

AFTERTHOUGHTS ON COLLEGE EDUCATION

1. TWO CONFLICTING PURPOSES IN COLLEGE EDUCATION

Reflections of a Retired Professor. Teaching classes every day doesn't give you much time to think about it. A professor just picks up his special subject where he finds it, and carries it on from there, without seriously considering what this has to do with the aims of education, or with his students' needs and expectations. I taught my first class in 1925 when I was 19, and I officially retired in 1976. During my teaching career I was aware that a serious conflict had developed between, on the one hand, the general *college experience* expected by students, parents, and the supporting public; and on the other hand, the specialized *academic knowledge* that we professors were delivering. We assumed that a variety of our courses added up the general education required in the student's college experience. I knew that this was not true but, at the time, I thought that nothing could be done about it. Since I retired I have had 26 years to think about it; and now I think that we could have done better, and still can.

Worse yet, we are exploiting the income we get for college teaching in order to pay for our graduate studies and research, which undoubtedly are of the highest scholarly quality among things that we do. They bring the highest prestige for universities, but this prestige is their pay. American society provides totally inadequate financial support for graduate studies and research, either in government funding or private donation, but this does not make it right for us to load their costs onto college tuition, or to cheapen our teaching services to make up the deficits, which is what we do automatically.

And to make matters still worse we are trying to do everything with a rigid departmental organization. Departments can teach their special subjects well, but they are poor at general education that combines several subjects; and the college experience is general education. Also departments are handicapped in applying their knowledge to solving real-world problems, which usually require knowledge of several fields.

Finally, we are working in a structure that was set up long ago before the 20th century innovations in science, technology, and arts of communication descended on us. It is long overdue for an overhaul to accommodate our modern world. If I had 50 more years, these are the problems that would require my urgent attention. So I would like to tell you what must be done to correct these difficulties and prepare for new problems.

American Education As We Found It. To tell this story let me begin in 1913 when the structures of high school and college, as we know them today, were completed. That was the year when universal education in this country was extended from eight years to the present level of twelve years, to include high school. High school offered two courses of study. There was a general one, under local control, which also provided job qualification. And there was an optional alternative, "college-preparatory", curriculum that included the entrance requirements specified by the colleges.

College was optional and has remained so, but the general structure of the academic curriculum for the BA degree had been standardized by 1913. It was planned as the student's *final education*. In four years it required about a third of the courses to be in a common core of general education, another third in a "major" chosen by the student, but with content specified by the department, and the rest was in free electives.

This arrangement permits students to adapt their course of studies to many personal interests, or career plans, without a rigid commitment to a preset vocational program. Specialized vocational programs, such as chemical engineering, architecture, or teacher training, have a legitimate place for students who know at age 18 what work they plan to do. But most 18-year-olds don't know that; and any chosen vocational education may turn out to be a waste of precious time and money. For this reason the number of students in the Arts and Sciences general curriculum has come to exceed the combined total in all of the undergraduate vocational programs. However, the college years should be used to make at least a general career plan and prepare for it, not simply to postpone the decision. The system permits too many students to drift aimlessly through college; and emerge with no idea what they plan to do with their lives.

The College Experience. On those two conflicting purposes of college education, we start with the *college experience*. In the college experience young adults, aged 18 to 21, in a new environment away from home, can continue their personal development; make friends of their own age; make some, at least preliminary, decisions about what they want to do with their lives; and *qualify for a job*. This is the purpose of college as perceived by students, their parents and the supporting public. *The college experience is general education*. It includes academic studies, extracurricular activities, personal development, and the making of one's adult mind. .

Extracurricular Activities. These are loosely organized, and supervised by an array of vice presidents. They include such things as: student self government, dormitory life, food and social dining, physical exercise, competitive athletics, entertainment, fraternities, provision for religious expression, student dramatics, student musical ensembles, political and other clubs such as the debating club, student newspapers, and organized travel such as junior-year-abroad. These elements should be incorporated rationally into a unified educational plan, but this is too vast a task for me here. What follows will be concerned largely with the academic component of the college experience. That is where the conflicts arose.

