

From a Wisconsin Soapbox

From a Wisconsin Soapbox

MARK H. INGRAHAM

*Dean Emeritus, College of Letters & Science, University of Wisconsin
Professor Emeritus of Mathematics, University of Wisconsin*

Madison, Wisconsin

1979

Copyright © 1979 by Mark H. Ingraham
All rights reserved

Printed in the United States of America

Copies of this volume may be purchased from the Wisconsin Academy of Sciences, Arts
and Letters, 1922 University Avenue, Madison, Wisconsin 53705, telephone (608) 263-1692,
at \$5.00 per copy including postage.

To
KATHERINE

My best
(but sometimes rebellious)
captive audience.

[Please see last paragraph of last address.]

Contents

PREFACE

x

Part I Liberal Education

- 1 *The Omnivorous Mind* 3
Given May 16, 1962, to the University of Wisconsin Chapter of Phi Beta Kappa. Republished from *The Speech Teacher* of September 1962.
- 2 *Truth—An Insufficient Goal* 17
The Keniston Lecture for 1964 at the University of Michigan; March 17, 1964. Republished from the *Michigan Quarterly Review* of July 1964.
- 3 *On the Adjective "Common"* 31
An editorial for the February 1967 *Review of the Wisconsin Academy of Arts, Letters, and Sciences*; February 23, 1967.

Part II Educational Policy

- 1 *Super Sleep—A Form of Academic Somnambulism* 37
First given as retiring address as President of A.A.U.P. This much revised version was given to the Madison Literary Club, March 12, 1940.
- 2 *No, We Can't; He Has a Committee Meeting* 57
Madison Literary Club; May 11, 1953.

Page

- 3 *Is There a Heaven and a Hell for Colleges?* 70
Commencement address, Hiram College; June 8, 1958.
- 4 *The College of Letters and Science* 79
Talk given to the Board of Regents of the University of Wisconsin, May 3, 1958.
- 5 *Some Half Truths About the American Undergraduate* 84
Orientation conference for Whitney-Fulbright Visiting Scholars. Sarah Lawrence College, September 6, 1962.
- 6 *Maps Versus Blueprints* 94
Honors Convocation, University of Wisconsin, May 18, 1973.

Part III To Students

- 1 *A Talk to Freshmen* 103
University of Wisconsin; September 18, 1951.
- 2 *Choice: The Limitation and the Expression of Freedom* 112
Honors Convocation, University of Wisconsin; June 17, 1955. Republished from the *Wisconsin Alumnus*.
- 3 *"The Good is Oft Interred with Their Bones"* 121
Commencement, University of Wisconsin—Oshkosh; January 19, 1968.
- 4 *Talk at Honors Convocation at Ripon College* 129
April 9, 1969.
- 5 *The Framework of Opportunity* 136
Thanksgiving address, University of Wisconsin; November 1947.

Page

Part IV A Little Fun

- 1 *Food from a Masculine Point of View* 149
Madison Literary Club; November 11, 1946.
- 2 *On Telling and Reading Stories to Children* 165
Attic Angel Tower, Madison, Wisconsin; March 6, 1978.
- 3 *Three Limericks* 179
- 4 *Fragments* 181
a. From an address given to the University of Wyoming Chapter of Phi Beta Kappa, April 26, 1965.
b. A comment.

Part V Somewhat Personal

- 1 *Letter of Resignation from Deanship* 185
April 5, 1961.
- 2 *Retirement Dinner Talk* 188
May 24, 1966.

Preface

It has been suggested that a selection of some of my talks and writings be published.

As I recently reread many of them, I realized more fully than before how much I talked and how frequently these talks became sermons. Since my grandfather was a Methodist bishop who in spite of the fact that he died when I was about eleven was a great influence on my life, I considered calling this *The Bishop's Grandson*. (As a child because of a family resemblance I was sometimes called "the little Bishop" by certain of my mother's friends.) However, I have been impressed for many years by the advantage of being from the University of Wisconsin when one makes an address or even a short statement, or participates in a debate. If one has the soapbox instinct it is wonderful to be furnished with such a rostrum, and besides in Wisconsin we have always had a courteous audience. Thus I chose the title *From a Wisconsin Soapbox*.

This collection is divided into five parts. The first contains discussions of certain aspects of liberal education, the second is concerned with educational policy, the third consists of addresses to students. I hope the fourth is amusing. The fifth is distinctly personal.

Three categories of talks which I often made are not included here. The first are mathematical papers. The second were about retirement matters and other fringe benefits. The third are statements of appreciation of colleagues made either on the occasion of their retirement or of their death. Another type of writing that I did much of, and of course not included here, is drafting reports of

Preface

xi

committees either as chairman or for the chairman. Some of these were used almost unchanged, others were recognizable, but only barely so, usually improved as to content and injured as to style. Some of these were on educational policy, either national or local, others were on retirement provisions, and many were memorials to deceased members of the faculty. Probably these drafts of committee reports were of more importance than writings that came out over my name only. I have not included excerpts from the books I have written or helped write.

There are a few essays I omitted with regret chiefly because I like their titles, for example, *Specialization: A Companion of Irresponsibility*, or *Beefsteak vs. Smorgasbord*, or, again, *Plagiarism: An Essential of Civilization*.

The reader will find some verbatim repetitions, sometimes only a sentence in a different context. Anyone who speaks often will incorporate whole gobs of old speeches in new ones. I could, of course, have made deletions so as to use such passages only once, but I decided not to do so wherever it would harm the structure of what I had to say. The greatest overlap is in the first two addresses. I have also inserted in brackets a few paragraphs from other talks into essays which did not originally contain them.

Often names of persons, generally from the University of Wisconsin, occur in these essays. Even if the readers do not know them, they generally, with little difficulty, can make valid substitutions. In many respects, certain illustrations are dated. However, Dodger fans should still remember Preacher Roe. But what does it matter, if it had been written yesterday it would be dated tomorrow.

I particularly wish to thank my sister Grace, whose generosity made feasible the publication of this volume. She and I were the youngest of a large family, bound together by strong ties of affection. We are also the only survivors. Of my brothers and sisters, she is the only one who seemed to me to be a child at the same time I was. She still is cherished, and after more than four score years she shares with me my earliest memories.

I wish to express my gratitude to Thompson Webb, Jr., for his assistance and advice.

After reserving a number of copies for personal distribution, I am giving the remainder of the edition to the Wisconsin Academy of Sciences, Arts, and Letters to be sold and the resulting income to be used for the Academy's purposes.

Mark H. Ingraham

Madison, Wisconsin
July 1978

Part I

Liberal Education

The Omnivorous Mind

In the spring of 1943, after I became dean, your committee in the spirit of hope asked me to give the Phi Beta Kappa address. Now in the spring of 1962, after my giving up that position, they with I presume a sense of relief have done so again. In 1943, watching the disintegration of learning, I pled for a core of intellectual experience that even as specialists we could all share. I again make the same plea. Such a core, although necessary, is not sufficient. We need a more omnivorous intellectual appetite than we have—one that encompasses not only the best of our ancient diet but also new staples and new delicacies from recently discovered knowledge. And we should appreciate and demand attractive ways to serve such food. However, we need not only wider intellectual understanding but also wider human understanding—a marriage of the heart and of the mind that will produce better and more responsible ethics to serve our time.

Thus tonight I frankly advocate a cause—the cause of broad intellectual interests and of a viable social order that not only can continue to exist but which will progress toward constantly expanding and unattainable ideals as an environment for the individual and the background for an individual's zest in the use of the mind.

The individual is central—even the purposes of society should be defined in terms of him. Although I deal tonight with men and women immersed in a social order, I shall primarily discuss in-

The Omnivorous Mind

In the spring of 1943, after I became dean, your committee in the spirit of hope asked me to give the Phi Beta Kappa address. Now in the spring of 1962, after my giving up that position, they with I presume a sense of relief have done so again. In 1943, watching the disintegration of learning, I pled for a core of intellectual experience that even as specialists we could all share. I again make the same plea. Such a core, although necessary, is not sufficient. We need a more omnivorous intellectual appetite than we have—one that encompasses not only the best of our ancient diet but also new staples and new delicacies from recently discovered knowledge. And we should appreciate and demand attractive ways to serve such food. However, we need not only wider intellectual understanding but also wider human understanding—a marriage of the heart and of the mind that will produce better and more responsible ethics to serve our time.

Thus tonight I frankly advocate a cause—the cause of broad intellectual interests and of a viable social order that not only can continue to exist but which will progress toward constantly expanding and unattainable ideals as an environment for the individual and the background for an individual's zest in the use of the mind.

The individual is central—even the purposes of society should be defined in terms of him. Although I deal tonight with men and women immersed in a social order, I shall primarily discuss in-

dividual men and individual women. To what else is an educator's life given?

Before going further, let me make explicit an apology. One is tempted to give advice or preach more by an audience that has the intelligence not to need the advice than by a less stimulating one, and I am yielding to this temptation.

We are made in large part by our abilities of mind and body, by the degree to which we mold and are molded by circumstances and by our ideals. One ingredient in our ideal for the intellectual life is balance between the specialized and the broadly interested mind. I believe that currently there is too great emphasis and an unnecessary emphasis on the specialist. Everyone of us rightly wants to be an expert both in skill and knowledge with respect to some worthwhile realm of human endeavor. No one of us will be only that.

For a moment let us speak of giants. For instance, but not just for instance, Newton and Leonardo da Vinci. No greater scientist than Newton ever lived. Leonardo was a great painter but not as great as Giotto. Leonardo was an inventor but not an Edison. Leonardo was a poet but not of first rank. He was an engineer; he was a boaster but not even in that did he stand quite at the top, although—in seeking employment from the Duke of Milan—he claimed he could build engines no fortification could withstand and fortifications no engine could destroy. That is doing pretty well. Few men have shown such universal genius.

It is a rare and fortunate generation that has either a Newton or a Leonardo. But some idea of a generation's ideals can be discovered by what happens to junior-grade Newtons and junior-grade Leonardos. Newton, jg, becomes an expert, is elected to the National Academy, and must debate with himself whether he can afford to stay at the University of California when General Electric offers so much money; while Leonardo, jg, struggles to secure tenure in some second-rate position, reads omnivorously, shows so-called "wasted talent" in many fields; but he is a joy to his friends and family and is never bored. In spite of the label of success that goes with the former, I would rather have my grandchildren the latter.

It seems to be assumed that within narrowing limits new Newtons

may arise, but that it is impossible for a man to ever again exhibit broad genius. I believe this only to the degree that the ideals of civilization encourage the first and prohibit the second.

The argument against the possibility of the polymath runs something as follows: It takes so long to reach any frontier of knowledge and takes so much work after you are there to occupy even a little of the new territory that no one with a good mind can afford much time except in a specialty. Let me challenge the assumptions of this argument. We should learn something from the geographic frontier. As the pioneers pushed forward, roads, canals, railroads, etc. were constructed behind them and communication became easier. It took more time to go to the Tennessee frontier from Williamsburg, Va., when Phi Beta Kappa was being born there, than it now takes to go from there to Alaska. Although the discovery of knowledge is honored, the organization and transmission of knowledge is often neglected. However, certain examples should give us hope, and I turn to mathematics. When Newton took giant steps in developing the calculus (important steps had been taken 2,000 years earlier), it was clearly a subject for the erudite. Others, notably some of the famous Bernoulli family, not only filled in gaps but organized the subject in a more coherent fashion. Soon, not just great scholars, but ordinary learned men could understand it and one English popularizer wrote in his introduction to *Fluxions* (an erstwhile name for the calculus) that "mathematics is not only an agreeable and beneficial amusement in a retired and country life, but is the best expedient for forming the minds of youth." Soon calculus became an undergraduate subject for mathematics majors and for physical scientists; next a sophomore subject (my generation); then a freshman subject (your generation). Now it is getting into the high schools. I warn you that you will feel a bit dated when your son in his junior year of high school asks you how to differentiate the cosine of a polynomial. He will be ready to ask that question, but will he consider you a source of knowledge?

How did this happen? Are youngsters brighter than their forefathers? Slightly, at most. Is their training better? Often not. The real answer is that knowledge discovered by difficult and cir-

cuitous routes can be organized and simplified to a very great extent after discovery. Calculus is not more difficult than algebra or plane geometry, but it has taken centuries to make this apparent, even to make it true. Moreover, the work of the scholars who organized the subject is second only to those who made the basic discoveries, and ahead of those who made original but essentially derivative advances. Much of the brain power that now produces minor original scientific discoveries (the result of most research) could well be spent in making more understandable and in making more available discoveries that have already been made. Moreover, this would often lead to new advances. There is a real call for the scholarship of synthesis.

Recently there has been recognized and effective scholarship going into the organizing for teaching purposes, of mathematics, physics, chemistry, and biology for both high school and college; but there are vast areas between this base of fundamental knowledge and the frontier that need organization and interpretation. If such work were done in the sciences, the social studies and the humanities, it would be by no means impossible for a man to know much more and much better than he does today.

I believe that the man of broad interest and knowledge would be possible now, as at the time of the Renaissance, if the Renaissance attitude again existed. We have even had some recent examples. Whitehead was a first-class mathematician. I honor him because he was also a first-class philosopher. I hope that some philosophers honor him because he was a mathematician. One of the most delightful evenings I ever had was spent on the porch of Professor McGilvary's home listening to Whitehead tell in technical but beautifully lucid detail just why the English defeated the Spanish Armada. He ranged from the type of ship each side used to how far below the surface the Goodwin Sands were at low tide. I realized I was in the presence of a mind that absorbed readily and illuminated what it had absorbed. It was, of course, a gifted mind—but it was also both a zestful and a disciplined mind.

Even if a well-rounded intellect is possible, is it worth the cost in unaccomplished specialized tasks? Let me give you some of the reasons why I believe it is:

First, the liberally educated man of broad interests is a more interesting companion to others (and I believe to himself) than the devoted specialist. Our adjectives should express precise meaning, not emotions only; and the word "liberal" is not a synonym for the word "excellent." The training in any field may be excellent, yet in some contribute little to a liberal education. I firmly believe that even the casual reading of Homer has far more to contribute to a liberal education than does a splendidly run welding shop. Although my own field is mathematics, the American who does not know matrix theory is not shut off from his heritage in the same sense as the one who has not read Shakespeare or the Bible. The greatest discoveries of science, the most searching analysis within the social studies, and the finest expressions in the humanities are such magnificent achievements of the human spirit that no good mind should be devoid of some knowledge of each. I greatly enjoyed the dictum Professor Skinner used to quote: that every educated man should know the *Oedipus Rex* of Sophocles, the Book of Job and the greatest common divisor process. Some appreciations are innate but more are cultivated.

Perhaps the above is a selfish reason; the next is not. I believe specialization leads to irresponsibility. The scientist produces a physical theory with which the engineer produces a lethal weapon; the military officer trains the soldier to use that weapon. The physicist and chemist blame the social scientist if this weapon is used. The engineer blames the military. The political scientist says he studies but not controls political behavior—the politician is responsible. The military leader says he is merely the power arm of the state policy. It is a comfortable feeling to serve a client or an employer and pass on to him the social responsibility for one's action. The off-color pebble in the mosaic which spoils the effect is not to blame; it is the artist. It is natural for the specialist to seek to be the pebble, but the artist—not the pebble—is a man. The politician wishes to be elected or re-elected to a job where he has far less security than does the physicist, the political scientist, the engineer, or the soldier who disclaim responsibility, yet he probably feels a deeper responsibility than any of them. And it is, of course, a politician who must make certain basic decisions that involve the

lives and happiness of all of us. He will make these in great degree responsive to public opinion. Both he and the public therefore should be informed; and the physicist, the soldier, the political scientist and the engineer have this public responsibility—the responsibility to inform. This means the responsibility of being ethically aware. This also means the responsibility of being clear and interesting as well as accurate. Without interest you will not be heard. Without clarity you will not be understood. The fields involved are intensely interesting, but also highly technical. Some of these techniques are also interesting. Yet your light can easily be hidden under a bushel of techniques. Many of our best minds should be devoted to making basically important subjects understandable—vividly understandable. This will not happen unless good minds not devoted to science are interested in science, and unless the scientist, because of his respect for and interest in the social studies and in the humanities speaks to the politician and to the poet in terms that carry meaning to them. There is need for communication between the minds that determine our future. Our present predicament arises partly from the inability of the East and of the West to communicate. It also arises from the inability of the scientist, the humanist and the politician to communicate. Communication comes from shared ideas, shared emotions, and shared intellectual experience. Without these there are only the rudiments of a shared language. Of course the specialists will and should communicate with each other on the technical level, but the scientists have also the obligation to communicate with the public. May I add that the poet has even a greater (and I fear at present an equally neglected) obligation to do so.

As an illustration of a difficulty of communication I have chosen 18 words or phrases. Each is in the common vocabulary of some department. Every one of them could be used in the title or a description of a course and a number are so used. With very few exceptions all of them have been used by faculty members with complete casualness in talking with me about official business. This is a richly undeserved compliment. My guess is that if a person has a writing knowledge of half of these and a reading knowledge of seventy-five per cent he is doing remarkably well. I would also expect that each of these words is in the regular vocabulary of some

one of you but that the vocabulary of no one of us contains all of them. Here they are arranged alphabetically:

Almagest	isotope
carbon dating	mercantilism
DNA	Merovingian dynasty
double bond	Pleistocene
the Enlightenment	recessive characteristic
entropy	stochastic process
existentialism	structural linguistics
Fortran	Telugu
impressionism	topology

The geneticist will be shocked at you if you do not recognize DNA; the historian if you do not place the Merovingian dynasty; the linguist expects you to know what Telugu is; and Pleistocene is a family word for the geologist. But be of good cheer! These learned folks would be shocked at each other. The vocabulary we can understand must be enlarged, and the vocabulary we use diminished. But there is another list of words that perhaps do not have the same meaning from person to person and country to country—for instance: compassion, freedom, truth. The sentence: "A understands B" in reality has two predicates and no object.

Specialization leads to irresponsibility in another way; that is, to the irresponsibility of lesser loyalties. The world is plagued with loyalties of all sorts of fractional groups instead of to the whole—particularly the loyalties to nations rather than to mankind. We are threatened by rampant nationalism. It is Russian imperialism, not Russian communism, that endangers us. It is not our democracy that Latin-America fears, but our imperialism. Loyalty to the nation is important. Loyalty to humanity is more so. Higher education is also served and plagued by loyalties: Too often the scholar is loyal to his department rather than to his institution, to his particular branch of learning rather than to learning. Mathematics is absorbingly interesting and exquisitely beautiful; but if a mathematician believes that the world's financial structure is uninteresting or cannot see beauty in the physical universe, a Gothic cathedral or a sonnet, he is not only to be profoundly pitied, but should be quarantined (at least

as an adviser) for he is a dangerous academic citizen. It is not for accuracy or personal security but rather for reasons of courtesy that I speak of the mathematician as a menace instead of, for instance, the English professor. We will not get balance in our society, in our culture or in our university without greater balance in the interests, in the appreciations and, as far as possible, in the knowledge of the individual. If each individual has narrow interests, the dominant group at any time will not be generous in their attitudes. Nor may the less privileged intellectual groups expect society to be interested in them if the dominant intellectual interests of society are not only neglected, but proudly neglected by them. Once the classicist was in the saddle; now the scientist is at the wheel. Although one is a more modern image than the other, neither the "man on horseback" nor the "man in the driver's seat" is a symbol of consideration. Both should walk the byways more frequently. The bully is the man who has strength without understanding.

