Smith

Ever since the publication of A Nation At Risk in 1983, the United States has been focused on education reform. Bridgewater State College, with its proud heritage in teacher education, has felt a special responsibility to take the initiative in improving a whole range of education issues from curriculum restructuring to technology use in the classroom to strengthening administrative leadership. Within the last few years, under the guidance of Professor Carl W. Smith of the Department of Secondary Education and Professional Programs, Bridgewater is moving quickly and forcefully to make significant contributions to education reform in Massachusetts.

Professor Smith is the Coordinator of Educational Leadership at the College. In that capacity he is responsible for managing and promoting two separate programs - a Master of Education in Education Leadership and a Certificate of Advanced Graduate Study (CAGS) with a combined enrollment of over 250 graduate students. The Masters program is designed for students with the bachelor's degree who want to meet state certification requirements, while the CAGS program is for teachers with Masters degrees who want more advanced courses in educational leadership.

Professor Smith is very excited about a new collaborative program with the University of Massachusetts-Lowell initiated under the leadership of Dr. Joanne Newcombe who is now the Acting Dean of Education and Allied Studies. Students who complete the CAGS program will be able to apply 24 credits toward a doctorate in educational leadership at UMass-Lowell. Beginning in Fall, 1997, those students will also be able to take courses at Bridgewater, offered by University of Lowell faculty, for their Ed.D. Fifteen Bridgewater students have already been accepted into the UMass/Lowell program.

The Masters and CAGS programs, combined with the UMass-Lowell collaborative, places Bridgewater at the forefront of preparing the next generation of educational leaders in southeastern Massachusetts. Professor Smith is convinced that these programs are essential if school principals and superintendents are to be prepared for the challenges of educational administration in the future. According to Smith, educational leaders will need to approach their responsibilities with new skills that emphasize group decision-making, effective interpersonal communication and managing information technology. In Smith's view, the team approach to educational leadership is now accepted in most school districts, and principals and superintendents must be prepared to manage their schools from within the team model.

Professor Smith also points out that educational leadership has experienced significant gender changes in the last decade, a change he fully supports. Nationally, 25% of educational leaders are women, while in the Bridgewater programs 60% of the participants are women. As a result, Professor Smith points out, program in educational leadership has responded not only to the requirements of education reform in this state but to changing demographics that are already having a marked impact on leadership positions in regional school districts.

One of the more exciting initiatives that Professor Smith has become involved with is the Center for Public School Leadership. A partnership between Bridgewater State and the Massachusetts Association of School Committees, the Center will provide professional development opportunities for local school committees and school committee members. This May Professor Smith convened the first meeting of the Center with the nationally noted education expert, Theodore Sizer, as the principal speaker. He hopes that the Center will draw school committee members from all over the state to what will be regular workshops on key educational concerns such as time and learning, curriculum frameworks, budgeting, facilities planning and policy setting.

Professor Smith, who came to Bridgewater with extensive experience in educational leadership in Maryland and Delaware, is excited about the prospects of the College maintaining its place as a dynamic center for those interested in fulfilling the goals of educational reform in Massachusetts. Through his role as coordinator of Educational Leadership on campus and his involvement in the Center for Public School Leadership, Professor Smith is certain to make his mark on strengthening the management skills of not only school administrators but school committee members as well. It is a difficult challenge, but one that Professor Smith realizes is the only alternative for a nation whose educational system remains at risk.

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In this era of globalization, free trade and export-driven economies, we should be reminded that these are not new concepts, but rather modern applications of the imperialism and mercantilism practiced by the European powers in Latin America and Africa during the heyday of colonialism. Professor Linda Wimmer of the History Department is conscious of current global trade relations and past colonial practices through her research, which explores the linkages between Brazilian tobacco production controlled by the Portuguese and Canadian fur trade under the direction of the English and French.

After spending a year examining archival materials in northeast Brazil and Rio de Janeiro and three months at the Hudson Bay Company archives in Manitoba, Professor Wimmer has been able to trace the inter-imperial trade that covered thousands of miles. According to Professor Wimmer, North American native groups preferred the Brazilian tobacco, which was twisted in long sticky ropes and covered with molasses over the more bland Virginia tobacco. The British and French fur traders, seeking desirable items to trade with indigenous groups for furs, stepped beyond their respective imperial boundaries, making regular purchases of Brazilian tobacco from Lisbon, the Portuguese imperial capital, to comply with indigenous consumer preferences.

Professor Wimmer's study of the tobacco for fur trade has led to more intensive examination of slave demography and family life in northeast Brazil at the height of the export economy in the 18th and 19th centuries. As a result of her research interest, Professor Wimmer delivered a conference paper at the Social Science History Association on slave demography in Brazil during the 18th century. Her paper explored population growth among African slaves who worked the tobacco plantations, a surprising development considering the living and working conditions of the laborers. Also, Professor Wimmer delivered a paper at the Organization of American Historians conference on tobacco farmers and local society in Brazil. This paper sought to investigate the social and economic positions of tobacco planters who owned slaves and to assess the relations between masters and slaves in colonial Brazil.