Academics. One role that academics have in the college experience is to give the student responsibilities to be met on schedule, and daily work to do, as well as longer-term assignments, all to be judged on quality of performance. Another is to present refined subject matter in which he, or she, can develop mental skills by practice in reading, speaking, laboratory experimentation, writing and critical thinking. This kind of teaching is costly, requiring one-on-one tutorials. *Except for basic science, which must be learned then or never, the particular knowledge acquired in the courses is not as important to the student's college experience as the public and professors, think.* Most of it is forgotten in later years.

The Making of a Mind. It is shallow to think that the aim of higher education is to top off the student's mind with some last bits of academic knowledge. A mind is a storehouse for information of course, but it is much more than that. A developed mind also embraces language, memories, religious beliefs, choices, purposes, values, likes and dislikes, ideas, concepts, and a plan of life. After early indoctrination in home and school, *everyone must make such a mind for himself, or have it made for him.* And college is the place to finish this personal development. A major responsibility of professors is to provide a mature, detached, perspective and advice for this process.

The Advancement of Knowledge. The other idea of the university dates back a thousand years. It says simply that the purpose of the university is to preserve, transmit and advance knowledge, the intellectual culture. In this view *the specific knowledge in the courses is of primary importance*. Note that *it does not include the making of a mind*.

I suspect that most professors think that this is what they are doing. Each one thinks of the intellectual culture as his own special field; his research is advancing it; and publication transmits it to future generations. He thinks of the student as another vehicle for passing it on to the next generation. Since knowledge has long since progressed to the point where one person cannot know everything, professors have become *specialists*, while their students are still in an earlier stage, still needing more general studies.

Each professor wants to deliver knowledge of his special subject. In fact his security, promotion and pay depend on his published work in his specialty, not on his teaching. *As a result, the advancement of special knowledge has been permitted to take priority; and delivering the college experience has been relegated to a chore.*

The PhD Degree and Its Prestige. In the 19th century American professors went to European universities for the PhD degree. Then in 1861 Yale took the bold step of initiating the first American PhD. But the number of universities able to conduct graduate studies to the PhD level was limited. So becoming a research university, and offering the PhD degree, came to be associated with prestige.

Alternative Doctorates. A PhD program is training for research. Of necessity its field is specialized and advanced. The number of students for it is restricted, both by the required talent for research, and by the limitation on the number of jobs as researchers in any special academic field. Recognizing this, those European universities had offered alternative doctoral degrees, not requiring research, to train many more students as advanced practitioners in various applications.

In American universities Law and Medicine were the first to advance completely to the graduate level; and they did it the right way. Both have large numbers of practitioners who need a broad advanced education to qualify for their profession; and doctoral degrees, JD or MD, as certification. *The whole faculty of Law or Medicine, not the departmental faculties, teaches this general curriculum in a three-year program, and grants the degree.* Neither the JD and MD degree program requires research training, or a research thesis. However, Law and Medical faculties do conduct research; and so can lawyers and doctors with their JD or MD training.

Then some, but not all, Law and Medical schools offer PhD. degrees for a much smaller number of research talented students.

American Teaching Universities. In 1913 by far the most college students were in what I shall call the *American teaching universities*, or colleges, that went no farther than the masters degree. Originally, before about 1930, such a university *was organized in whole-college units, without departments*. The president, or dean of the college, chose his own faculty. His job was to deliver the *college experience*. He might have had one professor in each subject who had a PhD degree. But for the rest he sought personalities, teachers from the community, alumni, or *generalists*, that is, teachers whose mind and knowledge are broad, ranging over a variety of fields, rather than to one field. Since 18- to-21-year-old students are still involved in the making of their minds, generalists are essential to organize knowledge for them and relate it to their world.

Thomas Jefferson's Description of the College Experience. In a speech to the UVa alumni in April 1955, President Colgate Darden quoted the founder as saying that education means "the diffusion of light throughout all ranks of society, from the highest to the lowest. Indeed it is the chief if not the only means by which the goodness of the individual should be nourished and his happiness secured." The quotation continues to say that what is needed is "not simply education but well directed education to improve his morals, enlarge his mind, clarify his decision, instruct his industry, and augment his material prosperity." On his own Darden added: "This the University of Virginia has not done, and until it is done the people of Virginia will be poorer for it." But in fact this was not unique to UVa; it was common to virtually all American universities.

To rectify that was my job when I came as dean of Arts and Sciences that fall, but I did not know it. I thought my job was to help build strong departments.