The larger role of any subject will be served best by the man of wide interests. I believe that the humanist must not only know but appreciate the nature of science as well as of some of its particulars if he is to speak to man today, and the scientist who reads Homer and Shakespeare may come to believe that science also can be expressed literately—perhaps even by himself. It was Darwin who wrote (and Justice Douglas in his book, *My Wilderness*, who brought it to my attention): "If I had my life to live again, I would have made a rule to read some poetry and listen to some music at least once every week—for perhaps the parts of my brain now atrophied would thus have been kept active through use. The loss of these tastes is a loss of happiness and may possibly be injurious to the intellect and more probably to the moral character by enfeebling the emotional part of our nature." The pressures to be a specialist and only a specialist are great. This is the way to gather cash, credit, and honorary degrees. The pressure is greater on men than on women. Are women alone to be educated? As a man I cannot look forward with complacency to a society of trained men and educated women.

Over-specialization may be functional as well as disciplinary. A historian may want all his time for research and no teaching. If he is a good historian his interpretations will usually be as important as his findings, and at a large institution more persons will listen to his

lectures than will read his books. Moreover, the listeners are usually persons who need his interpretations more than his reading colleagues. Of course, if he is a poor historian, he should have all his time for research since his teaching would be a menace. It is a tragedy of American academic life today that there is a higher status for research than for teaching. I can remember when, believing in balance, many of us urged the necessity of investigation. (For there is one thing worse than the scholar who doesn't want to teach: that is the teacher who doesn't want to learn.) Under the same circumstances I would do so again. But I didn't know how fast the pendulum would swing. I hope its amplitude will become smaller and its period longer. May we have more learners whose two joys are the discovery and the sharing of knowledge and may the sharing be not chiefly the pleasure of receiving glory for one's accomplishments but the joy of comradeship and service. Moreover, we should share the knowledge we acquire on the road to the frontier as well as what we find there. To the follower the road may be more important than the clearing.

My plea for the broadly interested man is in part an emotional expression based on my own reaction to experience. A man should approach old age with regret that his fulfillments are so much less than his ideals, for it would be unfortunate to find one's ideals as low as one's accomplishments. I would like to have been a better dean and a better mathematician, but this is not really my poignant regret. But I greatly wish I had drunk deeper from the font of literature—both English and those treasures kept from me by the bolted gates of language. I wish I had had an ear for music. I wish I could have traveled to more lands, studied their monuments of art, seen the rhododendrons in bloom in the Himalayas. I wish I had seen the light that anthropology shines on art and history. Some regrets I blame on circumstances, some I blame on myself, and some I blame on other scholars. If more historians wrote like Gibbon, more scientists like LaGrange and Poincaré, more travelers like deTocqueville, more statesmen like the authors of *The Federalist*, and more philosophers like William James, I might have been enticed into being a better informed man. Few textbooks give one a thirst for knowledge. The intellect should be pervaded by a sense of style and in all fields one should have access to style. In part it is the

fact that in the humanities style is cherished that makes many mathematicians desire to be classed as humanists.

Let me be candid. There are a lot of things of which I am not proud, but I am rather proud of my list of regrets.

This is a natural stopping point, but unfortunate as it may seem to you, it is merely a point of transition.

For a new start I wish to comment on one word from the motto of Phi Beta Kappa: Philosophy, the love of wisdom. Of all the departmental titles in the University's catalog this is the most eloquent, for it weds emotion to wisdom, appreciation to knowledge. You may point out that the same stem "phil" (that is love) is in philology, the love of words, but this sounds loquacious rather than eloquent. Moreover, the devotees of this subject have decided it is more accurate and dignified to be called "linguists" rather than "philologists." May it be a long time before the philosophers ask to be called "sophists" or, even worse, "sophologists."

I believe that love and wisdom, the compassionate heart and the hard head must be united or society may have to do it all over again. Let me, as samples, discuss some of the areas where expertness must be informed by compassion and ethics interpreted into intelligent action. In many of these areas I have definite views, some of them unpopular. Lest you believe I am afraid to give them, I may as I go along state a few of them baldly, but I do not wish to argue in favor of any of them. For much as I would like you and others to agree with me (and I would), I do not strive tonight to persuade you of any of my views except my convictions that, as intelligent people, you should have broad interests and you should bring knowledge, methods of scholarship, and the call of the heart to bear on problems of our times. As citizens of a democracy, you are responsible for what the society does. Nay, more, as persons of exceptional ability and education, you are shirking if you do not assume a leading role in determining what society does. Parenthetically, may I say that the person who courteously, understandingly, and intelligently expresses minority opinions is a leader even if he has few apparent followers. Norman Thomas, for whom I never voted, has been in my opinion an invaluable American citizen.

Now for some examples: Modern ethics should face the question whether foreign aid is primarily to help the United States or to help underprivileged fellow human beings. I disagree with Communism and I intensely dislike Russian and Chinese imperialism, but should we not be willing to feed the starving Chinese? I believe so. Certainly we should feed neutrals for the basic human reason that we have plenty while they are in want—not because they may help us.

Again: Is the ethics of self-defense enough to justify nuclear weapon testings in the atmosphere? Here a clear-headed, warm-hearted person may decide that the deterrent effect of might is the best gamble for peace, even at the expense of poisoned air. Perhaps he is right. I do not believe so. Read Teller and Muller, Kennedy and Cousins and reach your own conclusions—but be informed and think!

Think, too, about the ethics of retaliation, not in terms of man-to-man struggle but in light of the effect not only on the innocent children of the enemy but on the neighbor and his children as well. Reach your own conclusions but do not let your analysis be oversimplified. Symbols derived from the playing fields of Eton or Camp Randall, from the armored knight or Horatius at the bridge, or for that matter, from the *Christmas Carol* or *Ferdinand, the Bull*, are not adequate for thinking about mass destruction and its alternatives. If all the triggers are hairtriggers, we must do our thinking before the shooting starts. Let us pay as much attention to the voice of conscience as to the voice of techniques.

The hierarchy of words needs rearranging. Imagination often is more important than courage, compromise than determination. Russia has not shown "decent respect for the opinion of mankind." Mankind may be waiting to see if we will. Discretion is not only the "better part of valor"; it is needed to give virtue to power.

Again: Our tolerance and intolerance is a queer mixture. We have even in war tolerated the conscientious objector provided he objected on the grounds of some organized religion but not unless he belonged to a church with pacifist doctrines. In other words, a man may choose his own orthodoxy but not create it. I truly believe a pagan, or for that matter, a Presbyterian can be a conscientious objector.

It would be easier for me if I had a simple standard of patriotism such as that of Decatur: "Our country—. . . may she ever be in the right—but our country, right or wrong!" This is clearly immoral in a Japanese; this is clearly immoral in a Russian. This, I believe, is immoral in an American. It would also be easier for me if, on religious or other grounds, I believed that the use of force was always wrong—but I do not. For instance, I believe that the UN police action (war, if you will) in the Congo was right and worth the cost. The analysis cannot be simple, but I am frank to say that I see no probable results of peace, even a peace involving compromise, as terrible as nuclear war. But this conviction, of course, does not make clear the road to peace.

Man has been given the means to prosper, to have leisure to use creatively, to enjoy a rich life, and the means, the very same means, to destroy civilization. Is the cry we utter when we view mankind the cry of hope or the cry of terror? I know not.

Let us turn from external problems to an internal one where there also is a need for an emotional dynamic and intellectual analysis to deal with current ethical problems. Look for a moment at the question of social, educational, economic, and political opportunities for people of various minority groups. Our sense of justice calls for a society in which men of equal capacity, industry, and goodwill have equal opportunities. This deals with individuals, not with the evidence of average capacity of different races—evidence that as yet does not seem to me wholly conclusive. If we could take 100 Hebrew babies and 100 Gentile babies of assorted colors and nationalities, give them the same education and the same environment, and include a good deal of mathematics in that education, and then ask me to bet which group would turn out the more good mathematicians, I know where I would place my money. However, if the top ten contained 3 Gentiles, I would not deny them NSF fellowships because of any findings about averages. The University must show no official favoritism, in any genuine sense, to any racial group because it must not show such favoritism to any individual. This statement is not easy to interpret. It is seldom wise for society to interfere with a man's privilege of choosing his personal friends—even if that choice is often governed by a whole range of prejudices, including the congeniality of shared prejudices.

We are faced then with a conflict between our determination that no group in American society remain underprivileged and our belief that society should leave to the individual a large degree of personal freedom and a large degree of personal privacy. Consider the fraternity. The University has believed that fraternities are semi-official bodies, that their social regulations are a matter of concern to the University community, and that a national regulation that legislates the majority's prejudices is intolerable, even in a community that allows the individual chapter to act at least unavowedly upon those same prejudices. With this I agree. The easiest way to implement a prejudice against the Negro is in terms of color and race, and a prejudice against the Jew in terms of religion. To combat the results of such prejudice we legislate against regulations based on religion or race. Now we are faced with the problem of consistency. Suppose that a group wishes to form a Negro fraternity, or a Jewish fraternity, or a Catholic fraternity—should they be allowed to do so at the University of Wisconsin? My answer is Yes. Under present circumstances these will do more to equalize opportunity than to destroy it in the case of the first two, and the Catholic fraternity would be based on genuine community of interest rather than on prejudice. However, I believe that a Jewish fraternity in Palestine or a Negro fraternity in the Congo would be undesirable. We should be consistent in the large rather than in the small. Let us try to keep our eye on our real purpose and at the same time try to preserve as much individual freedom as a crowded world and human cussedness will permit. Moreover, there are limits beyond which we must not go to protect minority groups. We should not threaten the most important of all minority groups—the individual. Police-state methods in the hands of the University are no safer than in the hands of government. Tapped wires, secret cameras, hidden tape recorders, are dirty weapons, and a righteous cause must not be sullied by their use.

Here I wish to make a personal aside: I suppose a man who, like myself, does not believe in the Frank Lloyd Wright Madison Auditorium project but does believe in higher taxes so that the community may express itself more fully, who sees beauty in the structure of science but personally detests laboratory work, who likes Shakespeare and skyscrapers better than modern poetry and

Elizabethan architecture, who favors social security but abhors installment buying, who is a teetotaler but believes in personal liberty, who wants world government in order to protect the individual against the community and to foster diversity, and who—in the light of present weapons—is a near pacifist while delighting in Odysseus slaying the suitors, is an oddity. But he can and should express his gratitude that he has lived at the University of Wisconsin where his rights to such a congeries of opinions can be respected and the opinions themselves disagreed with.

But to return: The problems we face are complex and they are broad. They will not be solved by narrow-minded people or by the correlation of expert knowledge unless some human mind can do that correlating. The quest for irresponsibility charms many. Specialization is the means by which we serve society, but mere specialization is a step—a great step—in that quest.

The members of Phi Beta Kappa have ability and have used it to acquire knowledge. I trust that knowledge will be used to acquire wisdom—not the wisdom of the worldly-wise but the wisdom of the mind full of zest, manifold in its interests, appreciative of beauty, and the servant of the compassionate heart.

Truth—An Insufficient Goal

The honor of being asked to give this lecture is welcome; the opportunity is even more so. The prime pleasure derived from both the honor and the opportunity is caused by its being the Keniston Lecture. Deans' meetings are too often dull. This is because of both content and style. The content may range from the faults of the faculty (a subject that could be treated with grace and wit, but seldom is) to the process of registration which is automatically a millstone about the neck and a pain therein. The vocabulary ranges from pedage to the vernacular of the statistician. But there are exceptions and those exceptions were the rule when Keniston was present. Presidents might be damned but not scholars; scholarly presidents were even defended; and falderal was taboo. In addition, the manner of his discussions had so much verve, was so informed by style that it even lifted the rest of us above our normal level. He had a sermon to preach; he preached it magnificently; and no one had a higher pulpit from which to preach it than that given him by the University of Michigan. Of course he knew "the tricks of the trade." Perhaps he too kept an umbrella to lend to those who prolonged their appointments during thunderstorms. Of course he knew the techniques of the trade, and the business of the day got done. Chiefly he knew what the intellectual life of the university should be and devoted his heart and his mind to its enhancement. To bear his name even for one hour is an honor. To pay tribute to him is to discharge, in part, a long-standing debt.

When I prepare a lecture I enjoy selecting a title. A title may have some influence on the audience. It certainly has an effect on the speaker. For that reason I usually have several alternate titles to explain to myself what I wish to say. Here is a dull one: "The position of truth in the community of virtues," or another that rather amuses me: "The false claims of truth."

One cannot describe at the beginning what one wishes to say without saying it, and then you might as well have the benediction and go home. However, one may start by relating what led him to choose the subject. In this case it was a series of remarks (some heard and some read) that would indicate that arrival at the truth was the major reason for academic freedom. This explanation does less than justice to many aspects of freedom and even to some extent it represents a reversal of roles. This topic seems a good starting point not only to pay a tribute to truth and honesty but also to place them in proper relation to other virtues. It provides a vehicle to convey thoughts about a hierarchy of values and their consequences for university policy and for liberal education. Yet here I run a risk that I would not at home. There my friends have decided whether or not I can think concretely. Talking in generalities might confirm their opinions but not change them. My reputation would not be at stake there. I suppose it is here.

First, I present a meed of honor to truth and its correlative human virtue: honesty. Honesty is in my opinion a greater virtue than bravery and at least equal to courage. It is certainly a rarer virtue. The soldier who risks his life for his country buys on the "black market" or writes a lying advertisement. The woman who is willing to become a mother never admits, when speaking to the traffic officer, driving above thirty miles per hour or being overparked. Intellectual honesty and intellectual courage are closely related but distinct. The mind that always gives an honest answer to the question it asks may not be willing to face the more difficult questions.

The legal status of honesty is strange. Even truth is not always a defense against the charge of libel or slander. A man's name may not be ruined with impunity even if he has ruined his own character. The public is exposed to technically honest yet deceitful packaging, to lies and to exaggeration and particularly to insults to its intelligence through advertising by radio, TV and "junk" mail. In the day of the "fast buck" truth, whether a sufficient goal or not, is an unattainable one.

But to the scholar truth is essential; often it is the first criterion that must be satisfied by his work. However it is too easy to believe that because accuracy is necessary it will guarantee importance. It does not.

The assumed relation of mathematics and of the natural sciences to truth warps our understanding of these subjects and of their connection with other fields. I wish to expand this thesis at some length, but for the nonce I leave mathematics out of the picture.

I remember Millikan, the eminent physicist, once saying: "The scientist lets brute facts speak for themselves." What a whopper! If anyone ever uses torture to discover truth, it is certainly the natural scientist. The heat of a stake, the turn of the thumbscrew are insignificant compared with the flame that instantly fuses sand, or the pressures used by Bridgeman and his followers. The strength of the four wild horses that tore St. Hippolytus apart is slight compared to the force that rends the atom. If science is the discovery of facts, American scientists are spending many millions of dollars yearly to force those they cannot coax to speak for themselves.

But the greatest misconception in Millikan's statement concerns not the loquacity of facts but the nature of science. Science is ever interested in developing structures and relationships into which facts may be fitted. Great theories have time and again been proved to be false or inadequate but rarely useless. It is the insight into relationships—not the amassing of data—that is the mark of scientists. It is because mathematics is preeminently occupied with relationships and structure that it is not only the "queen" but also the "handmaiden" of the sciences.

Newton found the cosmos a mess, but left it a system; he founded the calculus and left it a mess. Others, such as the Bernoullis, made it into an elegant structure. This will be touched on again.

The creation of a great theory is always a supreme accomplishment. The mere recording of data at times may be nearly useless. In fact, the recovery of knowledge often is more difficult than its discovery. Like many other mathematicians, in the process of trying to develop some theory, I have at times proved a necessary lemma with comparative ease and then wondered who proved it first. To find that out might take many more hours than did its proof. To become reasonably satisfied that no one had discovered it before would take even greater labor. In fact, I was once so

frustrated that I said of the lemma, "as is presumably known," and gave up the hunt. In science it must often be true that a direct observation is a more rapid means and a less expensive one of finding a fact than searching the literature. A few minutes with a hundred-dollar microscope is cheaper than a few seconds with a half-million-dollar IBM memory and the microscope is more accessible. The use of a library may fall between the two in expense but exceed both in tedium. Sometimes truth is more costly to cherish than to woo.

Perhaps this is the right place for an important aside.

The objectivity of science is a derivative of the methods of science; the objectivity of the scientist is a myth. The ratio of emotional control to control by emotion differs little from field to field. Perhaps it is a little lower among musicians than among lawyers; yet doctors discussing Medicare, plant physiologists discussing ecology, and physicists discussing salaries all have low boiling points. Emotional control is derived from a combination of conscious effort and natural stability—not from the pursuit of an individual intellectual discipline. End aside.

The search for mathematical truth is the endeavor to discover consistencies, that is, viable structures. The data of the multiplication table is scarcely mathematics; its structure is. Science can be mathematical without being quantitative; it seldom can be quantitative without being mathematical. The mathematician needs considerable knowledge, a great deal of skill, but most of all an aesthetic sense. It is his sense of beauty that is his chief guide to discovery. Many classify mathematicians as scientists. This is not an insult and it has financial advantages. However, the truest classification of mathematics is not as a science nor, as others would sometimes state, as a language—but as an art.

This brings me to another great ideal: beauty. Keats was being grandly poetic rather than meanly literal when he declared:

Beauty is truth, truth beauty—that is all
Ye know on earth, and all ye need to know.

These lines are more complimentary to truth than to beauty. In the world of truth there is much dross; in the world of beauty, none. Even in praising truth a poet may express his insights by exaggeration and by metaphor. When my wife says: "There were a

million flies in that room," and I reply: "I only counted thirty-seven," she sputters. I have truth on my side; she has poetry. Mayhap she has the better ally.

I am not being anti-intellectual in comparing beauty and truth, nor am I when I believe that the university should more consciously focus its attention on beauty than it now does.

Truth, honesty and curiosity form a great triplet, but so do beauty, appreciation and wonder. It takes knowledge and skill to discover truth; it takes equal knowledge and skill to create or appreciate beauty.

Let me illustrate:

One of the supreme architectural achievements of man is the cathedral at Chartres. Any reasonably sensitive adult will realize its beauty if he either gazes on it from without as it soars above the city or if he steps within and finds himself transported into a realm of gorgeous color, cavernous shadows and fascinating form. I once entered at sunset when the light through the rose window above the west portal suffused the whole interior. This is no trivial experience.

But the cathedral can mean far more to him who is prepared. A knowledge of the faith as well as of the ecclesiastical nature of society in the Middle Ages adds meaning. The stories of the Saints and the recognition of their symbols; the keys of Peter to unlock or to lock the gates of Heaven; the sword of St. Paul to propagate the faith; the pipe organ of St. Cecilia to enhance the beauty of the Mass make the colored windows, already beautiful patterns of light, come alive with tradition. And how, if you want colored windows and a stone roof to prevent fire and do not have steel with which to build, can you secure light? Only by an intricate system of arches and buttresses which can carry the weight of the roof and yet leave the walls chiefly of glass. This was pushed nearly to the limit in Chartres and beyond it in Beauvais. The history of art and of the Middle Ages, as well as geometry and engineering, make far more intense the experience of such a building.

I have mentioned curiosity and wonder. Both are splendid, but too often wonder is atrophied and curiosity deformed. We can well be too sophisticated, become too used to surprise, and lose the power to be astonished and to admire. We must not empty our lives of wonder. When I say that curiosity may be deformed, I am not

referring to the obviously morbid interest that concerns itself with the family troubles of one's neighbor or that focuses on the filthy portion of the human mind. I refer to the tendency to channel our curiosity too narrowly. A man may seek new knowledge to satisfy a healthy desire to know. He can also find satisfaction in old knowledge. But the competition to be the first to publish that which is novel is bred of the love of success, not of the love of knowledge. There should not only be curiosity in depth but in breadth, and also breadth of knowledge and appreciation.