Professor Wimmer's study of slavery in Brazil has given her a unique insight into race relations. She found evidence of poor treatment of slaves, coercion by their masters, escape attempts and punishment by death. However, she also found evidence that many slaves raised families and went on with their lives despite their lack of freedom. Although Brazil was the last country in the western hemisphere to free its slaves (in 1888), Wimmer finds that race relations were constructed differently from prevalent patterns in the United States. According to Wimmer, social and economic position, cultural factors, and a wide variety of physical traits, including skin color, hair texture, and facial features, are used to determine racial categorization, which includes a plethora of designations.

Professor Wimmer's research also has given her insight into the relations between the English, the French and the native Indians. Wimmer is convinced that even though the English and French enriched themselves with the fur trade, the natives were not without some leverage. In order to trade with the Indians, the British, in particular, were forced to make the long and difficult trading arrangements with Portuguese Brazil, even though tobacco was grown in colonial Virginia. The Indians, it seems, were able to demand the Brazilian tobacco and played off the English against the French in order to get the best deal.

The study of slavery and international trade during the colonial era in Brazil has further sparked Professor Wimmer's interest. She will be spending the summer in Brazil studying a period of time in which the Dutch controlled northeast Brazil for a twenty-five year period in the 17th century. Professor Wimmer is most interested to see what impact warfare between Dutch and Portuguese for control of the colony had on the slave-based society and economy, on race relations and on colonial identity.

Besides her commitment to research on colonial Brazil, Professor Wimmer has become active in introducing a number of new courses into the History Department curriculum. Needless to say, the courses are directed towards a better understanding of colonial empires, slavery and the evolution of Latin American societies. Although this is her first year at Bridgewater, Professor Wimmer has quickly shown her ability to meld research and teaching in ways that benefit the discipline of history and expand the horizons of her students.
One of the eternal questions of college undergraduates is what kind of job can they get with a liberal arts degree? Professor Orlando Olivares of the Psychology Department is using a summer grant from the college's Center for the Advancement of Research and Teaching to approach that eternal question from the perspective of the employer. Professor Olivares sees the key issue about liberal arts and employment as one of job performance and the ingredients necessary in order to heighten job performance.

In order to examine the relationship between the liberal arts and job performance, Professor Olivares will construct a survey instrument this summer that will target a number of corporations in the region and elicit responses from managers on how well recent college graduates perform assigned tasks in the workplace. Olivares is interested in a number of factors that may influence job performance. One factor that he is especially interested in is the connection between grade point average at graduation and success in completing job responsibilities. He is also interested in comparing the performance of what he calls specific skill graduates - accountants, chemists, engineers - versus liberal arts majors who come to the workplace with a more generalist background.

There will also be comparisons of performance based on school status with private and four-year public college graduates examined in terms of their job performance. With this range of responses from the managers, Professor Olivares will then assess the factors that seem to be most influential in predicting success in the corporate environment.

The importance of Professor Olivares' study is that it will bring close attention to the issue of the role of a liberal arts education in the development of job skills. There is currently a debate within academia over the value of specialized education as opposed to the generalist approach that is accented in the liberal arts curriculum. By surveying key corporate managers, Olivares hopes to bring this debate into clearer focus by determining what may be the essential elements critical to successful employment of recent college graduates. After completing the survey, Professor Olivares hopes to convene a conference at the Moakley Center to present the data and evaluate the ramifications of the results for liberals arts colleges, for liberal arts students and for potential employers seeking to hire high performing employees.

Building on this initial study of job performance in the corporate setting, Professor Olivares has set his sights on another research project in which he will investigate predictors of college grade point average. This study will investigate attitude, environment, interest and personality as predictors of college grade point average. Environmental factors of interest are whether students come from intact families or divorced families, whether students come from households where the parents are college graduates or high school graduates, how many hours students work, and whether students are members of a minority group. Personality factors that Olivares will examine as possible keys to grade point average are conscientiousness, intellectual inquiry, and the tendency to be anxious or worried. This study complements the summer research project in that it will allow Olivares to compare and contrast those characteristics necessary for success at the college level versus those characteristics necessary to be successful once students leave the academic environment.

Professor Olivares comes to his research with excellent analytical credentials. A graduate of Texas A&M with a Ph.D. in industrial organization psychology, Olivares has an extensive consultancy resume as he has worked with numerous corporate clients on performance assessment. He has served as a consultant to companies on strategies to enhance organizational effectiveness and facilitate organizational change. Currently Professor Olivares is a member of the New England Society of Applied Psychologists and the Society of Industrial/Organizational Psychology.

When not involved in his research efforts, Professor Olivares has an active teaching schedule with courses in statistics and research methods, industrial psychology and organizational behavior. Although new to the faculty, Professor Olivares has already made his mark with a research agenda that is certain to make a valuable contribution to the college and the region.
A plant of the daylily cultivar ‘Bandit Man’, by Don Stevens from Massachusetts, introduced in 1979.

The flowers are five and one-half inches in diameter and 28 inches tall. Even though the blossoms last only one day, a large plant can produce a display like this for a week or two in July.