2. THREE MISTAKES IN NATIONAL EDUCATIONAL POLICY

Omission of the Practitioner's Doctorate. The background is now set for an understanding of what I see as *three historical mistakes in national educational policy that undercut the college experience*. As described above, Yale established the American pattern in Arts and Sciences, copying only the PhD and *omitting alternative doctorates* for practitioners that the European universities had. *This turned out to have been the first mistake*, although, as we shall see, its effects were not immediately apparent.

Total Departmental Organization. In the years after World War I the American teaching universities began to replace their college faculties of Arts and Sciences, going totally into departments. It was originally done only for efficiency, and to enable the college to grow much bigger. But it has also brought serious damage to the college experience in ways that were unnoticed at time, and of course were not intended. That brought the second great blow to the college experience.

A departmentally organized university is neat: The administration raises the money, conducts public relations, arranges the overall structure of the university, manages it with innumerable vice presidents, *and is isolated from education*. In effect the dean of the faculty exerts only budget controls, saying how many tenured positions each department has. *The departments provide the teaching*.

A department is a stable and independent unit on its own, more strongly related to the national organizations of its subject than to the college in which it resides. It selects its own members and, in this, *its primary motivations are to become better in its advanced studies and research, and to enhance its national reputation*. The national rules of tenure, originally intended to protect academic freedom, now reinforce the department's power to select its members. Departments choose specialists in their fields, *subject teachers, to the exclusion of generalists and personal teachers*. Students come from out there somewhere; and the professor lectures to them on his subject. *Unquestionably such a departmental faculty can present its subjects with more authority than can the unspecialized college faculty in an old-style American teaching university*. Departments are here to stay!

Evolving Defects In College Education. But look at what was lost. This total conversion to departments resulted in an unperceived loss of the general academic studies involved in the college experience and the making of minds. There was a shift of emphasis away from general education, and from generalists in the faculty to specialists. In fact departments use the tenure rules to exclude generalists and personal teachers. A departmentally organized “College of Arts and Sciences” grows into a huge amorphous system, granting degrees on a bookkeeping basis. Its classes include many students who come from around the university. Consequently, a student, or a professor, in it has little sense of belonging to a college. It replaces the academics of the *college experience* by a requirement that the student must take a variety of the departments’ academic courses. That is a feeble excuse for real general education.

This unbalanced emphasis on academic specialties, resulting in narrowing of the college experience, and loss of its personal teachers with their influence on the making of minds, was the most serious damage to college education in our time.

Surprisingly, their surrendering to departments the power of faculty appointments also diminished the stature of university presidents. We no longer have the great ones who raised endowments for specified new professorships; and then went out to find top scholars to fill them: the likes of Eliot and Lowell of Harvard, Angell of Yale, Woodrow Wilson of Princeton, Harper of Chicago, and David Starr Jordan of Stanford. The last one was Nicholas Murray Butler of Columbia, unless we include Abraham Flexner of the Institute for Advanced Study. Relatively obscure managers and general fundraisers, concerned with “public relations”, have replaced them.

Excessive Production Of PhDs. The years, 1945 to 1972, were a time when there was a perceived shortage of manpower in all fields of American society. One day, as I sat down in the barber’s chair, I began with the trite opening gambit: “How are things in your line of work these days?” Frowning with serious concern, he replied: “Not enough men going to barber’s college.” It was like that all over.

The shortage felt was especially acute among those with advanced training for the needs of national defense, high-tech industry, government and education. In college teaching the shortage was severe. Earlier there had always been an excess of PhDs produced for the available academic jobs. But this was reversed in these postwar years. Many American teaching universities, which had long yearned to become research universities, and grant the PhD, rushed in to take advantage of this opportunity.

Belatedly, around 1962, government finances were provided for a vast national expansion of doctoral programs. But in the years 1968 to 1972 it turned out that the expansion achieved was excessive; and federal funding of them was terminated. The new research universities, the “Centers of Excellence” that had been established in the planned expansion, were left, too proud to give up their new research status, and paying for their unnecessary graduate programs with their own resources. They are financing their costly research faculties by cheapening their college teaching, and raising college tuition sky-high to cover the remaining deficits.

This was the third great mistake in educational policy, a ghastly debacle of national planning and finance that is little known. It was something swept under the rug.