Not long ago a young man, with an intelligent and an alert look but clearly not overprivileged economically, lingered at the door of my office obviously wishing to enter. When asked if he wanted something, he said that he would like to look at the pictures on my wall where a few fine etchings were hung. He gazed with hungry appreciation and told me that he had not had much chance to see such things. He was a graduate student in one of the sciences. When I suggested a course in art history with one of our finest scholars and teachers, his reply was: "I am afraid my department would not like me to take that." I am not willing to admit that the only way to be a scientist is to be narrow-minded. Frequently the scientist demands this of his student but not of himself. Blinders were put on horses to confine their vision to the road and make it easier for the driver; they were not a favor to the horse. I fear that we not only drive our graduate students too narrowly but too long. There should be freedom not only at the end of the road but along the way. Perhaps the sentiment as much as the simile dates me.

Modern specialization has led to lack of communication even among scholars. This is the fault of both the tongue and the ear. About two years ago at a Phi Beta Kappa initiation, I presented a list of words. I shall not only repeat these words but also the remarks introducing them:

"As an illustration of a difficulty of communication I have chosen 18 words or phrases. Each is in the common vocabulary of some department. Every one of them could be used in the title or a description of a course and a number are so used. With very few exceptions all of them have been used by faculty members with complete casualness in talking with me about official business. This is a richly undeserved compliment. My guess is that if a person has a

writing knowledge of half of these and a reading knowledge of seventy-five per cent he is doing remarkably well. I would also expect that each of these words is in the regular vocabulary of some one of you but that the vocabulary of no one of us contains all of them. Here they are arranged alphabetically:

Almagest	isotope
carbon dating	mercantilism
DNA	Merovingian dynasty
double bond	Pleistocene
the Enlightenment	recessive characteristic
entropy	stochastic process
existentialism	structural linguistics
Fortran	Telugu
impressionism	topology"

This has had a sequel. A distinguished biologist later said to me: "Mark, why in a list of such odd words did you choose commonplace ones for biology?" Likewise, I have been amused by the number of different meanings of "topology" that are the single meaning known by various individuals. Naturally, when I listed it, I thought of its mathematical use.

You ask how to find time for breadth. The voter sometimes asks how to find funds for education. He is almost tired of having pointed out to him that the money spent on liquor and cosmetics would erect many buildings and pay many salaries. The time spent on these two items would provide for much breadth of education. I would, of course, include with the cocktail party the time spent at the "expresso joint," with the boudoir table the effort of a conforming non-conformist to look dirty and unkempt—I presume on the false theory that what is well done is worth doing.

But, if necessary, I would steal some time from specialization itself. The specialist may be of use to society but he does not determine that use. His work may be used to give new freedom or to give death to mankind; he does not determine which. If the best brains go into complete specialization they become slaves, even if willing slaves, within a democracy of the second rate. Responsibility exists only where comparisons can be made.

Breadth of interest is needed to give us both sympathy for diversity and compassion for human nature. These are qualities of the mind as well as of the heart.

Today, and certainly yesterday as well, conformity is the road to moderate success. The wastebasket and the five-foot shelf are both filled with the works of the nonconformist. The appreciation of diversity is a privilege, even a duty, and the production of valid diversity need not be confined to genius.

The identity of the individual depends on diversity. A uniform is an attempt to submerge the individual in a larger unit. It is the difference of the uniforms that makes for the individuality of a unit. Both the conservative and the radical may hate diversity. It is often the so-called "non-conformist" that wears his uniform with the greater obtrusiveness.

In spite of honoring diversity and of a well-known Latin adage, I believe that taste is a proper subject of discussion. Giotto, Rubens, Cézanne and Dali are diverse and appeal to different individuals (I happen to like the works of the first and the third); but they are all on a different level of quality than the trash from the gift shop. We should be educated to discriminate. We should cultivate the ability to both enjoy and respect, but it is not necessary to enjoy all that we respect and I fear it is impossible to respect all that we enjoy.

The words for our specialties are well defined but of limited use. The words for our ideals are commonly used but ill defined. I have already used a few of these such as freedom, truth, beauty, diversity, taste, curiosity, wonder. All ideals are partial. How can they be justified? If each must be justified by others, we wander in a circle. If we seek the absolute, we reach dead ends. In either case we are lost. Most of our great words contain residuals that we cannot explain in other terms, yet the place of each in our thoughts is conditioned by other concepts. Truth can be in part justified by its service to technology, by its role in government, by its guide to beauty. These do not explain in full our respect for it. Beauty is praised for the pleasure it gives, for its relation to piety, for its guide to truth. It has attributes beyond these. Justice is bound to society, yet our sense of justice is not entirely applied pragmatism. Diversity is not merely a release from boredom, but a partial revelation of the universe. Freedom serves truth, enhances beauty, develops justice,

protects diversity, yet freedom itself contains undefinable elements that are precious, independent of all these.

To give another illustration: Today loneliness and silence are on the defensive. Paradoxically, we can say that the man who experiences loneliness is the better companion, and silence improves speech. They have more intrinsic qualities—again in terms of their opposites. The lonely man may know both the poet and the tree and silence allows us to hear muted sounds: the rustle of grass, the murmur of gently flowing water and the scarcely audible whisper of falling snow. But beyond these lie other values.

I now come to a definite break. The remainder of my remarks will indicate that the statements which have preceded have corollaries. I shall limit the discussion of these corollaries to academic freedom, to teaching and the curriculum of the liberal arts college, to the education of college teachers, and to 18 minutes.

Those of us from the University of Wisconsin (and haven't I done well not to mention it before?) are proud of an historic declaration by the Regents, which speaks of: "... that continual and fearless sifting and winnowing by which alone the truth can be found." It is wrought in bronze upon Bascom Hall. Another building, in which I worked for nearly twenty years, bears in marble: "Ye shall know the truth and the truth shall make you free." One seeks freedom to attain truth; the other truth to attain freedom. Both are valid, but the Bible provides the deeper insight. High as is the position of truth, it is an imperious rather than an imperial virtue. You might think from the defenders of academic freedom that truth is its only, or at least its chief, justification. It is not. Truth is also the excuse for torture and wire-tapping. Academic freedom springs from a set of ideals that includes but goes beyond truth. The laboratory and the library are better places to seek truth than the marketplace of ideas. The marketplace of ideas is not needed so much to discover truth as to develop wisdom. It is not truth that demands toleration of artistic innovation, and I swear it often is not beauty either. It is the liberty of the individual to within reason express himself; it is the richness of diversity; and it is the difficulty of recognizing structure in unfamiliar forms. Human judgment has so often mistaken the sage for the fool and the fool for the sage, the subversive for the saint and the saint for the subversive, that, if you believe as I do that society is

better off with all four than with none, we shall tolerate wide aberrations from the usual—especially in the realm of human expression. The machinery that would have protected us against McCarthy probably would have destroyed the value of Norman Thomas. It is hard to know just how much intolerance we must tolerate.

The uses of academic freedom involve the discovery of truth, the protection of diversity and the development of wisdom. But freedom itself is a goal. It is a goal which in public life is protected by certain magnificent guarantees. These guarantees mostly stop at the doorstep of the business, the organization or the private corporation. These institutions may even penalize the individual for his speech beyond their aegis. It is the doctrine of academic freedom that the freedom of the citizen and even other special freedoms are not only necessary to the usefulness of a scholar but, more important, are appropriate to his very nature. It is fair to remember that without freedom not only are the scholar's eyes blinded, his tongue gagged and his hands bound, but his dignity destroyed. It is perhaps paradoxical that the discovery of the truth is increased by the freedom of the mistaken, that beauty and diversity are enhanced by the freedom of the charlatan, that wisdom is increased by the freedom of the fool, and that all of these depend upon the freedom of the critic.

Yet even freedom cannot be absolute. The freedom of one individual limits the freedom of others. No clear boundary for freedom may be made, but in general we must extend very great freedom to the intellect and to discussion, and chiefly place our limitations on action. I think both Governor Wallace and Martin Luther King should have the right to discuss segregation and proclaim the inequality or equality of the races. But I believe that society has the right to say that King may sit next to Wallace in the restaurant. I believe we should not spend money to try to put a man on the moon and I have a right to say so. But society has not only the power but the right to tell me to pay my taxes in order that the moon may be reached. The Holmes-Brandeis doctrine of "clear and present danger" came out of attempts to define a boundary line between freedom of speech and restriction of action.

Mandatory rules and the power to hire and fire obviously restrict freedom. There are more insidious means. Limitations of opportunity play a vital part. Even if fact-finding, especially scientific fact-finding, is over-emphasized, its support is justified. However, the disciplines which with less stress on facts also enlarge the spirit are not being maimed so much as starved. Milton and Newton must both be appreciated. One great difference between them is that the ordinary scientist may add to Newton by standing on his shoulder. The poet cannot add to Milton; he must be measured by his own stature. Perhaps this is why the student of Newton is a scientist, of Milton a critic. (This may help inflate the public image of the scientist.) It is also why the critic deals directly with the poet while the mathematicians who use the results of Newton have rarely read any of his works. Mathematical elegance is a collective achievement, style individual. Both add to the fullness of life. The scientist has a high standard of scholarly opportunity. It should not be lowered, but rather it should be attained by and for others.

If truth is an incomplete justification for academic freedom, knowledge is an incomplete goal for liberal education. It is, however, a major ingredient of such an education. I know some learned men who are not wise, but the wise man always has a well-stocked mind. Certain skills, such as numerical thinking, foreign languages and English expression which free us from the bonds of personal incompetence, underlie the training of the liberally educated. Appreciation of beauty should play a large part. This may have an important effect upon the curriculum but still more important effects upon teaching. Then there are the sibling virtues of understanding and compassion. Either without the other is dangerous. United they deserve the praise which St. Paul gave to charity. Some institutions, along with religious instruction, consciously use the curriculum to cultivate these characteristics. Whether or not this is done, the teacher should exemplify them and be willing to "wear his heart on his sleeve" more than is customary in the ethically diffident community of scholars.

Ask a physicist why he believes every competent student should know physics, and he will tell you how your life is conditioned by technology based on physics and how this is a scientific age in which

the man innocent of physics and the anthropoid are on the same level. What he really wants to tell you is that anyone asking such a question is incapable of understanding the answer and will never view the transcendent beauty of the universe as seen by a physicist, and is also incapable of realizing the tremendous intellectual achievement that is modern science. He is right in his vision of science; he is wrong in not trying more directly to help others get a glimpse of it. Little time need be used and none wasted in the process. My son, a graduate student in mathematics, recently had a specialty illuminated for him by a single lecture that set it in its relation to the whole of algebra. I may add that the physicist is also wrong in calling this a scientific age. It is an age where the thought of the scientist becomes the technology of the public without passing through the brain of the citizen, and yet technology is the lesser half. Voltaire was a devotee of Newton. What such author today explains Einstein?

I trust the physicists present will forgive me. I picked on them because the complimentary implications were certainly true of physics and doubtful in the case of many other subjects.

The value of reading Shakespeare should not be chiefly described in terms of improving one's style or the historic development of literature, or, as one dean (neither Keniston nor myself) said: "To trace the red thread of social change," but as a glorious experience that can be enhanced by knowledge and criticism, but is basically intrinsic. We are more certain of the fact that it is well to read Shakespeare than we are of any educational theory that presumes to tell us why. Teachers should recognize this and in explaining also enrich. The adviser or the catalog often gives less important suggestions than the fellow student who says (lest I make invidious comparisons, I speak of my own undergraduate days): "You must have a course with George Lincoln Burr, or with Lane Cooper or with Winans." These men dispensed knowledge, and in great big gobs. One was easy on the students; another was a driving taskmaster but rather an easy grader; and the third, when a student charged him with hating to give an "A", replied: "I would just love to; I've been waiting 40 years for a chance." All three succeeded in making manifest to the student the depth of their appreciation of the intellectual life. I'll bet you did too, Dean Keniston.

What we have been discussing has relevance to the nature of graduate study and to research. Too much of both is based on specialized fact-finding rather than on structure, on beauty and on human compassion.

One of the great needs of science today is to make communication and the learning of a vast array of facts possible. Admittedly the size of the job presents enormous difficulties. Again I refer to the calculus. When Newton and Leibnitz died, a few erudite geniuses could use it; after Euler and the Bernoullis, it was a standard portion of advanced mathematics; after the work of that labyrinth of committees called "the SMSG," it is a high-school subject. And, if I were at Minnesota, I would point out that one small portion of advanced calculus has now made an "end run" and nestled in the kindergarten (a wildly-mixed metaphor). More of our best brains should be spent in consolidating and putting in proper relation what is discovered, for organization is frequently a more rigorous and original task than is discovery. Such work might well provide subjects for first-rate Ph.D. theses since both imagination and historic sense are required. If all the rewards were to go to the "Daniel Boones" who find the paths and none to the "James J. Hills" who build the railroads, we would always have a frontier but never a civilized country.

The element of beauty and quality should enter the education of the future college teacher. A second-class mind, after specializing on a second-class author, will hardly be ready to help an undergraduate deal with Dante or Milton. I would rather have such a person lose himself in these authors who can overwhelm him than master one he can exhaust.

The concern of both society and the individual for the lot of the less fortunate has had protagonists like Theodore Roosevelt and his distant cousin. It had had great technicians among teachers with able minds ruled, visibly ruled, by human compassion, and among their students also. I cite two, both in labor relations: one trained in law at Michigan and at present a professor at Wisconsin; one trained in economics at Wisconsin and now a dean at Michigan. Let us not separate the heart and the head. I have never known a decapitated or excoriated person who was vital.

Today we honor a splendid scholar and administrator who nobly

served a great university. I have tried to put in balance some of the goals of liberal education without belittling any. I have used some great words such as truth, beauty and freedom; I have omitted others such as, for instance, duty. I have tried to keep in mind both the individual and the community, for a university serves each. In fact, it cannot serve one without serving the other. Must I apologize for not discussing explicitly the major problems of the day? Certainly I did not refrain either because of lack of conviction or because of the belief that scholars should not be outspoken. Both the life of Dean Keniston and the record of the University of Michigan make it clear that the faculty of a great university should not take the vow of silence nor, for that matter, the vow of poverty. If one seeks knowledge, loves wisdom, cherishes freedom, appreciates beauty, is fascinated by diversity, and with understanding and compassion leads his daily life, you know pretty well where he stands on education, on war and peace, on racial justice, and on the welfare of the unfortunate. I have not discussed these issues on the surface but I hope I have beneath it. However, for the demonstration of that I take refuge in the oft-used dodge of the professor who is stuck or whose time has run out: "The proof I leave as an exercise."

On The Adjective "Common"

We all know that an adjective is a word which modifies a noun. We sometimes forget how much the noun modifies the adjective. Few adjectives are so greatly affected by their attached nouns as is "common." Common manners, common weeds and common bathtubs do not evoke pleasant images, but we delight in the common touch and in our common heritage, including those two great portions of that heritage: the common law and the common tongue.

That which a group has in common, whether it be a regional domicile, a profession or a goal, defines a community. It is also to a great extent the community to which one belongs that defines the individual. For instance, I belong to the Mathematics Department of the University of Wisconsin, the State Historical Society, the Wisconsin Education Association, the Wisconsin Academy and the goodly host of "Dodger" fans. Each of these categories has many members, but I believe I am the only member who is in all five.

Some communities we belong to by circumstance, others by choice. This is one of our great freedoms akin to the right of assembly, a freedom to nurture by use. Some communities I belong to because I am a specialist, others because I resent the present emphasis on specialization, still others because they represent generality within the realms of specialization. This is the case with the Wisconsin Academy. In some respects the Academy is ineffective, in others highly successful. Let us not stress this. Rather

emphasize the fact that its members hold in common a combination of attributes that no other community has. Members belong because they value deeply several things, among which are: (1) The State of Wisconsin, (2) intellectual zest, (3) the community of scholars.

The State of Wisconsin is our home. That alone means much. It means more because it is a beneficent home. It is a lovely area—hills and valleys, oaks and pines, waving corn and well-cropped grass, cumulus clouds, dazzling snow, and water in all its fascinating forms except the sea. It is a land with a history, a history brought to it by diverse peoples: French, English, German, Scandinavian, Jew and Gentile, colored and white, but also a history formed here by pioneers, legislators and scholars. It is a commonwealth where more effort than elsewhere has been devoted to the commonweal. It deserves our loyalty and we are proud of it.

Next to character involving integrity, self-control, affection and compassion, I believe I value the appreciation of beauty and the lively use of the mind. Copernicus, Kepler and Newton each adding to our understanding of the heavens, Dante contemplating man's relation to the universe and discovering the possibilities of the developing Tuscan tongue to describe the human spirit, Gibbon writing magnificent English in phrases befitting the majestic pagentry of dying Rome, and Leonardo denying by his life that there was any field to which he could not contribute, are examples of the intellect at its highest. Those of us who care for these have a love in common.

A person's work may be mathematics, within mathematics—algebra, within algebra—matrix theory, within matrix theory—matrix equations. In such a context a person may write a sentence or two, intelligible to only a handful of others. That is considered success and occasionally it is important to others. I suppose each coral that died, adding its lime to the reef, had something about it peculiarly its own. But the experience of the matrix specialist has something in common with the experience of a skull-finding anthropologist and each leaves a useful residue to the structure of science. Yet this is a rather ghastly excuse for a narrow life. We should have something to say to any educated, zestful person; and it is well to band together at levels other than the cell to say it. The aggregate of scholars should also be a community of scholars. It is

only by talking and writing that a language develops. We develop a specialized jargon to describe the beetle or the Beatle. Yet not every specialist wants to live to himself alone. I recall with joy the devoted investigator, who, proposing a course on human parasitology, pounded the table and asked in shocked tones: "Do you realize there are students who graduate from this University without even knowing what a bedbug looks like?" Let us omit the bugs but keep the evangelism. We must develop a common intellectual tongue and a common intellectual life.

The wonderful thing about the cocoon is that eventually the butterfly comes out of it.

Paint the floor toward, not away from, the door!

Part II

Educational Policy

Academic Sophismatism

Super-Sleep—A Form of Academic Somnambulism

The following paper is almost entirely borrowed. First of all, it is borrowed from myself, being composed chiefly of parts of three other papers. Moreover, I realize that the ideas in these were borrowed, consciously or unconsciously, from many other persons, ranging in degrees of degradation from professors of ethics through billiard-room associates to college presidents. This is natural. One is lucky to have an original idea in a lifetime. Most of us must be judged chiefly by the pattern of election and rejection of the thoughts of others that forms our working minds.

During the last two years I have spent much of my time considering the problems of academic government. I want to bring you an analysis of three aspects of this work. About half of what I have to say is taken from an address presented to the American Association of University Professors at New Orleans, and constitutes a statement concerning current misconceptions regarding academic freedom and tenure. The second portion is also taken from a statement to the American Association of University Professors. It deals with why I have come to feel that the American Federation of Teachers, although its right to work in our institutions must be protected, nevertheless represents at the college level a harmful movement. The third portion is far less considered as to detail, but hints at how a person with great respect for reformers and

evangelical blood can take a conservative starting point for his thought while admitting that the terminal distance from this point may be nearly proportional to the amount of thought expended.

Most of what I have to say tonight was written with institutions other than Wisconsin in mind. In general, we have already reached a maturity in matters of academic freedom and tenure that marks us off favorably from most of our sister institutions. In particular, it would be a total misconception of my purpose to think that the attacks on administrative practice are aimed at any members of this club. They are not. I almost wish they could have been, since the reaction would be worth much of the cost.

Among mathematicians it is a commonplace that one studies a proof not so much to establish a fact as to understand the relations involved. I would be willing to take the word of Euclid and twenty centuries of scholars for the validity of the Pythagorean theorem, but I would be a sorry mathematician if I had never understood not only one, but a number of its proofs, in order to perceive the relation of the facts partially summarized by this theorem to the great body of geometry. Thus also it is easy, but not enlightened, to accept the dogmas of academic freedom and academic tenure without an effort to discover why they are right.

I have come to believe intensely that persuading people to proclaim the right creed rather than the wrong is of little use. Even success in securing the emotional assent that leads to working for a cause, though essential, is not sufficient. We need an ever-widening circle of scholars in faculties and in administrative positions who understand the relationships underlying our beliefs and the complexities of putting these beliefs into operation.

It is such an understanding I now discuss. As a point of departure I introduce the theory of super-sleep, a theory that can be merely sketched by a mathematician, but should be amplified by the psychologists, decried by the linguists and probably annihilated by the physiologists.

There is a form of rest that takes the guise of intense activity. For instance, the other night I was home alone, too tired to read and not yet having reached the degree of digestive contentment that made going to bed seem sensible. What did I do? I computed the roots of a fifth degree equation. This could be easily passed off as work. It was

not. It was spinal reflex rather than cerebral. I call this activity super-sleep. If subconsciousness is the doing of mental work without being aware of it, we should recognize mental vacuity in the cloak of occupation as a form of sleep. I believe that whenever a man performs work at a lower level of mental alertness than the work requires, we are dealing with a form of laziness or of super-sleep. Whenever a meeting of this club stimulates thought and understanding we are functioning at a level worthy of its traditions. Whenever it is just a meeting fulfilling a psychological need for gregarious activity, I believe it is only a form, perhaps a desirable form, of super-sleep. When a university president analyzes and brilliantly expounds faults in current education, but gives us as a solution the return to the Middle Ages and Thomas Aquinas, he has lapsed into a super-doze. It is laziness and stupidity that let striving for a cause degenerate into loyalty to a slogan. One wonders why sometimes an ardent supporter of academic freedom hedges a little when made departmental chairman, collapses as a dean, and becomes an opponent as president. Is it pure selfishness? I think not. The seed of the trouble was at the start with the man as a professor. He and his colleagues indulged in super-dreams. "Academic freedom" had been a slogan, not a subject to be understood. Never having analyzed what it really meant, what conditions were necessary for its maintenance, and at what price other than emotion it could be attained, the increasing problems thrust upon a man whose time for understanding them was becoming less and less caused a breakdown of principle, or as he probably would have phrased it, "an increase in experience had caused him to abandon adolescent ideas."

Super-sleep is a form of academic somnambulism in which we all participate. We probably could not stand the pace if we did not. However, we are not always justified in using our heels to save our heads. There are occasions when it pays to be awake, for instance in driving a car or a university. We must be able to recognize super-drowsiness when it approaches. Its chief symptom is a tendency to over-simplify our thoughts. We reduce many pictures to silhouettes because we are incurable caricaturists, and too often we think that we have painted a masterpiece of realism. Yet black and white are nearly as rare in ethical and intellectual matters as in the colors of

nature. We meet very few saints in academic life today, but then too we meet very few fiends. Ours is not a profession where a moron can easily gain a foothold, but our geniuses are readily found because they are so rare. The fun of depicting academic life is spoiled, for the honest, by the "more or less"; the "more or less" dishonest and the "more or less" useful, the "more or less" able and the "more or less" dumb. To this latter class practically all of us belong along the line of at least one carefully cherished obtuseness.

I wish to note some of the over-simplifications that today complicate academic problems. I shall particularly emphasize over-simplifications of thought in regard to academic freedom and its correlative academic tenure.

In examining the problem of tenure we shall start with two contrasting syllogisms, indicating some of the mental fixations which lead to difficulties of understanding and mistakes of action.

First Syllogism:

Major premise: Without academic freedom scholarship is barren.

Minor premise: There is no academic freedom when the tenure of the scholar is not fully recognized by the administrator and realized by the professor.

Conclusion: The tenure of the teacher should be inviolable.

Compare this with the Second Syllogism:

Major premise: American education is for the benefit of the student.

Minor premise: An incompetent or lazy teacher robs the student of the very benefit our colleges are established to give.

Conclusion: It is the duty of the administration to promptly dispense with such a teacher whenever found.

Both of these arguments contain enough truth so that a convinced and convincing speaker can make them overwhelmingly plausible. There are men who could dress the seductiveness of the first syllogism so that it would sweep us off our feet, and many an able administrator could start us singing Old Hundred for the stern puritanism of the second.

But let us look twice. Both arguments are appealing oversimplification and can be riddled with ease. They are shoddy. To be honest, they were even fixed up to be shoddy, but they were not fixed up to be any less substantial than those used by many intelligent men discussing this subject. The weakness is due to many faults. Essentially, however, the first argument suffers from too many ninety per cent truths stated as absolute truths, and the second from a vicious non-sequitur.

Without academic freedom scholarship is barren. Is it? "Bitter is the path of one who mounts another's stairs" is the cry of one enjoying little freedom, but certainly not of a barren intellect. The Cambridge of Newton would have been an unpleasant place for one who didn't fit, the Pisa of Galileo was a tyranny, Erasmus constantly charted a course between Scylla and Charybdis, and the England of Bunyan was often a prison. Two things keep our premise from absolute truth—one the explosive quality of certain geniuses that even if fettered will, when their hair is sufficiently long, uproot the gates of Gaza; and the other the much more prosaic fact that those whose opinions agree with the powers-that-be always feel free. There hasn't been much hardship suffered for being a Democrat in Louisiana or a Republican in Vermont, and the majority may be intellectually fecund.

Our major premise is false, but it is the falseness of exaggeration. It is true that the genius of Dante, of Galileo, of Bunyan burst all bounds, that an Erasmus was not too petulant, and that Newton basked in the glory of being an ornament to the leaders of Society. Yet you will grant that not every sensitive poet when reduced to retainership has the sterner qualities that make him experience an earthly purgatory and view an everlasting hell with lyric praise of God's beneficence, and I certainly can assure you that not every mathematician is molded from the same clay as Galileo. The timid of intellectual power, the inhibited of fine sensibilities have contributions to make to civilization that can never be done under anything but the greatest freedom. Nor are all brains cased in that graciousness of personality that wins the liberty of expression denied the boor. We must learn to value intellect even when it does not come in a pleasant housing. We may have to eat our spinach to get

our iron. Without academic freedom the scholarly class will produce less in quantity, its production will be out of balance towards an excess of conservatism, and there will be a warping of the production of the novel so that it not only comes in undue proportion from those with some maladjustment, but bears the stamp of that maladjustment.

The normal production of discoveries throughout the whole range of science in a world that eagerly asks for this production, compared with the many rather bizarre attempts at new forms of art in a realm where the academies had attempted to sterilize the atmosphere, may indicate that the new is apt to grow more wholesomely in a home where it is welcome than in one of unsuccessful birth control.

We can still hold to the premise that academic freedom is necessary for the fullest and healthiest scholarly productivity, and we can recognize that the results of scholarship are of maximum use only in a free society.

Our second premise is also too sweeping. We cannot literally claim that "there is no academic freedom where the tenure of the scholar is not fully recognized by the administrator and fully realized by the teacher." In spite of the many places where conditions exist which for certain groups spell insecurity, there is hardly an institution where most of the members of the faculty do not feel they have all the freedom they can personally consume.

A mathematician with good digestion and fair nerves may not find all the rules of tenure necessary to his peace of mind. A sociologist of temperament may be capable of little but exhibiting that temperament if academic security is not given the strongest of guarantees. Our judgment of the degree of security necessary to the finest expression of American scholarship must not be limited by our own constitution or the distance from the frontier of controversy that our subject may enjoy. We need protection for the individual. Yet I regret the linguistic habit that always associates "rugged" with "individualism." There are other types of individualism to be championed. The orchid requires the hothouse, not the oak.

Another point concerning security of tenure should be driven home. Security of tenure that is not recognized by the professor is of little use in establishing academic freedom. I know administrators who shun any violation of tenure but do not wish their faculties to

know this is the case, deeming the sense if not the actuality of insecurity to be a valuable incentive. Instead, such a sense may be a curb that keeps a man from releasing his finest constructive thought, but rarely keeps the destructive critic from making use of the apparent persecution to give the semblance of verity to his assertions.

We again modify our more sweeping statement, but again find an essential truth to which we tenaciously hold. Without security of tenure and the knowledge of that security, academic freedom will be only partially realized.

We must slightly modify our conclusion to fit our more realistic premises. Yet any tenure plan must be so safeguarded that not only the genuine scholar is protected, but that he knows he is. American scholarship may blossom and fruit without this, but the blossoms will be blackened by frost and the fruit will be pitted with wormholes.

Let us examine the argument of the second syllogism. We shall, I believe, find as great truth in its premises as in the first, but a weaker connection between the premise and conclusion.

Even with the addition of the duties of research and publications and many other more peripheral responsibilities assumed by or thrust upon our institutions of learning, it is still true that the chief purpose of most of our colleges and universities is the education of the student. It is also true that in spite of notable cases of self-education, the quality of instruction does count, and count vitally in the education and life of the student and the nation, and that incompetence has little, and laziness no right of protection in the faculties of our institutions.

But the conclusion that arbitrary dismissals by administrative fiat is the proper handling of the matter has no connection with the premise. Laws are made to curb the malefactor. Yet in this country they throw around the accused a mantle of protection in the form of "due process." Did our ancestors fight for these principles to aid the criminal, or was it to be sure that if anyone, particularly oneself, were unjustly accused he would not suffer unjust punishment? Our law is ever-seeking to reach a balance that will adequately safeguard us from the tyranny of the racketeer without subjecting us to the tyranny of the dictator. Though the emphasis may have to shift to meet the greater danger, we will in general be seeking an effective

process of curbing crime without forgetting that it must be an orderly process and not the rule of the vigilantes.

What we seek through any tenure policy is to minimize laziness and incompetence without at the same time giving undue power to those who may wield it for other purposes. Does allowing arbitrary and almost casual dismissals do this? I think not. Our chief opportunity is not at the stage of dismissal, but at the stage of selection.

The problem of incompetence is to my mind more genuine than the problem of laziness, and here we are met with the disagreeable fact that it has its deepest roots in two sources of dishonesty—the dishonesty in our graduate schools and our dishonesty to each other about our colleagues. Perhaps no blot on our profession is darker than the standard of our recommendations. One way to rate institutions is to see for what institution you think your misfits are good enough. Of course, I approve when a man excelling in research but a poor teacher moves to an institution which has room for the specialist. Of course, I approve of the shifts that sometimes take place for converse reasons. Often there is no genuine readjustment, but merely a man unfitted for the profession is passed from one institution to another on recommendations that are genuinely dishonest, or at least leave so much to be said that they should be triple spaced to facilitate reading between the lines.

Institutions must be allowed a probationary period to test a man, a probationary period that might well be shortened if we were ourselves more honest during the time of a man's graduate work, or upon his transfer from our institution to another.

I strongly believe that tenure should be divorced from rank and be recognized earlier than at present. But may I say emphatically that unless we use this probationary period to select those who will raise the standards of American scholarship, it will be inevitable, and I believe desirable, to move backwards from the path we are taking. The principle is right when applied to the type of persons we hope we are, but unless we have the mettle in our character to maintain and improve quality by the means of early decision, we do not deserve, and fortunately we will not in general get, the privileges we seek.

We are not merely faced with our own dishonesty but with dilatoriness on the part of the administrator, often, I sadly confess,

the departmental chairman. If a man is only moderately lazy and only mildly incompetent and is an acceptable companion on the golf links or at the dinner table, the decision to dismiss is almost always unjustifiably postponed—postponed frequently until the postponement is accepted as a mistake never to be corrected. I personally believe in the limited probationary period more because it will dramatize the necessity of a decision than for any other reason. If ten incompetents start in the profession and we get five out at thirty and none after, it is far better than getting none out at thirty and one at fifty.

Dismissals after delays are more often caused by laziness and stupidity than by maliciousness or hardness of heart. When an instructor at the end of two years has demonstrated his unfitness for a position but the administration finds this out at the end of four years and acts at the end of eight, it has unjustifiably sucked the life blood of a man, perhaps an incompetent one, before discarding him, but it has done this because of laziness or even good nature in not making a prompt evaluation, and stupidity in not handling the situation while there was still a valid way. A soft heart and a soft head may make a very cruel administrator.

But let us not think laziness and stupidity fall like the mantle of Elijah on deans and presidents. One astute president pointed out to me that in certain recent tenure cases the administrative mistakes were shown to be largely those of the departmental chairmen and the other colleagues of the men involved. Touché! He was correct. Nor are all the troubles visited from above. I have sometimes felt that three-fourths of the tenure cases that come to the attention of groups outside an institution could have been avoided by common sense on either side, not necessarily on both.

Since we desire never to protect incompetence or laziness we should realize that a process is necessary for occasionally dismissing a man after the probationary period is passed. Attaining tenure represents a shift in the burden of proof. At the start the individual must prove himself worthy of a place in the profession. After attainment it is still possible to separate the undesirable person from his position, but the burden of establishing the fact that he is undesirable rests on the administration. Of course, the easiest thing for the administrator is to wield absolute power, and the suddenness and

silence of the method is also often easiest for the dismissed. If the administrators and the unfit professors were the only parties involved there would be much to be said for the system. But the same plan could sidetrack the social reformer and could muzzle the academic opponent, making a farce of freedom. The fact that in a country where this power is almost universally legal it has not in general been abused is to the everlasting credit of our administrators. But even if abuse is relatively rare, it is frequent enough to overwhelmingly damn the system. We must build towards a practice which makes possible a fair hearing for the man on continuous tenure whose discharge is proposed. A hearing that the accused will be slow to seek without a clear conscience as it may readily end his academic career, but a hearing the possibility of which will make the administrator carefully search his own conscience before he starts action, and will make him day-by-day more careful in selecting an able faculty in which there will seldom be the necessity for such occasions.

Moreover, sickness, accident, and the ticking of the clock may lead to a decreased vitality which lessens a man's competence and seems to the robust a form of laziness. But will not the profession which shows consideration of such men induce more worthy scholars to its ranks? I believe so. We have not as yet coped socially with the problem of making the maximum use of men of depleted energy who still should have an opportunity to express the fine quality of their mind as far as their vitality permits. The problem of wisely handling this lessening activity of old age is far less serious in institutions with a reasonable retirement system.

There are two other over-simplifications of thought in regard to tenure that are frequently met. The first of these I may call the legalistic over-simplification, which holds that any dismissal, if legal, is thereby justified. For those granted power, in the hope that they will use it for the benefit of society, to rule out considerations of policy on legalistic grounds is to exhibit a form of laziness which, if occurring in a professor, would richly merit dismissal.

Secondly we have the goad theory. One of the reasons why regents and trustees fail to grant tenure is that they feel we need the spur of economic insecurity to keep us at the trot. This feeling has deep roots. In visiting one fraternity house on a trip to speak for the

A.A.U.P., the students, after a little edging up to the subject, blurted out, "If you can't fire a professor, will he work?" Actually I do not believe that lack of work in the ordinary sense is prevalent in American faculties. I admit that we have a sublimated form of laziness that replaces scholarship by committees, and good teaching by methodology, but if this is connected with tenure at all, it is the result of the nervous excitation of insecurity. Laziness of the garden variety is a rare weed. Somehow by education and by the quality of our production we must secure the confidence which in this respect I believe is well merited, and much else that we wish to secure will follow.

If a tenure policy is to have the highest usefulness it must have three qualities. 1) It must protect academic freedom. 2) It must lend to the profession a degree of security that will make it attractive to the ablest men. 3) It must not be so indiscriminating that it opens the students to the abuse of continued instruction by men incompetent or lazy as teachers and scholars. This is not easy of attainment.

Our enthusiasm in fighting for the principles of tenure should be lifted by the hope and by the resolution that they will be used to raise the teaching and scholarship of our colleges and universities to a level far higher than it has attained.

Even in regard to the direct question of the teacher's freedom of expression, much clear thought is needed. It is acknowledged in a statement approved by both the American Association of University Professors and the Association of American Colleges that "the college or university teacher is a citizen, a member of a learned profession, and an officer of an educational institution. When he speaks or writes as a citizen he should be free from institutional censorship or discipline, but his special position in the community imposes special obligations. As a man of learning and an educational officer, he should remember that the public may judge his profession and his institution by his utterances. Hence, he should at all times be accurate, should exercise appropriate restraint, should show respect for the opinions of others, and should make every effort to indicate that he is not an institutional spokesman." What means should be used to compel recognition and fulfillment of these obligations? I believe the answer is, "no official means on the part

of the university or college." It is the examination of the other alternative that leads one to this conclusion. The alternative, depending upon administrative judgments in ridding us of the distasteful, too often eliminates the essential contributions of scholarship. Moreover, this alternative places the college in the untenable position of responsibility for the public statements of its faculty. This, Lowell and Wriston have pointed out with an apprehensive shudder, is more than any administration cares to face.

I firmly believe that of the new ideas that are called fool notions, ninety-five per cent are fool notions. I have little sympathy with a new suggestion just because some other idea that worked out well was once new and scoffed at. I reiterate, at least ninety-five per cent of the so-called fool ideas are just that. But the other five per cent contain the vitamins of our civilization. I do not believe that our intellectual chemistry has reached a point where we can eliminate all the impurities from our food and still leave in the elements of life. I believe it is far safer to allow people to proclaim their faith so that we may use in each generation those new ideas that are necessary to progress and trust the common sense of the listeners and the competition of other doctrines to eliminate the false.

We must face the paradox that often the initial struggle for freedom has been won by people who are certain that there should be freedom for those with whom they agree, but whose convictions are not much broader than this. We sing with fervor of the "Pilgrim's feet, whose stern impassioned stress a thoroughfare for freedom beat across the wilderness." We must remember that these feet had crushing heels for those with whom the Pilgrims disagreed, and that the colleges that dotted the wilderness were to bring up children to think "as they should," not as havens of freedom. From the Magna Charta down, men have frequently won freedom for a purpose that did not include in itself freedom for others. Some of us believe, however, that these by-products of a more liberal mode of life were far finer than the objectives originally sought. Too frequently neither the conservative business man nor the radical enthusiast rank freedom above the immediate purpose it is to serve in his hands.

Tolerance, however, should not lead us to the silly belief that all doctrines are equally good simply because they have an equal right of promulgation. Scholars should not remain without emotion or

divorce themselves from the current of passing events. They should take a determining part in such events. There are doctrines that I believe we should hate with good, whole-hearted, evangelical hate. There are many abuses of freedom in this country that deserve our bitterest condemnation. In fact, if exposure and public condemnation are not used society will devise means, the use of which will be the first victory of those ideas they were designed to combat. Clear knowledge of acts and an aroused public opinion are in my judgment effective and clean arms in this fight. But if they are not vigorously and promptly used it will not be those of us that care for freedom and tolerance that later will choose the weapons for the battle.

In opposition to the theory of official control is the equally absurd caricature of freedom, the belief that the professor should be free from criticism. One reason why tenure should be firmly established is that college presidents and deans could then criticize us more without being made to feel they were threatening us. There are many men who resent any discussion of the texts they use, the examinations they give, or the hours they appear for work. We seek academic freedom so that the force of our criticisms, of economic systems, of politics, of philosophy, of art, of literature, and of education may be of value to society. We ourselves must not have so thin a skin as to claim that our actions cannot be questioned. It is wholesome, if not welcome, to receive criticism from the leaders in our own professions, particularly if they have been placed in positions of responsibility above us, and from our colleagues and students who suffer most severely because of our foolishness or ineptness.

I now pass to another matter, which I believe requires wakeful thought.