Cost of PhD Programs. I would estimate the annual cost of one departmental PhD program to be *at least* \$500,000 in addition to its college teaching, only about two thirds of which shows up in the department's budget. And for 25 departments this implies a total cost of at least \$12.5 million. In an Arts and Sciences student body of 5,000 students this adds \$2,500 to the cost of each student's education. And this is minimal; it could easily be double that. How much of that \$2,500 is added to the student's tuition depends on the financial structure of the university. *But, unless specific endowment is found for them, there is no escape from the fact that, to reduce this cost, one must curtail these PhD programs and reduce their faculty. Of course either of these measures would initiate a bitter faculty revolt.*

Here let me hasten to say that I consider graduate studies and research, with their associated PhD degree, to be the best quality things we do. I am proud of having initiated two successful PhD programs myself. I strongly believe that the good departmental PhD programs must be preserved and protected from two ever-present threats. One threat is excessive production, beyond the available resources of talent and finance. The other is contamination by trying to make the PhD serve other educational purposes, however worthy in themselves. I did *not* say that giving the PhD is the *most important* thing we do. I believe that delivering the undergraduate college experience must come first.

The private Ivy League universities, including Chicago and Stanford, are less affected by these cost factors. They are the beneficiaries of the still-existing private and public national fellowships that search out the best graduate students, give them fellowships that pay graduate tuition, and provide a support stipend. The Ivy League universities also have the advantage in federal dollars for research. The top-ranked state universities, with long-established graduate and research programs, have substantial state support for buildings and instructional costs. They have huge alumni support, and some also have large private endowments as well. Their large size reduces the unit cost of their PhD programs. For the foreseeable future they, together with the Ivy League universities, can turn out all of the PhDs the job market will absorb.

The excellent smaller private universities have none of these advantages, including, in the South, such ones as: Duke, Vanderbilt, Wake Forest, Miami, Rice, and Tulane. Duke professor Rojstaczer describes their plight in an article, *Colleges Where the Middle Class Need Not Apply*, The Washington Post, 3/8/01. They are digging deeply into the talent pool for graduate students, subsidizing them with funds from their limited private endowments, then cheapening their teaching and hiking tuition to balance their budgets, all for the prestige of being "a great research university" producing PhDs that glut the job market.

Weapons Of Mass Instruction Graduate studies in Arts and Sciences bring in little money except for inadequate grants. To save money for graduate studies, departments have resorted to the use of GTAs (graduate teaching assistants), large classes, the lecture method, true-or-false check-off tests that require no writing, and other *weapons of mass instruction*, which leave students passive. And they slight the costly individual coaching that develops skills in the laboratories, seminars, languages, mathematics, writing and speaking sessions. These skills cannot be taught by lecture any more than a winning tennis player can be trained by only lecturing to him on tennis. *As we have seen, this is the main cost factor forcing tuition up to today's prohibitive level.*

3. RESTORING THE COLLEGE EXPERIENCE

Bring Back the Colleges. Although for the foreseeable future departments will continue to provide most of the teaching in their subjects, *that does not mean that the entire faculty of Arts and Sciences must be made up of the departments.* And, as we have seen, the departments cannot provide the college experience; for the departments have excluded its necessary personal teachers. *So, in order to restore a proper college, the first thing to do is to supplement the departmental faculty by a small College Faculty chosen for this purpose. Its Dean of the College must have an independent budget to choose a faculty of his own, whose members are not to be members of any department. It is essential that the criteria for their selection, promotion, and tenure shall be independent of those for the departmental faculties. The basic function of this College Faculty is to provide the college experience and to administer the BA degree*

There can be several such colleges served by the same departmental faculty. This occurred naturally in the English universities, with their separate colleges named for the residences in which faculty and students lived together. Harvard and Yale adopted part of this scheme in their house system of residence and advising. Princeton partitioned by dining halls. At UVa we were able to achieve a form of this in our “Associations” with their common first-year dormitory, and stable academic advising to graduation..

So I would like to set up several colleges within the same student body, with different characteristics. For example, one could be a women’s college. This scheme could have saved Radcliffe, which apparently has been stupidly dissolved into Harvard’s departmental structure.

Graduate Studies for the College. This introduces another problem. An undergraduate teaching college, separate from the departmental faculties, cannot be viable without having graduate studies and research. We have come to the point where to be a college teacher without doing research and publication is tantamount to professional suicide. But participating in the departments’ specialized PhD and research programs puts college teachers at a disadvantage. They need a graduate program of their own that is consistent with general education, and providing the college experience.

A Practitioner’s Doctorate in Arts and Sciences. Since Yale overlooked it in 1861, a broad program for practitioners who can apply their advanced knowledge to problems of the real world has been missing in departmental graduate studies. Such problems usually do not fit neatly into a single academic discipline, accessible to departmental specialists. But much public money is available to support them. So, for the survival of the separate college faculty, I propose that they have a degree in general graduate studies. The idea is based on the JD and MD degrees of Law and Medicine, and is new only in its application to Arts and Sciences. *I call it the Doctor of Arts and Sciences, DAS, degree. Like the JD and MD, it is to be given in a three-year graduate program by the whole college faculty, not by departments. Like the JD and MD degrees, but unlike the PhD, I propose to charge full cash, not just nominally booked, tuition for it. Here I will not attempt to specify its content, except to say that it should have a flexible structure, like the BA.*

Uses of the DAS. I see the main role of the DAS as general education continued into the graduate level. There are many thousands of able students who will continue

beyond the BA, if we make it attractive. But the research PhD is not appropriate for most of them. To save time for continuing to the DAS *we have to make it possible for good students, by advanced standing credit in the BA program, not mere advanced placement, to get their BA degrees in shorter time, up to two years shorter.*

Higher practitioners of the Arts and Sciences have not been recognized because they are so diverse, not limited to one profession like those of Law or Medicine. But they are out there in large numbers in the huge new developments in science, communication, computer technology, applied mathematics, in national defense and the organization of our increasingly complex society. Their numbers have been increasing recently, especially in relation to natural resources and the environment. Typically such practitioners use multidisciplinary skills, for which the specialized research training of the PhD is ill suited. I believe that the broader DAS is ideal for this need, which will become its second major use.

Public administration, in particular, requires an advanced general education. The law degree has served this purpose, and will continue to do so. But the JD program is loaded with legal training necessary for lawyers, but not for public administrators, and is limited in its capacity to incorporate science and other A&S subjects that are increasingly needed. So the DAS will supplement the JD in this area.

I also see the DAS as superior to the specialized PhD for the training of college teachers. The need of jobs for their PhDs led the Ivy League universities to promulgate the false notion that a PhD degree is a necessary qualification for any college teacher. Actually, in some subjects, having a specialized PhD education *may do more to unfit* a teacher of young undergraduates than it does to strengthen him.

Finally, the DAS degree will have special significance for the humanities. Technical subjects have crowded out the humanities. So professors of English, languages, history, drama, music, and art have tried to keep students in college longer so that there will be time for their subjects. But the DAS will eliminate the need for this abuse, costly in a good student's time and money. For it will provide a huge new outlet for the humanities at the graduate level.

Departmental Doctorates for Practitioners, a Bad Idea. To meet technical manpower needs, some universities have introduced non-research doctorates *in each department*, alongside their PhD programs. The plan was never adopted nationally because the Ivy League universities opposed it as "watering down the PhD." Although it sounds superficially like the DAS program that I propose, I also oppose it. *The DAS is one program for a whole College faculty*, and is therefore far less expensive than an array of some 25 separate departmental programs, added to the cost of the 25 departmental PhD programs. Furthermore the whole College faculty can muster more diverse resources, than can single departments, for the broad training of college teachers and practitioners. One DAS degree program in a college is not only cheaper but also better.

The Master's Degree? Yes, it is the fastest growing component of higher education, but not the departmental master's degrees of Arts and Sciences. The thriving master's degrees are those in schools of education, community colleges, adult extension divisions, and engineering schools. They provide training, and retraining, to technicians in such fields as: health sciences, engineering, business, and school teaching.

Actually, Arts and Sciences has the best resources for this work but, because of its specialized faculty and departmental structure, it is unable to provide the cross-field

individual programs that these students require. So, in addition to the departmental master's programs, *I propose to give the College Faculties authority to grant whole-college master's degrees.* By calling on their own, as well as departmental, course offerings they will be able to put together multidisciplinary master's degrees tailored to individual students' career needs, which departments themselves find difficult.

Complete College Faculties Without Departments? Some universities in this country and in Europe have attempted to return to the old-style faculty organization without departments. These universities tend to drift back into departmental structure; and I believe this is inevitable. Departments are here to stay. Practically, the most that can be hoped for is a smaller separate College Faculty that supplements the departments.