To such a great extent influence in these days is exerted by a concert of action, that clear analysis of the type of organization with which it is useful for faculty members to associate is needed. I believe it is important to discuss openly and freely the question as to whether the faculty member who joins the American Federation of Teachers, the affiliate of the American Federation of Labor—frequently called the teachers' union—is thereby increasing his chance to be useful or is failing to understand and is in part nullify-

ing the opportunity of a scholar to play his own peculiar role in our civilization. I have come to have two clear opinions on this matter: 1) That we should be willing to expend our energy and resources to defend the right of our colleagues to join and take active part in the affairs of the American Federation of Teachers, and in some places this is not an empty gesture; and 2) that the American Federation of Teachers at the college level would do, if successful, more harm than good.

Though we should discuss and frequently severely criticize the opinions of our colleagues, we should first of all see that these opinions have as free access to careful consideration as is possible. This means that they should develop in an atmosphere of thought and not in an atmosphere of martyrdom. The crown of thorns may be noble after convictions are fixed but it is not a thinking-cap. Secondly, it means that the expression of our colleagues' convictions should be untrammelled. If those expressions are diametrically opposed to our own, we can enter the lists in support of their freedom for utterance with even a clearer conscience than fighting for our own views.

Nothing that I say in the rest of this statement should be construed in any way as an indication of any lessening of enthusiasm in the defense of our colleagues who are joining the Federation against not only dismissal, but the much more frequently used economic sanctions in the way of lack of promotion and stagnation of salary. However, a clear stand in favor of the freedom of one group should at least permit a person to also freely criticize the movement that that group represents, and in stating that I believe at the college level the American Federation of Teachers is in danger of doing more harm than good, my reasons divide themselves into two sets—first, general theoretical reasons why such an organization is not in accordance with the ideals of free colleges and universities, and, secondly, particular practices of the American Federation of Teachers which seem to me harmful. Some of these are necessitated by the theoretical reasons and some are perhaps fortuitous results of the present leadership of certain locals of the American Federation of Teachers.

In the first set of reasons would be my belief that the academic groups form perhaps the best hope of being something like impartial

referees in the social controversies of the next twenty years. If in large measure the faculties should become identified with organized labor, the chance to play an impartial role would be negated as effectively as if they identified themselves with the interests of capital in its present form. The fact that our present social system has evolved after much experience by a process of continued maladjustment and readjustment seems to me to indicate that at present and in the future marked changes will be necessary and also to indicate that we have gained much which merely thoughtless alterations would destroy. The changes we make should be guided as intelligently as possible. Most of the thousands of proposals for innovations will inevitably be proposals which lead to greater maladjustment but a few of the suggestions will be those which indicate the necessary lines of growth in the future. In other words, we should have skepticism enough concerning our present system to look optimistically for changes, even radical changes, but we should have a strong enough skepticism of the average proposal to realize that the changes we wish to arrive at will not be achieved by a mere hankering after the new or the seemingly novel among the sufficiently antiquated proposals. The existence of intelligent unhampered scholarship should be the best means of maintaining this skepticism and keeping it from being barren. The alignment of faculties in close alliance with interests beyond the research interests and educational interests of their profession seems to me likely to reduce both the freedom and impartiality in point of view which are essentials to the maximum usefulness of our profession. The whole movement towards the unionization of faculties in affiliation with the labor movement in general would be a move in this direction.

[If the role of the faculty is to be central either in law or in practice, it must not sell its birthright for temporary gains. Those who accept the relationship of employee to employer as the basic relationship between faculty and administration negate the fundamental role of the faculty as well as its fundamental responsibility.

The responsibility of a scholar is to have and use a clear and well-informed mind but not to have a cold spirit. Indignation with injustice, compassion for suffering, and impatience with stupidity are qualities appropriate to the scholar. The scholar will at times join groups to make his work more effective. Yet he will resist the

temptation to abnegate his freedom of expression or action by self-imposed associations as strongly as he resists attacks upon his freedom by others. A scholar's conviction may lead him to belong to a particular political party or a particular class organization, but he should not coerce others to belong to such. I have felt so strongly my own desire to be in the position to impartially choose my own position that I have refused to join the American Federation of Teachers on the one hand and the Rotarians on the other. Within our own bailiwick let us never, just to negotiate a better bargain, cease our striving to be in a position of responsibility. When it should be ours to decide, it should not be ours to accept.]

As I have pointed out above, much freedom has been won by people who are not seeking freedom in the abstract but merely freedom for their own opinions. We may hope, however, that as civilization matures a larger viewpoint will be found. It seems to me from the contacts we have had with certain leaders of the American Federation of Teachers that this larger viewpoint is not present. Some have even expressed their reluctance to saying that they would defend the academic freedom of a person who advocated the doctrines of the fascist form of government in the United States. There are groups, I believe, in the Federation who desire freedom as a necessity to the promulgation of their own social doctrines, and if the universities were controlled by those who agreed with them they would have little interest in the protection of the freedom of those believing differently.

I have also observed such tendencies in certain locals as: 1) A desire for recognition of the union as the only representative of the teaching staff. 2) The protection of all union members whether efficient or inefficient. 3) An honest belief in dishonesty as a legitimate tool for advancing those causes that they place above honesty; and, in general, a submergence of questions of means below questions of immediate ends.

I should make it clear lest I am unfair to the Federation of Teachers that to a large extent the chapters are autonomous units. This means that some may be working with the highest purposes of education in mind, and I have known some such, while others may be merely the tools of the doctrinaire. An organization, however, that gives such latitude to its units must expect not only credit for the

valuable work of some of the groups but sharp criticism for the work of others.

For these reasons I hope more and more college professors will stand for professional ideals which they are willing courageously to maintain in face of pressure from social groups in both directions and an emphasis on the importance of methods, methods of honesty, methods of real freedom, and methods of courtesy, which are fundamentally desirable if society is to progress and worthy of delay of one's own particular ends in order to keep the way of progress still open.

In spite of the title of this paper, I have spent most of my time on how to avoid super-sleep rather than describing its best use. Super-sleep is a mental necessity. The super-insomniacs, and we have all known some, are among the most maladjusted and irritating of persons. While awake one should not be interested in the label of either radical or conservative. Although at Wisconsin there is no radicalism in what I have said this evening, it is taken at many places as more than slightly dangerous. Even my statement about faculty affiliation with labor, when first given, not only stimulated before I got up the next morning a reaction from Jerome Davis, but also was vigorously attacked before breakfast by a southern dean who thought such affiliation justification for summary dismissal. It is important, however, when indulging in super-sleep to see that our reflexes are properly conditioned, and it is in this manner that I defend conservatism *per se*.

Ignorance is the chief excuse for conservatism. If you are an expert in a subject, in that subject you may well be a radical. This does not mean that conservatism is ignorant or unintelligent. It is, in fact, the most intelligent mode of meeting ignorance.

If only men conversant with a subject spoke with positiveness, radicalism would be sensible, but as the tribe of false prophets far outnumber the seventh sons of seventh sons, when in doubt one should be doubtful.

By studying the use of habits we get much light on the use of conservatism. In the hurly-burly of mental consciousness a day of actually acting without habit would be too exhausting to be survived. We would start by considering the advisability of underwear. Is it really sensible to wear underwear on March 12? A friend of mine, a

brilliant mathematician, says he leaves for a summer vacation with the clothes he wears, two shirts, six pairs of sox, six handkerchiefs, "no underwear, I never wear it" (again a habit). Then the weather is to be consulted before the tie is chosen. Two minutes at least would be consumed in deciding whether two or three spoonfuls of sugar go on the shredded wheat, etc. We would not have to decide whether to attend classes or not. We would be too late.

There are then these recurrent questions, the answers to which we have relegated to habit. There also are vast hordes of situations of a non-recurrent type, which demand our action but are too numerous to individually claim a large share of our attention. It is here that a generally conservative attitude is useful. A flood of new proposals crowd for recognition. Some of them are highly valuable, most of them are foolish, and some dangerous. A large group of these proposals will be so patently absurd that our ordinary sense will dismiss them. Many may be safely ignored. Still a huge group demand a tentative decision on our part. Usually the conditions we live under, if not ideal, are fully tolerable, with at least a ten-to-one bet that a given proposal for change would be detrimental. If we must act and have not the time for study, the most intelligent attitude is to offer up a silent prayer for forgiveness for calling your brother a fool, make a sarcastic remark or two about upstarts, or a jingoism or two to help mental digestion, close your eyes and vote "no." Those who are silently planning to quote this against me at the next faculty meeting should remember that this confession is not only personal but vicarious.

But if there were not at times another possibility the situation might seem desperate. For then how could we hope to get through the reforms that as experts in a given line we might recommend. As the majority will on any given topic be ignorant, and as the above recommends an obstructionist's attitude when ignorant, it would seem that we should always remain motionless. There are two loopholes, however. There is really another state between expertness and ignorance, namely the state of having enough knowledge of the subject or enough knowledge of human nature to decide who the experts are and then trust to them. In the case of health, for instance, few study medicine but the majority try to find out who are the best doctors, and though conservative in general may even have their

very vitals ripped apart on professional advice. The intelligent conservative will eventually give in when enough expert opinion is ranged against his, or awake and study a subject if it can be shown to him that there is an obligation so to do.

In facing the question of picking those we can trust, we reach a problem which is in danger of consuming the time we promised to save by our conservatism. There are few rules that help us to pick an expert, but there are certain rules that help us discard would-be ones.

First there are the people who are clearly labeled "quack." They promise too much and vituperate too universally. The purveyors of cure-alls, be they pills which are "good for what ails you," or political parties that promise to abolish want, are usually talking from a mental vacuity, or with a low form of self-interested cunning. Trust not the mental dyspeptic who too bitterly assails present conditions and declare that the "youth of today do not listen to the home, the school, and the Church, for these institutions have nothing to say to him." He probably has an educational gadget to sell.

Secondly, trust not the man who speaks as with authority in one field because he really knows something about something else. When Compton, Eddington or Jeans talk religion it is interesting but certainly not expert opinion.

Third, trust not the educational sadist who takes pleasure in beating his wife, whom he charges with giving unwholesome food to the children, but when submissively allowed to select the academic menu chooses either a diet of Grecian hors d'oeuvres or a hundred great desserts.

I grant that sometimes I have been puzzled in feeling that conservatism is in general the sensible mood, but that most really great men have been radicals. I think the attitude I have expounded tonight explains this seeming paradox. An intelligent use of knowledge is almost always radical; the intelligent attitude towards the problems we meet in ignorance is conservatism. Radicalism in matters of which we know nothing is terrifically dangerous; conservatism on matters with which our familiarity is great is usually a betrayal of trust. Sometimes there arises then great minds which gain insight into problems of large moment. They make a deep and radical impress on an age and are recognized as the truly great—such

men were Plato, Moses, Michelangelo, Newton, Christ. Frequently on other matters they were conservatives, but this is of little moment. "Render unto Caesar that which is Caesar's and unto God that which is God's" is not the solving of a political question but the instinctive conservative brushing aside of a question that did not really count as to the reforms in which Jesus was interested. Newton's radical departures in science left him a conservative in religion. Well-founded radicalism is the greatest of all qualities, but most radicalism is a form of intoxication. Seldom is conservatism great, but it is nearly always useful. He who helps change our environment to the benefit of the race in an honored leader. He who merely tries to change because he cannot adjust to it is pitiful and sometimes obnoxious.

So I plead not only for men of tough minds, but also of tough hides—men who do not fear the label of conservative or radical while awake, but who do their super-snoring to the tune of "don't rock the boat."

But I do not wish to end on this note. I deeply believe that the American scholar has a mission beyond sleeping soundly and not akin to the restlessness of a professional malcontent. He should be the juror of American life because he brings to the judgment the inherited insight of the past, the keenest instruments and methods of precision of the present, and because, while surrounded by circumstances that make it possible for him to speak impartially, he cherishes this opportunity to merit and win the respect that will make his words, if wise, also useful.

No, We Can't; He Has a Committee Meeting

I might as well disappoint you at once. I am not going to belabor, through a compendium of all the witty sayings of our colleagues, the fact that committees are the invention of the devil. Neither am I going to deny the fact.

The evidence may be circumstantial, but it is also incontrovertible that when the devil first felt misgivings about the autocratic tendencies of the Almighty he, with becoming modesty, suggested that there be a committee to report on heaven's entrance requirements. The Lord naturally hoped that this would quiet the trouble and set a precedent for all time by making Beelzebub chairman. Finally, when no agreement could be reached, a second and somewhat less austere curriculum, oddly called parallel—a sort of Ph.B. program, was established with the devil in charge. Aside from the subject for a moment, I may say this second curriculum had such pleasant and seemingly well-intended entrance requirements that it nearly ran the old curriculum out of existence until St. Peter's endeavors at recruitment stabilized the intake of heaven at a select but relatively constant level.

Like other inventions of the devil, committees have a strange fascination. Men deride them, declare their adhorrence of them, but secretly seek membership on them and feel hurt when not included. A well-known member of this faculty, a most skillful belittler of all

administration including committees, took special occasion to tell me he would like to be included on some of them; he was, and proved useful, 'though never changing his pose. Do not try to discover the hero of this story: he is not only protected by anonymity but by multiplicity.

It is not my purpose to trace the history of committees as well as establish their origin. I shall revert, however, at times to their annals just to lay to rest certain slanderous legends that have grown up about them. For instance, it has often been said that they never accomplish anything. This is false! The Tower of Babel was built by a committee; Socrates was condemned by a committee of the whole; Marie Antoinette lost her head on order of a committee; and both mathematics and history lost their status as requirements, or at least had them transmogrified, on the recommendations of committees.

But I should confess that the foregoing is not at all in the mood of what I wish to say tonight. I really want to discuss from experience academic committees, especially those of the University of Wisconsin, to point out that when considered soberly they are not only useful but beloved, and finally to indicate some of the elements that may make them succeed or fail.

I now apologize for but not refrain from qualifying as a witness—if not expert, at least experienced. Excluding routine committees such as those for masters' and doctors' exams, or those to estimate how much the salaries of assistants can be raised for how little money, or to do other administrative piecework, I was able to count up at least 57 (a number with a rather vinegary taste) major committees that I have served on since 1927: 37 at Wisconsin and 20 for national organizations; 26 of these have been, at least from the time consumed, weighty assignments; and of these I was secretary of two, chairman of twenty-two, and in charge of the menus of one. Among these committees have been: The University Committee, the Committee on the Quality of Instruction, the Committee on University Functions and Policies, the joint commissions of the American Association of University Professors and the Association of American Colleges on Academic Freedom (representing the AAUP) and on problems of retirement (representing the AAC).

I do not think it would be an exaggeration to say that 25% of my working time for the last quarter of a century has been spent on

committee work. Naturally, since no man is willing to admit that he has wasted over six years, you will understand at once that I shall for the most part defend committees and committee work.

Of these committees I really believe only two (outside of the time consumed) have done more harm than good. And in the case of some I think I join with all my colleagues in pride in their results.

Let us admit some of the bad elements of committees. I shall touch on three:

- (1) The time spent;
- (2) The responsibilities ducked;
- (3) The compromises with mediocrity made.

To illustrate: An estimate was made of the time consumed by the Committee on University Functions and Policies from which I quote:

Approximate man hours at meetings—4,868.

It is my judgment that more time was spent by persons working individually in connection with these reports than was spent at the actual meetings. If this were true, a conservative estimate of the manhours put on these two reports and on other work of the committees would be 10,000.

In addition to faculty time on committees, there was one full-time secretary for the Committee on University Functions and Policies throughout its existence; and the Committee and subcommittees called upon many offices for help.

This was not time of little value but time of scholars—many of them great scholars. Only results of real importance can justify such use of time. Moreover, time and temper have a close relationship; one could almost believe that they came from the same Latin stem. The family strain that must develop from being out the same evening each week (less strain if friend wife went to the Club for dinner too), of the same subject discussed over and over again, of the repetitious telephone calls, is hard to calculate. It was a charitable wife indeed who, when her husband had been one of those at our cottage drafting a final report, said of his absence: "Oh, he's just gone up to a mountain with two other men to pray." A German accent might have made this more accurate.

On the other hand, not all time of any individual is equally valuable. No one lives at his highest productive level but for a very small fraction of his life. I suppose the man who produces one first-

class idea a year is a genius. There must be much boondoggling and some somnambulism in every life. If a man could reduce his committee work to say 10% of his working hours, it probably would destroy little that is vital in his productivity and would give him a sense of participation that in some cases is essential and in all cases restful.

Secondly, committees are a way (often an evil way) to duck responsibilities. The responsibility may be avoided by either the individual or the group, by an administrative officer or by the faculty. The faculty even elects standing committees to make up its mind for it. But frankly, delegation of powers occurs as frequently to allay hunger as to shun responsibility.

Perhaps the worst charge that can be made against committee procedure is that it assures compromises with mediocrity. Take departmental executive committees. There is, for example, \$3,000 to be spent in multiples of \$250 in raises for ten people. The department agrees that the most should go to the most productive and the largest raises to those in the most productive years. What happens? The chairman, often the most effective member of the department, insists that no recommendation be made for him. Three are then recommended for \$500 and six for \$250. Who are recommended for \$500? A, the most active and brilliant man in the department; B, the man who would make life intolerable for his colleagues if anyone got more than he does; and C, the man whose record last year was so mediocre that no raise was granted. (It has not improved this year, but of course it never will; and one can't let him be in the lower decile because anyone in the department is worth the average of other departments.) Besides, this is just a recommendation and it is much better to have one's colleagues' affection and only the dean earn an alphabetic appellation. Well, perhaps it is!

The same decision can arise about courses, or publications. My solution of the publication problem is about 10% more support and about twice as many editorial curmudgeons.

Turn now to the good; and there are plenty of bones, very dry bones, with which to inter it.

I shall not linger on the many jobs well done both of a routine nature and occasionally concerning important policies. These are obvious.

Just as sometimes committees lead to unfortunate compromises with mediocrity, so also they lead to genuine *modi vivendi* when such are necessary. Very good men have opposite ideas and it is not lack of logic but lack of coincident assumptions that makes them differ tenaciously. Even when they cannot be made to live comfortably with each other, it should be made possible for others to live comfortably with them! If a University is a place to make *prima donnas* socially useful, neither anarchy nor autocracy is the most likely form of government to succeed in doing so. We had a very able scholar and teacher of mathematics some years ago who was particularly successful at instructing engineers. He was also a very husky lad. When asked what he did to help the poor students, he replied: "I invite them down to the gym and then I bend them a bit." This may work with the use of personal prowess; it rarely can with the use of authority. The committee does, however, not only help to make important agreements but makes individuals more bendable in the process.

And some compromises are pretty good. For instance, the statement of the American Association of University Professors and the Association of American Colleges on "Academic Freedom" is, I believe, a good statement and better than either could have written and vastly better than that which the Association of American Universities recently perpetrated all by its lone.

Another great good that committees produce is an educated body politic. The ballot is a pretty shabby substitute for the town meeting. You can recognize outstanding merit or run the rascals out by the ballot—although rarely in practice, but it scarcely is an instrument of political education. The committee most certainly is. It is also a means of developing loyalty (not, as is often hoped, in the basically anti-social, but certainly in many of those of good will). Wisconsin has a very loyal faculty. One likes the horse he bets on, or the University in whose future he has been asked to invest extra time, energy and understanding. Few committees I have served on have worked so hard, at the sacrifice of so much else that was important and pleasant, as the Committee on University Functions and Policies; but when some years after their discharge, the members were recalled, it was almost like old-home-week to be together again. (Incidentally, after the lapse of four-and-a-half years, to be able to

have all twenty-two members who signed the First Report, as well as the two ex officio members, in residence and well is, I imagine, something of a record.)

Moreover, without committees the forces that lead to mutual respect between the disciplines would be halved.

Even if committees can fulfill the functions of the circumlocution office, they also can stimulate to action in strange ways. Let me give two illustrations: Our divisional executive committees only rarely turn down a new course or a candidate of a department for tenure. However, department after department deletes outmoded courses because of this hurdle and time and again reach the decision that some reasonably good, but not excellent, man should go elsewhere rather than allow their colleagues to think less of their standards. As another and rather personal illustration, as chairman in 1939-41 of the Committee on the Quality of Instruction, I helped write an ardent appeal for reducing the size of classes, especially discussion sections. From two years later on this document has been kept before me by our faculty as a standard I dare not repudiate. Not all embarrassment is useless. I only wish some public officials had also helped with that report!

I have labored at too great length the possible values of committees; but what I really hoped to do was to outline some suggestions as to what should be included in a handbook for those appointing committees and for their chairmen, secretaries, and members.

Elective committees should be few. We certainly have enough now. But those few can be of the greatest use. No other committee has from its inception served the University as has the University Committee. It has a tradition of responsibility that few academic committees in America have developed.

Most committees had better be appointed—not in order to reflect the opinions of the appointing officers but to secure greater representation both within a single committee and within the whole roll of committee participants. Our “in conjunction with” practice has been a very great success.

One of the evils of having so many colleges is that it makes the committees bigger. The attempt to represent all colleges not only increases the number by the representatives of new colleges but increases the number of persons from the larger colleges as an offset

to the disproportionate number of members from the smaller colleges. Somehow a solution to reverse this process must be found. Perhaps divisional rather than college representation should be used. If more of the faculty belonged to and used the University Club a greater sense of trust that there are many who could represent the whole might be developed.

The greatest evil in appointments is to hope that the perennial bickerers will be cured. They are not cured but are thorns in the flesh of their colleagues. Of course the ultimate in this evil is in our congressional investigating committees. Think what a change it would be to have McKellar, Jenner and McCarthy move for an investigation and have Saltonstall, Douglas and Fulbright carry it out.

Of course a committee should not be packed; but once I swore that if I ever appointed another, I would be certain that on some important subject a plurality of two would be found.

Then, too, there must be a hard-working chairman as “goat-in-chief.” The “goat” in the case is not merely trivial slang but a real analogy. He must eat the hard metallic husks of facts and then, when digestion is complete, bleat. Bleat in the report, bleat in the meetings of the faculty, bleat to the administration and to the regents. You know:

The goat is quick on its feet;
It dines on tin cans and mesquite;
His smell gives offense;
His temper is tense;
But his voice is only a bleat!

But your time will limit me from discussing many aspects that a manual for a committee will treat in detail: such questions as that of the committee's secretaries, its files, mimeographing, the good faith of the minority and the majority, the privilege of dissent, the wisest size, the strategy of presentation. But I shall touch on three more points:

- (1) The time and place of meetings;
- (2) The diet;
- (3) Drafting the report.

Most committees seem to meet at the Club for lunch. For committees of six or less a case can be made for this habit, but even then,

a shaky one. For larger ones it is almost the worst of times and places. Such meetings harm the digestion, squeeze the work into the thirty-two minutes from 12:51 to 1:23, and preclude billiards. The next most popular time is 4:30 p.m. Conflicts with seminars usually cut attendance; hunger begets exasperation and minimizes human understanding. Such a time is bad.

This leaves Saturday afternoons and evenings available. Most committees faced with that dilemma quickly choose to be impaled on the evening horn. It is totally unfair to men with small children. This is an unpopular choice with wives, but gave me the title of this paper.

The time of adjournment is as important as the time for starting a meeting. If there are to be many regular meetings two hours are long enough. 7:30 p.m. to 9:30 p.m. seems a period of maximum goodwill, without food, as is clearly recognized in the customs of this club. One committee I served on had a fine rule: Adjourn at 9:30 but allow the speaker to finish a sentence but not a paragraph. This compromise between punctuality and punctuation was left to the chairman. But the homelover, the night worker, the bookworm, and the public speaker all resist evening meetings.

So far no solution has been used. I have a solution—it is simple and practical but it will not be used any more than my suggestion that chopsticks have holes down the center so they can serve as straws will be used in China. The solution is to have each member of the faculty give the President a schedule card and that assignments be given on that basis. From those with no classes at 7:45 or Saturday morning a committee on timetables could be picked. Lectures and convocations would insist on Thursday and Friday at 4:30, thus avoiding attending any. I only fear that unless we falsified the records, Mr. Fred would choose Sunday at 7:00 a.m. for the deans. Certainly a proper choice of assignments known in advance would enable Alden White to fill unpopular hours. Think of the choice of either teaching Medieval History on Tuesday, Thursday and Saturday at 10:00 or being on the Athletic Board.

If you persist in "committing" at the Club at noon (12:17), the question of diet arises. Do not fear. I shall not repeat a former paper, but I shall tell a story. I served once as chairman of a committee of nineteen gentlemen and one lady. She was an eminent member of the department of Home Economics. It seemed logical to

ask her to arrange the luncheons. I have never fully made up my mind whether she had received the wisdom of the serpent from Eden's apple or whether her studies of dietetics were devoid of the influence of male psychology. In any event, after one luncheon of thin soup, a pretty salad lacking any gustatory value, and a trivial dessert, eighteen members of the committee asked me to assume the choice of menus—and a fine committee had a fine time writing a fine report sustained chiefly by beef and pie. The lack of any reluctance on the part of our home economist in relinquishing her duties or in eating what was set before her rather makes me incline to the serpent theory. Remember: the way to a man's mind is through his heart, which leads to certain other pertinent conclusions.

Let us now turn to the subject of drafting a report. If committees in their conclusions often compromise with mediocrity, they almost universally do so in respect to their English. A split infinitive and an apt phrase are equally abhorrent. A sentence must be devoid of comedy but include commas. Underline all important statements and many that are not because they are probably written so stupidly that no one would notice them otherwise. Nothing I resent more than that if ten people write a report it will be more correct on the one hand and more dull on the other than the correctness of the committee's grammarian or the dullness of its bore. Start with a stretch; continue with a yawn; end in sleep. Let me illustrate: I was writing about the recent integration bill and said that some might expect those who believed in integration to favor this bill but that it was as logical to expect a man who yearned for a drink of pure cool water to be grateful for a cup of fetid and contaminated liquid. My drafting committee said: "You know you can't call names like that; can't you get a quotation to fit?" The next day I had deleted the above but put as the text of the whole statement Matthew VII: 9-10: "What man among you if his son asks for bread will give him a stone, or if he asks for fish will give him a serpent." That was an improvement but the committee as a whole took it out.

After an experience on the University Committee I reacted so strongly on the subject that in 1934 I committed a skit called "Budgeteering." I am going to quote at some length from this:

"The Committee at once started meetings. The Committee met with the President. The Committee met with the Dean. The Committee met with the

Departmental Chairmen. The Committee met with delegates from groups of 'earnest seekers after truth' who thought they had found it. The Committee examined the Dean's figures on 'teaching load' and 'cost per credit' and discarded them as totally inadequate after which, by Sub-Committees, it gathered together many complicated tables of figures which finally were seen to be equally inadequate. The Dean's figures were then photostated with explanatory remarks. All this consumed twenty-five meetings. The descriptive part of the report was prepared."

...

"At the twenty-sixth meeting it was decided that each member would bring to the twenty-seventh meeting a statement of faith as to the 'essentiality,' etc. These were:

"Ames—A great university is distinguished from a college by its research. There are hundreds of institutions for the feeble-minded. There are thousands of college country clubs for the average dud. The university is for the discovery of knowledge by the trained investigators of the present and the training of research men for the future. Consequently the teaching burden must be minimized. All students should be trained in the writing of concise English, in the reading of French, German, and possibly Italian, and in mathematics. The rest of a student's time should be spent in specialized work in one subject.

"Bradford—The Liberal Arts College is founded and maintained to give a cultural training to those who can receive it. It is better for a man to appreciate Giotto than to advertise depilatories. The reading of Horace is more educational (without great loss of sex appeal) than enthrallment in *Snappy Confessions*. A sound linguistic background, philosophy, a knowledge of the masterpieces both of literature and art, a little mathematics, and perhaps a course or two in science is the basis of the education of any good intellect. It is not our business to educate the second rate or the gold digger. Not only should business courses be eliminated but administrative expenditures should be cut at least in half.

"Williard—The basis of well-being in the community is the well-being of the individual. No man can be happy or be a good husband, father, and neighbor unless he is qualified to earn a sufficient amount of money to live according to the American standard, educate his children, provide for his old age, and leave a moderate estate to secure the future of his family. The primary purpose of the college is to train men, and women too, to earn a livelihood. We should slough off courses that serve no practical ends.

"Harbush—The world is at the cross-roads. Our economic system has broken down. We must build anew or expect our civilization to crumble. Want and starvation will wander over the face of the earth. Our curriculum

must point towards an understanding of economic problems. What we need most is a body of citizens trained to think intelligently on social questions. Leadership must be developed and so must followership unless democracy is to vanish. For the first two or even three years we must train all our students in economics, in sociology, in applied history, and in statistics. Stop teaching for culture. Study Russia. Study the tariff. Study taxation. Wake up!

"O'Fallon—This is not just a college located in this city. Its campus is the State. There is not one of the sixty-five counties which should not receive the aid of this institution. There is not one of the 1,972,506 adults in the State who should not be served by us. The radio should tell our citizens what the laboratory discovers. The press should make each mother aware of the psychologists's important discoveries concerning the complexes established through spanking. The drama and the lecture platform should spread the cultural influence of Shakespeare and Shaw, of Aristotle and O. Henry. Of course this will mean an increase in administrative costs, but nothing else will return as much to the State or make the State feel more kindly towards its great University and our College."

...

"At the thirty-third meeting, however, the following was unanimously adopted:

"A great university is one where the youth of the State are taught by able teachers who, while being eminent in scholarship and research, realize the larger significance of the college to the State. The College, while training each student to be proficient in some field of work, must make him aware of the cultural heritage of the past, the nature of scientific method, and the economic problems that now confront us. It should also train him to be self-supporting. Broad training in science and in the appreciation of art and literature may often be preferred to too much work of a purely practical nature. Those of superior intellect should not suffer because of the necessity of being trained in the same classes with less gifted students. The College should, whenever possible, continue to spread its influence to the borders of the State through the Extension activities of its faculty. We emphatically believe that the research, instructional, and extension work of the College will suffer if the teaching load is increased. The administration should consider the possibility of cutting costs of business items."

I later submitted this to *The American Scholar* and got a partial acceptance summarized by the Editor in the following sentence: "Don't you think you could cut the length by one-third and still convey the same sense of unutterable boredom?"

But reports must be written, I presume, and actually three of the happiest experiences of my life have been with drafting committees. One was made interesting by the insistence on precision by Meta Glass, President of Sweet Briar and sister of Carter Glass. Another I shall never forget because it allowed me to watch Professor Kiekhoffer remold sentences to make them more fluent and also frequently more exact. To him no sentence was in any true sense written; it was always oral. He would beat out the time of a sentence, its long clauses and its short phrases. He would flavor its alliterations. He would then read a sentence or two before and one or two after to get the general rhythm. He then came out with the balance we should all have sought. A third was the helping to put together the report of the Committee on University Functions and Policies. We had worked through many subcommittees ranging in size from one to over a dozen. Each subcommittee's report was not only received but the committee as a whole decided to what extent it agreed with the report. Each subcommittee's report, even when in part not approved, was included in the appendix of the report of the committee. In general, each chapter of that report was: (1) written; (2) rewritten by the drafting committee; (3) agreed to in substance as written or as modified by whole committee with suggestions given by individuals as to rephrasing; (4) rewritten by drafting committee; (5) adopted subject to editorial changes by drafting committee and opportunity to suggest editorial changes given each member; (6) master copy made by secretary showing all suggested changes; (7) final report decided on by drafting committee (this last step was the praying upon the mountain top—already mentioned).

In conclusion it is only fair to ask whether I point with pride to more important things than I view with alarm in this committee life I have shared with many of you. I can, with clear conscience say, "I do." For instance, I point with pride to the following which came about in large part through the work of committees on which I was allowed to serve:

- (1) The establishing of the method of absorbing the cuts during the depression so that our younger staff would not be too greatly disturbed.
- (2) The giving to the faculty for the first time a careful summary of the time and money budget of the University and our analysis of its

salary scale. (This, I believe, was the most complete such statement given to any faculty of a major university in the United States up to that time.)

- (3) The establishing of the faculty divisions.
- (4) The basic plan for the new library.
- (5) The analysis of the University's functioning through two reports of the Committee on University Functions and Policies.
- (6) The plan of the Math Society to secure recognition on the part of the universities of their responsibility in the field of research publications.
- (7) The statement on Academic Freedom and Tenure of the AAUP and the AAC.
- (8) The extension of Social Security to private universities and colleges.
- (9) The reversal of the tendency to earlier and earlier retirements.

I shall not resent the belief of those of you that some of these decisions are harmful. I shall not resent the belief of those of you that think it has mostly been busy work.

However, I imagine all of us believe that the effort required by work of committees is a small price to pay for keeping the control of the educational policies of the University in the hands of the faculty; and, to be honest, I will have to say that, in spite of the hours and sometimes headaches that have gone into it, this work for me has been fun.

3

Is There A Heaven And A Hell For Colleges?

I come to Hiram College with resentment in my heart. You stole a fine scholar and an excellent teacher from Wisconsin to make him your president. Although I congratulate you, such theft is not easily forgiven. Whatever I inflict upon you in the next half hour is just retribution.

One of the formulae for a commencement address is: We have given you a splendid education but we are leaving you a burden. The times are challenging. Go forth and do what we could not do. Master the world we could not master. Make it worthwhile for democracy. And you will forgive us, on such an occasion, if we say to ourselves something like this: "We have done our best by you and we think it is a glorious best. We hope you will do your best by us and we hope it will be a glorious best."

But this is not the kind of commencement talk I wish to give. I do not wish to talk about your duty. That I shall leave to the alumni who have gone out into the world and performed with success and skill the tasks that faced them. But day by day I worry about the quality of a fine educational institution, and day by day President Sharp worries about the quality of a fine educational institution. I want to talk, therefore, about what I really spend my time thinking about, namely the quality of educational institutions.

May I now take a new start. I have often thought I would like to write a short story. If I have ever had a good idea for one I have never used it for that purpose. I suppose it is because short stories are hard to write and speeches are easier to prepare that I transform any idea I have for a short story into a speech. (A story must capture its readers; a speaker often is furnished with an audience.) One of the stories I have contemplated was about the poetic justice meted out to our hero in the afterworld: In a Hell that is not all Hell, a Heaven that is not all Heaven, nor a Purgatory that is all one way—always going up toward Heaven, never going down towards Hell. He faced an immortality in which he knew what was right and was allowed—nay, forced—to witness the effects of his deeds done while he was on earth. This would be rather frightening. At times, however, it might be very encouraging. Some of the stupid things we did, without thought, would come to plague us. Some of the cruel things we did, with thought, would come to plague us. Some of the intelligent things we did—even if done quietly, known to only a few people—we would see enhance their lives and hence enhance other lives in a widening benediction like a ripple from a stone.

This is my cue, for I wish to talk about the heaven or hell that an institution faces as it realizes what it has done in serving American education, in serving its graduates, in serving those who came to it but did not graduate, in being a force in the community, in upholding standards or in letting them down: the heaven and hell of knowing how it has helped and how it has hindered progress in our country. In other words, I want to discuss how St. Peter might determine the grade-point average of an institution.

What are some of the required obligations of a college similar to the required courses in a curriculum? I have chosen three headings under which to illustrate these requirements but not to comprehend all of them. First, an institution of higher learning must be honest. Second, it must have a social conscience. Third, it must be intelligent.

There are many virtues—many that we justly admire. One of these is courage: the physical courage of a soldier, the moral courage of a person who stands alone in an unpopular cause. I believe physical courage is a more common virtue than moral courage. It is also a more common virtue than honesty. Many more persons in America

during the war would buy on the "black market" or cheat on their gas rations than would flinch from danger. Honesty, complete honesty, unselfish honesty, intellectual honesty is really a rather rare virtue. Petty honesty is perhaps even rarer. And yet without honesty how much shoddy in our lives, how much change without progress! No institutions should stand more clearly for honesty, especially intellectual honesty, than institutions of learning.

How is honesty shown? How is dishonesty shown? Dishonesty can be shown by a catalog which describes the campus as more beautiful than it is, which describes the social life as more ideal than it is, which describes the quality of teaching as above what it is. Dishonesty can be shown by the teacher who pretends to know the answers when he does not, by the student who cheats in an examination. It can even be shown in simply grading—by saying a student has done an excellent job when he has done just an average job, by saying a student is average when he is much below average. And the injury this does to the moral fibre of the students can be seen in the rest of their lives.

Pick up any magazine. Its advertisements, largely designed by college graduates, are misleading in picture and in statement. In fact, misstatements have come to be so taken for granted that some would claim they are hardly dishonest and that if everybody is going to discount them 50%, you must exaggerate at least 100% so that what is believed is correct. (No, my arithmetic is not mixed up.) However, I do not hold this point of view. But I cannot expect that businesses will reform their advertising until colleges reform theirs. What is promised the athlete or what is promised the scholar in high school by even a slightly careless representative of the college conditions that athlete or that scholar, sometimes identical, to shade the accuracy of his statements throughout the rest of his life. To a certain degree any college, looking at what some of its alumni have done, knows that it has not set before its students that high standard of honesty, that example of straightforwardness, which would go far to improve the life of this country.

But we must not only talk about dishonesty but also about honesty. There is a great deal of it in American colleges. It is good when a mathematics teacher says: "I am not sure what the proof of our theorem is. I am certain that what we have discussed today is not

complete;" or when the biology teacher says: "I do not know what the effect of radioactivity will be in the next generation, but here is the evidence;" or when the economics teacher champions an unpopular view as to the best way to meet a recession. It is better yet when the next day the mathematician or, best of all, his student presents a complete proof; when the current flow of knowledge concerning radioactivity continues to reach the class; when time for careful analysis of the changing face of our economic pattern is provided; and the student's freedom of judgment is fully respected by the protagonist of another opinion.

The second characteristic that an institution must have, if it is to find satisfaction in the contemplation of its accomplishments, is a social conscience, nay, more—a clearly avowed social conscience. In fact, to a degree honesty is only one aspect of a social conscience.

The first fruits of such a social conscience are public-spirited graduates. If private gain—and I do not mean merely private financial gain—were the sole aim of higher education, it would be wrong to ask donors to give to the colleges, to ask legislatures for appropriations, and we should pay taxes on every acre and every building. I believe that expenditures on education should be greatly increased; but if private gain were the sole aim of education, these expenditures should instead be drastically curtailed. I wish to see tuition kept from rising largely because I desire to have emphasized the fact that education primarily for the public good should be the central aim of every college. Of course, it is clear that the self-centered aspects of education, as of life, although not dominant, must be great. No healthy adult should be a burden on others. Equally important, during our most productive years, is the need to supply the material requirements of the family. To enable one's self and one's family to meet the standards of a nation whose citizens can increasingly afford to live graciously is a large portion of one's duty. Individually and as a family to live a truly cultured life is no mean ambition. For all of this we need education. But this must not be all. The benefactions of the fortunate, the taxes of the public, and, above all, the devotion of the teacher support education whether its control is public or private. This generosity must not be squandered on those whose loyalty ends with self or clan.