Responsibilities of the Colleges. In summary, I am proposing that there be separate college in Arts and Sciences, with faculties independent of the departmental faculty, chosen by the Dean of the College. Their relatively small faculties of personal teachers and generalists are to control and administer the BA degree, a new general Masters degree of their own, and a new three-year Doctor of Arts and Sciences (DAS) degree that is parallel to the JD and MD degrees. These faculties will have advantages in multidisciplinary and applied research. The departments will continue, as at present, to provide most of the teaching in their subjects, and to conduct their majors and their specialized programs of graduate teaching and research to the PhD.

Finances Of The Colleges. I have called for bringing back the college faculty. These extra professors will cost a lot of money, which universities can ill afford to load onto tuition that is already too high. How then can we pay for them? The answer is inevitably painful. *Reduce the departmental faculties involved with the PhD degree.*

Advice to the Private Regional Universities. *To them, and to the new Centers of Excellence, I propose that they replace all their PhD programs in Arts and Sciences, except those that are specifically endowed, by one whole-faculty DAS degree program. The resulting faculty-salary savings will provide funds, not only for better teaching, but also for some reduction in tuition in these universities.*

Due to the requirements of tenure, the faculty-budget savings from this will be slow in realization, but eventually normal attrition will release the funds. Meanwhile the possibilities for private funding of their Colleges' costs should improve because endowed professorships for their personal teachers will be more attractive to potential donors, especially to wealthy mothers, than are departmental professorships in academic fields.

Objections of the faculty and the president will be softened by the fact that the DAS *program* retains the graduate-studies-and-research status that the PhD programs have provided. And the PhD programs can be restored one by one, as finances, faculty resources, the PhD job market, and the supply of good students justify it. Nationally, the overall quality of graduate studies will be greatly improved by reducing the number of poorly qualified students that are now being admitted to fill superfluous graduate programs.

And nationally, this will open graduate studies to many more universities not now able to finance departmental PhD programs, and therefore to far more students. So the third thing I would like to do is to put across this idea nationally

An Engineering Analogue. Many engineering schools do not have a general degree in engineering analogous to the BA. Because there is so much to learn, students specialize from the start in particular engineering areas, originally in the four forms of civil, mechanical, electrical, and chemical, but now further subdivided. In recent years they have added departmental PhD programs, continuing the specialization. By contrast, the problems of modern industry have become more complex; and they no longer fit neatly into these simple categories. As I see it, there is even more need for a general, non-specialized, advanced degree in modern engineering, than in Arts and Sciences. Since *technology* is a word that is not specialized to particular disciplines, *Doctor of Technology* might be the engineering analogue of the DAS degree.

4. COLLEGE EDUCATION FOR A NEW CENTURY

Ninety Years Later. In 1913 college was conceived as final education for a student who was then going out into a world where there was little opportunity to continue learning. – See the description at the beginning of this document. –Now that situation is entirely changed. With radio, then television, computers, and now the Internet, we are flooded with information, most of it trash. Since, unlike 1913, we are now overwhelmed with information, the purpose of college education must become one of finding, selecting, and evaluating needed information, as well as making of the modern mind, rather than one of storing a lifetime stock of it in one's head. The college curriculum itself should reflect this new world, and it does not. But it will take many people, and a long time, to construct the curriculum for the 21st century. Here I can offer only some observations about what a modern education might entail.

Education Throughout Life. College education is no longer final; it is only a stage in an ongoing process. Furthermore we now have the resources and the time to continue learning throughout life; which is often necessary in order to keep one's skills and knowledge up to date. Most of lifelong learning is self-taught, or family-taught, not by formal schooling, although universities' continuing education also provides some academic teaching for it. Let us look first at some examples of such non-academic education, some beginning at very young age.

Early Family Education. Have you ever thought about what a huge part of making of the mind occurs at mother's knee in the preschool years? It includes spoken language and religion. –Two-year-old humans are language geniuses! -- As adults we do not remember the source of such knowledge, and tend to regard it as absolute, as unquestionable. With respect to religion, this is the source of fundamentalism, and of countless wars throughout history. Differences in language do not seem to cause so much trouble,

Clearly this is an area where secular college education can do much to teach young potential mothers and fathers how to do a more intelligent job in the preschool education of their kids. Schools of Education do some of this, but they tend to reach only schoolteachers. It should be widely available, perhaps required, in Arts and Sciences, but it now appears only here and there in elective courses.