My prescription in order to enlarge the influence of our colleges

through increasing a sense of social conscience in the students is for faculty members more openly to discuss their motivation. I know few scholars who are not driven by both the zest of intellectual activity and a sense of obligation to mankind, and yet I find them reticent—I sometimes think increasingly reticent—in admitting their ideals. Why cannot a code that is strictly followed, a motive that is one's driving force be openly proclaimed? I do not wish a preaching faculty. Heaven forbid! I only wish that the false cloak of seeming indifference be cast aside. Age can speak to youth if it will speak with the enthusiasm that is in its heart. The ear is keen; may the tongue be adequate!

A second prescription relative to the social conscience of the college is that it grasp the opportunities that come to it as a source of scholarly activity. These are twofold: First, to increase the fund of human knowledge and, second, to apply that fund to human needs. The scholar must be ever deepening his knowledge even, if possible, beyond the frontiers that others have reached. But the community of scholars that form a college can also serve their fellow men through the application of knowledge. I am happy to see the effect, the direct effect, of colleges and universities in legislatures, in city planning, in public health, in musical opportunities, in farm production, and in international understanding. America could not afford the present concentration of scholarship in its colleges and universities if the channels of communication between these centers and the surrounding world were not direct and open.

Thus part of the heaven of every institution comes from seeing the services of its graduates to mankind and from the immediate services of the institution itself. Not only each scoundrel but each self-centered egoist that it graduates, as well as each missed or muffed opportunity for public service, contributes to its hell.

No more important than to be honest and to have a social conscience, but more peculiarly its own, is the obligation of the college to be intelligent and to foster and develop intelligence. The home contributes more to honesty or dishonesty than can the school or the college. The church may be as great a source of spiritual values and social conscience as the college. But I firmly believe that intelligence at its highest level, in its most trained form, in its greatest self-awareness centers in and radiates from the college or university more

than in or from any other institution. In many walks of life stupidity is unfortunate but forgivable. In a college it is a betrayal of trust.

Any man should be proud if on his tombstone could be written: "He taught well—three thousand students." I would be. But perhaps you will not scorn my admission that it would be a deeper satisfaction to have said of me: "He had Milton in class and did not hinder him." And sometimes I think that Barrows of Trinity in Cambridge was the supremely fortunate teacher, for he was a great scholar and also the teacher who inspired Newton. Even if it suffers twinges of remorse to know that its student, Byron, scratched his name in the marble of the Temple of Neptune, no college should be happier than Trinity, whose sons include Newton, Bacon, Herbert, Macaulay, Thackeray and Tennyson, truly the alma mater of excellence. We must ever recognize that the supreme obligation of the college is to nurture excellence.

But I am getting wound up and if I were to exhaust my emotions, I would also exhaust your patience. When I find myself in such danger I try to recall the introduction by Dean Slichter of an oratorical president: "Gentlemen, those of you who are mathematically inclined may during his talk ponder the problem: Is time infinite, or does it only seem so?" Hence I shall limit myself to a few remarks on three aspects of institutional intelligence: First, on intelligence in the curriculum; second, on intelligence and its relation to freedom; and third, on zest for the life of the intellect.

The college should show intelligence in the choice of the matter it teaches and in the choice of its method. A college must not be bound by tradition, but neither should it be compelled by prejudice against tradition. Both limitations are bad; the second is the worse, for tradition is seldom totally devoid of wisdom. The classics two generations ago had no right to exclude the physical sciences as intruders in the realm of liberal education; and the physical sciences should recognize that the next generation may need to understand social psychology and the history of other peoples as much as the physical makeup of the universe. Yet let me be quite clear. Neither the behavioral sciences nor the sciences that underlie our technology can be a substitute for Homer, for Dante, for Rembrandt, for Beethoven, or for the beauties of mathematics. Like a sunset, some intellectual experiences are valuable, not for how you can analyze

them, but for the direct experience of beauty and truth they yield. They belong in every education. They are the goal, not the means.

One place where I believe American colleges are not intelligent and negate excellence is in the use of textbooks, ranging from mediocre to good, rather than in the use of masterpieces. I would rather have a student read Gibbon and be brought up to date by lectures rather than read a current textbook on ancient history devoid of style even if it contains an added century-and-a-half of research sieved through a good but not great mind. Dante and Shakespeare should be consumed in bulk rather than in samples with other lesser poets. Elegance as well as rigor should be sought in mathematics. I am grateful to Professor Wilcox of Cornell who started a course in sociology thus: "Since Professor X is away, I am giving this course. I am an economist rather than a sociologist but I know that no harm is done by reading a great work. We will start with Darwin's *Descent of Man*." It is presumptuous to substitute a description of an eminent man for an introduction to him. Great writers and great artists, alive or dead, are the only distinguished people who always have time to meet you. Do not spend your time on checkers if you can play chess.

Colleges, while holding fast to that which is good, should realize that the basis of progress is in intelligent experimentation. There is no use in foolish experiments—experiments one knows will fail—such as substituting bookkeeping for mathematics or counselling for hard work, nor in considering it an experiment to try what you know will succeed when you can afford it only in a sample. For example, Mark Hopkins, the student and the log—the perfect teaching load and the concomitant reduction in equipment. But as an intelligent experiment, consider your Hiram Study Plan for sequential concentration on one course after another. I am not sure it is better than four or five simultaneous courses. Perhaps after college the scholar or the architect will tackle problems sequentially; the executive will not. But also this is the type of education that cannot be ruled out as foolish or adopted universally and immediately as clearly superior. It is a plan that has been modified and developed within its own history. It is highly intelligent to try it. It is useful to Hiram to do so. Your experience is also useful to Wisconsin.

May I turn to the relations of intelligence to intellectual freedom. Confidence in freedom is based essentially on faith in the persuasiveness of intelligence and faith in the richness of diversity. Hence more than elsewhere we should find in the colleges the champions of freedom. If propaganda is really more saleable than sense, if in the long run passion is stronger than principle, then if we are sure of our own sense and our own principles, we may wish to coerce others. If vulgarity is more permanent than good taste, then if we are sure of our own taste, we may wish it to dominate by force. But I do not believe the hypothesis of either of these statements. Time and again, though given a hard run, sense has won the race over propaganda—even propaganda entrenched in legislative committees. And time and again passion was calmed: The Bill of Rights, neighborly aid (personal and international), the Lord's Prayer and not the hymn of hate have been reaffirmed. Moreover, even a man of conviction should doubt his own infallibility. And, as to the matter of taste, we admire the Greeks but on what evidence? On the evidence of poems worth memorizing and repeating; of philosophic writings worth copying by medieval monks standing to their tasks; of architecture worth preserving. The trashy side of Greek life, which certainly existed, has returned to the dust from which it arose. We admire the paintings of Italy, but we can be sure that on the Renaissance walls were chalked a now vanished "Tony loves Angelo." We admire the Gothic cathedral. Many of the long-dead builders needed baths—moral as well as physical. The cheap and tawdry is ever present but also is ephemeral. I believe that much that is acclaimed today solely because it is novel is really cheap, tawdry and ephemeral. But I certainly believe that our grandchildren will find that this age too has created worthy and lasting expressions of the human spirit. I would rather have a century decide which is which than trust my own judgment alone.

And finally, intelligence should be zestful. If intelligence is only a duty and not a privilege, then civilization is a tragic mockery. One reason why I believe that good research scholars are usually good teachers is that both good scholarship and good teaching spring from joy in the use of the mind. The adult who bores himself is pitiable.

I respect the American college so much that I would not belittle it

by attempting to describe its ideals solely in terms of a few attributes such as integrity, social awareness, and intellectual competence. But however we modify or expand this list, zest in the pleasure of the intellect must not be omitted. What then is the remorse of the college when it sees its graduates spending more time with T.V. than with books, more time in being enthusiastic Republicans or enthusiastic Democrats than in being analytic citizens? But also what satisfaction it receives from its graduate who produces a beautiful formula or a penetrating poem and from its own scholarly accomplishments! There are many facets to an educational institution; they should all sparkle. The college is a place where ideas should be fun.

In this dipolarity of the academic soul between heaven and hell we had better be sure heaven is overwhelmingly predominant. For I am afraid if an angel were singing celestial music in one ear and a devil were twisting the other with a red-hot poker, we should not hear much music. I firmly believe that Hiram and Wisconsin, and a host of other American colleges, can take pride in their work—pride, I hope, forever short of that self-guided missile of Satan: smugness.

And now, President Sharp, may I again be personal. We have both chosen, perhaps not in error, to devote most of our time to administration. We live with endless minor irritations: the donor who only gives advice; the time spent on the parent who is a problem instead of the student who is an opportunity; the prima donnas who ornament our faculties but who are easier to bear in the singular than in the plural; and the everlasting minutiae of administration. But our life is not all irritation. We live with fellow scholars and we share the privilege of serving these scholars, young and old. It is from them we hear the call: "Behold the Grail!"

The College of Letters and Science

This morning, rather than discussing the needs for staff, the needs for salary increases, and the needs for buildings, all of which are great, I wish to discuss some of the problems of keeping balance among various aspects and functions of the program of the College of Letters and Science and especially its program of teaching at the undergraduate level.

The College of Letters and Science is the one college that grants degrees based on liberal arts programs—although it must be admitted that the programs in Education are chiefly of the same nature. The College of Letters and Science is also the home of the basic sciences, of the humanities, and of the general departments in social studies. Obviously it must serve not only the students who expect to get degrees within the College but students of all colleges taking courses in these fields when necessary to their own work. In particular, many courses in mathematics, the physical sciences, English and economics are taken by large numbers of students enrolled in other colleges or who plan to take their last two years in other colleges. During this semester more than 60% of the credits being taken by students at the University of Wisconsin are in the College of Letters and Science and over 80% of the credits taken by freshmen and sophomores are in this College. In forecasting the teaching load of the College, the total enrollment of the University is

more significant than the expected registration as degree candidates in the College itself.

These facts indicate opportunities; they also are danger signals. It is easy for a department to belittle its service to other departments in favor of its own majors. It is equally easy for professional and specialized groups to feel that all of the energy and the best teaching talent of a given department of Letters and Science should be expended on the courses that serve them. It is necessary to be a Janus to preach the sermons that give balance to the outlook of two such groups.

This aspect of the College's work also can lead to confusion in defining the curricula leading to the general degrees such as the B.S. and the B.A., particularly the B.A. It would be absurd to believe that a course in Homer is a substitute for machine-shop practice for the Engineer or that a knowledge of Shakespeare takes the place of a course in textile chemistry for the Home Economics major in clothing; but it is equally absurd to assume that either the course in Engineering or the course in Home Economics plays the same part in liberal education as does work in Homer or in Shakespeare. The freedom, perhaps too great freedom, of election in the general curricula in Letters and Science should not lead one to forget that liberal education has a character of its own, a character that must not be lost. Nor should we for a moment believe that the pressures to dilute liberal education come from without the College alone. They also come from every over-enthusiastic specialist within the College. Moreover, the necessity of the student experiencing hard work within a specialty as a part of his general education (and this is a very real necessity) leads to encroachment upon all opportunities for adequate breadth.

Another point where balance must be observed is that between large size and individuality on the one hand and small size and conformity on the other. I am not trying to use loaded words. Only in a large university may an adequate coverage of even the major subjects of the central branches of knowledge exist; and only a large university can afford to offer its students such a range of choices as to give the individual full scope for his own development and taste. However, with great size the values of intimacies may be lost and the

individual may fail to inherit in common with his fellows the cultural treasures of the past.

One effort, and a very successful one—to have your cake and eat it too, is the program of Integrated Liberal Studies, a program embedded in a large college of a huge university but one in which the same students are thrown together in class after class to study together the same subjects—subjects central to our intellectual life. There is evidence and testimony to the success of this program. One might ask: "Why not substitute it for all the general curricula of the College?" The answer is that to a very large degree the success of this program is that it is voluntary on the part of the students and voluntary on the part of a group of excellent teachers. Any lack of interest in the teaching or resistance to learning on the part of the student would vitiate the whole program. However, I hope that some aspects of the program can be spread to other groups, probably through parallel programs rather than by dilution of this one.

A third area where balance must be sought is indicated by the remarks of two members of the Board of Regents: One, that faculties should change offices every five years; and the other, at the Governor's Conference, that we must perpetuate for the future the best of the past. I hope neither will feel offended if I quote the admonition of St. Paul: "Prove all things; hold fast that which is good." Great masterpieces of scientific discovery, of artistic creation, and of human and philosophic understanding must forever form a portion of what we carry forward from generation to generation. Like a sunset, you contemplate them for their own sake as well as for any other purpose they may serve. Both flexibility and steadfastness are necessary; neither alone is sufficient.

Another place where balance must be sought is in the proportion of senior and junior teaching staff. I firmly believe in our system of graduate assistants. Unless teachers are immortal, new teachers must be initiated; and there is no place where the first teaching experience of a future college professor is better gained than in a great university while going forward in scholarly work and under the supervision of excellent and interested senior teachers. I realize I have avoided the issue to some extent by describing such ideal circumstances. Frequently we fall short in one or another particular of

such a description but also frequently the approximation is good. Secondly, our money goes further if a reasonable share of our teaching is done by junior staff and, thirdly, most of such teaching is good and a great deal of it is excellent. However, there is no question but that too great a proportion of the teaching can be done by graduate assistants and in certain departments I believe this is now the case. One of these is my own. This is only in part due to the economics of the situation. It is in large part due to the fact that we are passing through a period in which the number of students taking mathematics has increased greatly in proportion to the number of fully trained mathematicians, and nationwide anyone who can do a reasonably good job of teaching mathematics is under pressure to do so. I hope we can soon improve this situation. I cannot say that great improvement is immediately in sight. In several other departments a larger share of the teaching should be done by instructors and assistant professors in proportion to that done by graduate assistants, but in the College as a whole I believe that both the balance and the supervision is good.

I must touch on one other place where there is a constant question being raised as to whether we have attained the proper balance, and here I think the criticism is far greater than is justified—namely, the balance between teaching and research. I recognize that there are a few positions in the College where the teaching may be justifiably so routine as to not require as teachers scholars active in investigation, and I recognize clearly the value of both short and long-time assignments to research duties only or to research duties with only a certain amount of very advanced teaching; but by and large the faculty should be and is made up of research scholars who are also devoted teachers. I have rarely set down in my own mind a list of our top research scholars without also having formed thereby a list of extraordinarily good teachers; and when the faculty committees are asked to pick the recipients of the Kiekhofer and the Reynolds awards (picked for excellence in teaching), the results are almost always that the recipients are also excellent scholars. Much criticism of university work is of course justified, but this particular area is one in which unjustifiable criticism is almost inevitable since both the less gifted and the lazy student, as well as the disappointed faculty member, pick on this to rationalize their failures.

Balance must also be sought in the relation the College places upon the gifted student, the average student, and the poor student. It is natural to help one in trouble, but society will benefit to a great extent if every opportunity is given to the gifted to make the most of his gifts. We must do more in this respect.

And, finally, may I make a remark as to why universities' faculties grow. One obvious reason is because a university's student body grows, but I think we should never forget that just as cogent a reason is the growth in knowledge. As the realm of knowledge expands, so does its frontiers and the university must not only man the central citadel but also these frontiers. If the student body of the University were the same size as it was fifty years ago, its faculty would still have to be much larger. Nuclear physics, polymer chemistry, topology, as well as the excavations at Crete, would demand coverage by specialists. We must not in the College of Letters and Science gear our program only to the number of students we have but also to the state of human knowledge.

5

Some Half-Truths About the American Undergraduate

Our undergraduates are young people mostly between the ages of eighteen and twenty-two, and I believe that they are more like your young people of the same age than either group is like their elder compatriots. This may not be true of their clothes, their manners, their passing opinions, or other surface phenomena, but it is true of their sympathies, their interests, and their energy supply. The wisdom of age is the wisdom of experience; the wisdom of youth is the wisdom of vigor. Who knows which is the better guide?

There is no stage at which our university student is at the same educational status as the university student elsewhere. In general, unless the college is vocational, our student will not specialize as soon as the student in continental Europe. However, when our student enters his junior year—that is, the third year of college—although he knows both more and less than students elsewhere, he is approximately at the same level as students of western continental Europe entering a university in their own country. The evidence of this is based on experience. Our better juniors, who have a good working knowledge of the language, have trouble but succeed reasonably well at a European university. And when a European student, who knows English and is ready to enter a European university, comes to this country, he also finds the adjustment difficult but succeeds at the sophomore or junior level.

After this preliminary statement I find it hard to answer the questions you will want to ask by the time you have been here a few weeks without great use of the phrases such as “sometimes,” “in some places,” “often, but not always,” etc. Some of the questions that I shall try to answer are the questions asked by your predecessors at a conference held last June, as they were about to leave the United States.

The first of these questions is: “How carefully is the American student body selected?” Our colleges differ greatly in their degree of selectivity. The spectrum is continuous but I shall describe three levels.

First, there is a group of colleges and universities where the entrance requirements are very high and the competition to get in rugged. This group includes great private universities such as Harvard, Yale, Princeton, Columbia and Chicago; and at least two public universities: California and Michigan; two scientific institutions: Massachusetts Institute of Technology and California Institute of Technology; and a group of smaller colleges such as Amherst, Swarthmore, Bryn Mawr and Vassar.

Secondly, there is a list of institutions that have high standards of accomplishment within the institution, but only moderate standards for admission. Many of the state universities belong to this group, frequently with easier standards of admission for students from within the state than for those coming from outside. However these institutions have not made it easy for students to remain, and the junior and senior classes are actually composed chiefly of able students. The reputations of these institutions are such as to lead to a high degree of self-selection on the part of students. However, many students enter this group of institutions and some graduate who would not be admitted into the first group.

The third group of institutions have relatively low standards both of admission and retention. Many of these institutions actively seek students. Some provide excellent instruction; others do not. It must not be assumed that there are no good students in these institutions. Many students, who later make splendid records in graduate schools and have distinguished careers, come from this third group. There are a number of causes why such students enter those colleges: The expenses, especially for students living nearby, may be less at these

institutions. Many of these colleges are church-related and appeal to the religious affiliation of a student or his parents. Family traditions lead others to go to the alma mater of their father or mother. High-school friends tend to stay together. Moreover some timid people have good minds and do not wish, at least initially, to face the possibility of failure presented by major institutions. It should also be remembered that there is much good teaching in these colleges.

The advantages of the high degree of selection are obvious. In fact, to the faculty they may seem more obvious than they are real. I believe that selectivity presents dangers. The birthright of excellence is to excel. A too rarified atmosphere may deny this to many. As a youth with a good mind passes from adolescence to manhood he should gain in intellectual self-confidence. This is promoted by a comparison with a wide distribution of ability. The disadvantages of selection are ameliorated by the failure of the selective process itself. Our measurements of ability and attainment are inexact, and failure leads to injustice. But perhaps, as in the case of the partial purification of food, it is the remaining impurities that contain certain necessary vitamins.

Standards are maintained, first, by excellence of teaching and the stimulation that arises therefrom; second, by the insistence on a high level of accomplishment relative to the students' capabilities; and only third, by grades and selectivity.

In a democracy we should err on the side of giving too many rather than too few the opportunity of a college education. Moreover, decisions should not be forced on persons too early as to either their college plans or professional careers.

When do American college students decide on their lifework? The range is enormous. Those going into professional colleges, such as engineering, decide early. Moreover, certain groups, such as future physicians, have decided before they enter college. Perhaps it is because of the selection and training resulting from this early decision, adhered to through so many years, that physicians have such inflexible economic and social attitudes. Another group come to decisions as to their careers during the first two years of college, after tasting the delights and the boredom of many subjects. These persons may go through a good deal of internal turmoil and even

become restless as to remaining in college, but on the whole they are a fortunate group. Others do not decide upon their fields until graduation; and many, although believing they know what their fields are, change them after graduation. (In my case it was from Economics to Mathematics.) These are truly blessed, for with all the comforts of believing that they know where they are headed, they, with only a slight loss of time, receive a broader education through their change of purpose.