Around the Dinner Table. As another example of family-taught continuing education, I suggest that the family dining room should have in it these three resources: an unabridged dictionary, an encyclopedia, and a world map as a globe. (Flat maps can convey false ideas of geography in the large.) And table manners should allow you to get up from the table to consult these sources during family discussions. That will not happen too often; and it will be the adults who do it. But the kids will get the idea that, to be worthwhile, opinions must be based on authoritative facts, and that the place to start is with those three basic sources.

Travel. *The Education of Henry Adams* is the classical book on the values of travel in education. Most luxury travel on guided tours for adults is shopping and eating, and virtually worthless as education. But independent family travel by car, using the *Guide Michelin*, or that encyclopedia, as travel guide, is invaluable for both parents and kids. In the U.S. visiting the special sites of American history translates book learning into reality for the whole family. The national parks provide tremendous opportunities, not only for magnificent scenery, but also for nature study. Family camping is educational in its exotic experiences. And the kids will learn to translate the map into reality, and get a feeling for the actual distance represented by an inch on the map.

In Europe it is necessary to have enough of the language to get around independently. That does not require a fluent command, but it is better if you have it. The kids will be motivated to study language in school. This kind of travel lets you see ancient cities and museums at your own leisure, without the guide's singsong prattle. The kids will be bored but it will not hurt them; they will appreciate it later. And there are guided tours that have genuine educational value, such as the ones conducted by universities, learned societies, the Smithsonian and other such national institutions. You have to use some discrimination to distinguish them from those shopping-and-eating tours that are disguised as educational.

College Courses On Videotape. This is an area of tremendous possibility for lifelong learning outside of college. It can compete with television because it lets you see live images besides reading or hearing words. Some such courses are now available commercially, but so far we have only scratched the surface. It also brings a serious danger that colleges will use it as a weapon of mass instruction, replacing live teachers.

A College Curriculum For Education Throughout Life. . Some departments have brought the teaching of their own subjects up to date to reflect these modern developments, but the departmental organization of the universities has not been able to accomplish this in general education. I think that the non-departmental College Faculty, described above, with its generalists and personal teachers, and with its DAS degree extending general education, will provide the *organizational structure* necessary for a new college curriculum, appropriate for the making of minds, and education that will continue throughout life, though I do not presume to specify that curriculum itself here.

Making of the Modern Mind. Since we professors, because of our departmental specialization, have largely lost our influence in the making of our students' mature minds, that influence has fallen to the media. There it is deliberately used to promote political agenda, or commercial interests. An example is the way that the public mind was successfully sold on a war with Iraq. Or consider the way that big business can shout, "Tax and spend", to defeat legislation that would provide social services. If we

professors are to have any influence in American society, we must find a way to introduce habits of dispassionate and rational analysis into the thinking habits of our students that will at least offset the power of the media. In teaching our special subjects we are doing little of this now.

Rational Tolerance. Western societies have made great strides controlling the passions that go with the idea of absolute truth. We do it with tolerance that respects different points of view. We still have troubles with fundamentalists in religion, who are convinced that theirs is the one true religion. But the Law now primarily excludes such a position in favor of freedom of religion. And tolerance is not limited to religious beliefs. For example, in science we no longer insist on the one true theory of motion, but we use Newton's laws for their simplicity in common motion, reserving the more correct, but more complicated, relativity to explain the structure of the universe. We have become used to the notion that there may be different mathematical models to explain the same phenomenon. The weather predictor on television keeps reminding us of that.

But this tolerance has some less desirable characteristics too. It goes so far that we feel that anything goes. For example, the Law's respect for individual rights permits child killers to roam the streets; and its respect for your right to drink alcohol allows drunks to kill pedestrians. It only punishes them for it when it is too late. In general this excessive permissiveness allows the media to control the making of our minds.

Perhaps the greatest intellectual achievement of the 20th century was to introduce that general tolerance. But it remains for the 21st century, and I think for its academic community, to develop a rational tolerance in the college education of minds that will set the boundaries of tolerance, and protect us from being tolerant of intolerance.

William L. Duren, Jr.
Charlottesville VA, May 2003.