I presume that our liberal arts college, giving no or little professional work, but preparing many of its students for later graduate work, is a natural outgrowth of an earlier stage in the British educational system, but is so changed and modified that it seems to be a characteristic American institution. Many such colleges are denominational and many others once were. Some of our private universities started as liberal arts colleges. Location, support and historical accident determined whether a college developed into a purely liberal arts college, like William and Mary; a strong liberal arts college with a small but excellent graduate school, as at Princeton; or a predominantly graduate university, as in the case of Columbia. But practically all of our universities have at their core a liberal arts college. Another group of colleges started solely to educate teachers but have added a liberal arts college in recent years—almost always augmenting their educational stature in the process.

It should not be supposed that all the undergraduates in our institutions of higher learning are in liberal arts colleges or even that all in such colleges are taking a general course. There are many four-year colleges, or two-year schools following two years of liberal arts, specializing in such subjects as Education, Business Administration, Music, Journalism, Pharmacy, Agriculture, Home Economics and Engineering, with courses ranging from rather broad training in fields such as Education and Journalism, to highly technical programs in Engineering. Moreover, the liberal arts colleges often have specialized courses in such fields as Chemistry, Pre-Medicine, Applied Mathematics or City Planning. There is much pressure from students for early specialization. However, it is fair to say that the backbone of our educational system at the college level is the student

who takes a broad program of subjects, science, social studies and the humanities, in his first two years and in the last two years of college a major, accounting for about half his time, in a specialized area accompanied by a continuation of his broad training. True specialization occurs when he goes on to graduate or professional school after receiving his undergraduate degree.

This breadth of education has its virtues and its faults. Depth of knowledge is often lacking, but considerable ability to adapt to changing circumstances is frequently developed. Often the undergraduate is in the early stages of working out a hierarchy of values. Ability to drive a car, make a Hi-Fi set, swim well, and get along socially are often valued as highly as scientific knowledge or critical insight into literature. Some never pass this stage, but many rapidly sort things out during the last part of their college careers or immediately thereafter; and to a much greater degree than even a decade ago, this process starts in the earlier years of college or even in high school.

I often hear complaints that our undergraduates are not interested in politics. Perhaps for some generations this has been true of the American in general. The proportion that does not vote is large. Until recently public service has not had the respect that it has, for instance, in Britain. Few people aim at a political career, and many political posts are not considered posts of honor in spite of the large number of conscientious and able men who fill them. For years I have tried, without success, to decide in my own mind whether this is good or bad. If we had more interest in politics, we would have better government; but might it not be at the cost of a certain emphasis on the individual and his capabilities? Perhaps Athens was more corrupt than Sparta. At any rate, to a disconcerting degree our college students reflect the attitude of their elders toward politics in their lack of concern, in their using the same rather than original slogans, in rigid and profane conservatism or rigid and profane radicalism. In fact, the casual and tiresome profanity used to express political opinions is not an evidence of depth of feeling, but a protective emphasis to cover lack of analysis. The trouble with youth is that it is not as much better than age as we wish it were. However, there are a few aspects where our youth seems to be making genuine

progress beyond their elders. I shall mention three: The college student genuinely has less race prejudice and is more concerned with inter-racial justice than has been true in the past. Secondly, the labor union is accepted as part of our social structure to a greater extent by the sons of wealth than by those who gained that wealth. Thirdly, the college student has both a surface and a real interest in other peoples and cultures. When he travels abroad he accepts (if anything, too readily) both the virtues and the vices that he finds. One of the great advantages you will have as teachers is that you represent in your person, sometimes even more than in your subject, something about which he is curious.

As to the manners of our undergraduates, the more said, the better, for these manners will be resented if not understood. They differ considerably from one part of the country to another. In general, I would judge, they are more informal than in most of the rest of the world. Among people of the same age, one is often introduced by a first name. Sometimes it takes a little detective work to find out whom you have met. At least in the middle west, you may find yourself called: "Prof." or "Doc," the student believing this is a sign of respect. In general they will show you very real consideration—but only the respect they would show an equal. To them every decent person deserves friendly treatment. None deserves awe. If a lady looks healthy, few (I am sorry to say) will offer her a seat on the bus. But the feeble or infirm, irrespective of age or clothes, will have no difficulties. Of course there are many American boors. I believe other countries have some. But in general, although deferential respect may be lacking, our American youth respects human beings as such and expects to share in that respect. If next winter you are shocked at the undergraduates' manners, just get your car stuck in a snowdrift and observe how quickly you are helped. You may revise your opinion. The average European waiter is far more formally courteous than his American counterpart, but I have never known men in this country to stand around grinning while two women changed an automobile tire. My wife had that experience abroad by the walls of a great castle—symbol of feudal chivalry. The impression that the American tourist makes is often unfortunate. Many of them show a distressing lack of self-reliance

and adaptability. But most of those who demand that American customs accompany them abroad are middle-aged. This is not typical, I believe, of our youth. I shudder to think that possibly they too will some day be sclerotic.

I turn now to undergraduate extra-curricular activities and the relation of our institutions to these activities. Many of you may not be prepared for the extent to which the university and college is involved in the student non-academic life. First of all, the institution is concerned about relation between the sexes, the individual activities of the student, his social life, the rules that govern where he may live, and even whether he may have a car or not. (I am suspicious that the anti-car regulations stem more from the desire of the faculty for parking space than from their obligations in loco parentis.)

Athletics is another example. Here the university tries to fulfill the double obligation of providing facilities and regulating activities. The extensive fields and buildings for recreational athletics are among the most expensive items in the physical plant of the university. These are often more than matched by the facilities for inter-collegiate contests and the practice of the teams. The university governs the conditions of inter-collegiate games, the numbers to be held, the times of the week on which they can be held, the eligibility of the students to participate, and the compromise between amateurism and professionalism. I presume the so-called "Ivy League" has the highest degree of amateurism and the lowest degree of skill. Perhaps the involvement of the institution in these activities is indicated by the fact that the official name of the so-called "Big Ten" is "Intercollegiate Conference of Faculty Representatives."

There are hordes of other activities: student newspapers with varying degrees of freedom, dances, music, dramatics, the student Union—each with their committees and subcommittees, participants and faculty supervision, at least financial. In fact, student Unions are sometimes designated as departments or divisions of social education.

Since these activities are replicated from institution to institution I believe that the amount of organized extra-curricular activity per student is greater in the small institution than in the large where it is left to a large degree to so-called "activity boys."

Many students are self-supporting: summer work, meal jobs, gadgetry up to the IBM level, and athletics all contribute to this self-support. In some cases the time spent in class, in laboratory and in earning money leaves little time for study, reading and relaxation—and often relaxation comes first.

One of the most controversial aspects of American student life is the fraternity. This is the subject to which some of the sharpest questions were directed by the visiting Fulbright professors last June. Some institutions, including several of the strongest, have abolished fraternities. Others have reduced them to the users of designated social rooms in dormitories. In some institutions nearly all students belong to fraternities; in others, only a small minority. In a full-blown system, a fraternity owns a house where its members live and eat; the older members elect the new members, subject to rules of the college, and, if a national fraternity, subject also to regulations of the national organization. Sometimes these two sets of rules are in conflict, as in the case where the national fraternity specifies that members must be white or Christian and the college specifies that there must be no discriminatory rules governing the election of members. A few boys, more girls, and a good many mothers are distressed if a student does not get into the desired fraternity or sorority—or perhaps any at all. Some fraternities have, at least locally, high scholastic traditions; others are an additional diversion from University work. My own belief is that fraternities do more harm than good, have a slightly snobbish effect, frequently produce undesirable sets of values and are an artificial means for the selection of friends. I wish they would die, but I would not kill them. Death may be desirable where murder is not, and freedom must tolerate the reasonably undesirable.

Another subject of disagreement is coeducation. However, there is controversy on this subject in only a few institutions for most colleges seem satisfied with their own system, whichever it is. In the West and Midwest, except in Catholic institutions, coeducation is taken for granted. Many of the leading Eastern institutions, both large and small, such as Harvard, Cornell and Swarthmore are coeducational; and men's colleges such as Amherst, and women's colleges such as Smith and Mt. Holyoke are conveniently located with respect to each other—a convenience which existed even in the

6

Maps Versus Blueprints

Mr. Chairman, Ladies and Gentlemen and, in particular, Honor Students:

Of all audiences, I like best Honor Students, especially if accompanied by their parents. An honors group does not worry about your being too concise, rather they worry about your taking too long. Form demands that I congratulate you, and I do so, but you will understand far better how sincere my congratulations are from what I say later than from any adulatory language which I might employ at the start. And a word of warning! I do not have a single new thing to say tonight. However, this statement is as much a boast as an apology, since the center, although better known, may deserve more emphasis than the periphery.

In 1919, when I came to the University of Wisconsin fresh from tramping in the White Mountains, I felt chagrined if anyone passed me walking up to North Hall. Now, all the male students do, and most of the female—though some of the young women who sail by me near Music Hall decide, when they are abreast of South Hall, that it is not really too important to get to class on time. I may even be at Bascom Hall to open the door for them, a bit of politeness that once again is tolerated. The legs slow down; the hair falls (or rather, has fallen); the appetite lessens; I haven't had a good mathematical idea in years. I realize that zest is often wiser than experience.

Are there any advantages of age over youth that could possibly justify my speaking to you this evening? Of course, I would not have

asked that question nor, for that matter, would I be talking to you now if I did not think the answer was "Yes." Youth has a more accurate memory than age, but not as great perspective. Age is more tolerant than youth. It not only is more tolerant of youth than youth is of age, but is more tolerant of the young than they are of each other. The affections of the elderly may not be any stronger than those of persons in their prime, but they are more tested—especially affections for organizations; and for me, after over half a century at Wisconsin, the institution for which I have the greatest affection is this university.

Loyalty and affection are kindred but not synonymous, for loyalty to a greater degree is governed by a sense of duty. For instance, no matter how great our affection for the University of Wisconsin, we owe a greater loyalty to the United States; and no matter how great our love for our countries, I hope that mankind will develop supra-national loyalties.

So I speak as one who claims more perspective but less acuity, more tolerance but less drive, more tested affections but less passion, with a sense of deprivation for what I have lost but serenity in what I have found. I hope in discussing the nature of the University, to exhibit the advantages of age but I am done dwelling on them.

I choose to discuss the nature of this University because it is more essential than its purposes or its accomplishments. To quote a committee that I was on years ago, "The University should be a community of scholars made as useful as possible." Let us examine scholars, community and usefulness as they are, but also as ideals we would approximate even if we cannot exemplify.

Above all, the University should be a home of scholars (students, faculty, administration, and Regents), although not all so-called "professional" scholars, yet all persons with ever-expanding curiosity, with mental drive and with intellectual integrity—men and women with love of beauty, a passion for precision, and disciplined minds. Even a dictionary may become eloquent and portray the ideal rather than the realized; for instance, one of Webster III's definitions of a scholar is "a learned person, especially one who has the attitudes (as curiosity, perseverance, initiative, originality, integrity) considered essential for learning." Such an ideal does not

make one less understanding of others, but more so, for any sense of superiority is tempered by the thoughts of our shortcomings. A person who on the scale of the ideal scholar reaches 40% should not be too humble in the presence of one who reaches 50% nor contemptuous of those in the 30% class. The central characteristic of the University should be scholarship. The person who is not to some degree striving to be a scholar does not belong here. In the faculty, publication is not the only evidence of scholarship though it is a good one. In the student, grades are not the only evidence of scholarship but they are important indications. I have known great regents whose tolerant understanding was high evidence of scholarship. This is primarily an intellectual institution or it is unworthy of the support given to it by the State.

I admire the University of Wisconsin not just because it is an aggregate of scholars provided with facilities for their work, but because to a marked degree, again far from total, it is a community of scholars. A community of scholars should have certain characteristics. Its members should have great freedom—freedom to explore the new without threat, freedom to defend the old without scorn. Its resources should be generously shared for they will always be limited. The atmosphere should be one of controversy tempered by courtesy and mutual respect. Too often the research team seems more important to the individual member than does the department, and the department than the University. Our loyalty to a subject should be transcended by our loyalty to learning. Happily I have known scholars at the University who strove to keep in mind its total welfare. Birge, who was president when I came here and who was then around 70, told of how he and a group of other scientists, led by the great geologist Irving, resolved to make their own interests in research subserve those of the University. That has been a goal of an extraordinary number of their successors. That was the spirit of Farrington Daniels when he shared his knowledge of thermoluminescence with physicians so that they could protect workers from undue exposure to x-ray. It was the spirit of Steenbock when he gave to the Wisconsin Alumni Research Foundation for the support of research in the University his health- and wealth-producing patents; of Karl Paul Link when he did the same; and of an alumnus, Tom Brittingham, Jr., almost a magician in investment, who gave his skill based on study and aptitude that these patents might yield a

manifold return. It was men like Commons, whose insight made the State a leader in social legislation, and like Babcock and Russell, who saved the dairy and canning industries of Wisconsin. We have never reached our goal, but we have come appreciably closer to it than is usual. In doing so, we have served many human purposes.

Members of the community should share not only resources but interests. Specialization has led to great progress in research, but often it has narrowed the vision of a scholar and made the life of the intellect less attractive. The department should be a focus, not a clique. Reputation may make one respect his colleague but the strength of the community depends on understanding as well as respect; and, for understanding, shared curiosity is needed. There will be many forces on the road to success that will try to limit your interests, and they may be as harsh or harsher if you choose an academic life than if you enter some other field of endeavor. Resist them. I am glad we have requirements which try to ensure a certain breadth of education on the part of the student, yet it is tragic for a man to have a rangy mind at twenty but a confined one at seventy. There is something ironic in a system if it educates the student and ossifies the teacher.

I would be sorry, indeed, if you thought I believed that pure intellect is the most important thing in life. Character is far more important. The community of scholars will be a taudry sham if its members are devoid of character. Honesty, reliability, unselfishness, courtesy, compassion, and even some of the more necessary negative virtues are required for a valid community. (I wish being a scholar implied the possession of all these virtues, but the history of scholarship, even of mathematics, denies to us any such hope.) Likewise, government is not the most important thing in life; and government too requires integrity which is not always present. We do not demand sonnets from the Senate and Assembly, but wise legislation. Just as the principal work carried on at the Capitol is statecraft, so the central function of the University is intellectual; or, as some might say, we are a mental institution.

If we had listed the purposes of the University first, we would have failed more often than we would have succeeded, for we would have made rigid structures, have excluded sweeping thoughts, and made blueprints rather than maps. However, by gathering together many keen minds, by giving them the wherewithal to work and a

chance to influence younger and sometimes keener but less-trained minds, and by allowing them to explore where curiosity led them, rich fruits of accomplishment resulted. Remember, historically the axioms came long after the basic theorems of geometry, just as highways are built in a country that is already explored and at least partially settled.

A community should have regard for distinction. It is the distinction of the faculty that separates the great from the mediocre university, and the number of distinguished minds in even a great university is not very large. Perhaps I have known one genius in my life and several score of distinguished scholars. I am sorry to say the genius was not here, but many of the distinguished were. But more important than the comparison of institutions, distinction breeds distinction. It attracts the able and turns them into the eminent.

A university as a community of scholars which cherishes distinction is a very durable institution. This has been true over the centuries at Bologna, at Paris, at Oxford, at Göttingen. It is true now and here. Great traditions are cherished and defended. So also are some of the trivial rules which exist as traditions rather than reasoned decisions. President Wilkins of Oberlin used to like to engage in a dialogue as follows: Question: Why do our colleges have four-year courses? Answer: Because Harvard was the first American college; it had a four-year course and was copied. Question: Why did Harvard have a four-year course? Answer: Because the settlers of eastern Massachusetts were from the eastern portion of England and copied Cambridge which had a four-year course. Why did Cambridge have a four-year course? Because it was founded by scholars from Oxford which had a four-year course because Oxford was founded by scholars who had studied in Paris where, sometime during or before the twelfth century, the students had voted that the course be four years long. All of which leads to the natural faculty conclusion that it is all the fault of the students.

But to undigress, universities are very durable institutions. This is one reason why I believe that the merger will neither do all the good which the governor wishes nor all the harm which many of my colleagues fear. This does not mean that a university cannot be hurt. It can be hurt by actions which restrict the freedom and hence the usefulness of the scholar, whether the restrictions come from outside

or from internal demands that we all speak with one voice—and the department is more often tyrannical than the college. It can be injured by discourtesy that diminishes its character as a community. The sense of community is already lessened by the tendency of faculty or student groups who think of the administration as “they,” as opposed to “us.” It has been hurt by separation between the disciplines. A merger may increase or decrease costs by miniscule amounts, may increase or decrease the pressures brought on state officials, may increase or decrease the malaise connected with change; however, the nature of the University runs greater risks of being bruised by internal than by external forces.

But the blueprint does have its uses.

Of course, I believe that neither a man nor an institution should be without purpose, for their unity and their usefulness depend upon it. The State has a right to expect the University to be useful, to enrich its life, to improve through knowledge the economic condition of its citizens, to make clearer the problems and opportunities posed by modern science and technology; but the commonwealth will be bitterly disappointed if it demands from the University services which are not the outgrowth of learning. Do not try to pedal a cow or milk a bicycle. What I would emphasize is that the purposes should grow out of the personality, the natural interests, and the talents of the man or the institution. (I am glad that Newton had done his great scientific work before he was made master of the mint, or else the harvest of one of the most seminal minds in history might never have been reaped.) The map should precede the blueprint. Starting with a blueprint, you may never arrive at a classics department; starting with the history of human thought, its contribution will be considered essential; and the life not only of the University but of the State, will be enriched.

Given the nature of the University as a community of scholars, what are some of its natural purposes? I shall mention three:

First, a community of scholars seeks continuity of learning. Education is a prime expression of this desire. If teaching is belittled, decay ensues.

Second, a community of scholars must preserve and increase knowledge. Moreover, the increase of knowledge will mean little, and preservation will be a burden rather than a privilege, unless the

new is organized as well as publicized. The man who relates the recent discovery to general principles, whether well-known or newly developed, does as much, often more for learning than he who finds the novel. After a very technical lecture a friend of mine remarked that it reminded him of a story his father told. In the days when flocks of passenger pigeons darkened the sky, a hunter took his gun planning to get with one shot ten pigeons for supper, but he aimed a little too low and only got a hundred pigeon toenails. One tessera of scientific knowledge is of little use until it is fitted into the mosaic. It is he who places it in the whole design, not the glassmaker or the lapidary, who is the artist. The man (excuse me), the person who for the twentieth century relates Dante's thoughts on the destiny of man to our own culture, in my opinion, exhibits scholarship of greater value than he who edits the sonnets of some worthy medieval poet who, nevertheless, could remain forgotten without loss.

Third, the whole history of learning is that it serves mankind, and in doing so, enhances its own scope. I have little regard for the man who scorns pure learning, but no respect for the toast, "Here's to pure mathematics—may it never be of any use." Desuetude is the godfather of decrepitude.

Measured by an archangel, man is a failure—but a glorious failure, for into the clod has been breathed a bit of the divine. Measured by the ideal of a community of scholars, the University of Wisconsin is a failure—but a glorious failure, for it has given us hints of what is possible for the human mind and for the society of the intellect. Moreover, it has served mankind, especially the citizen of Wisconsin, in many ways beyond the foresight of the planner. I am proud to have been a part of this university. I am proud that I have been allowed to talk to you about the nature of a university for our affection is not blind; rather, the clearer our sights, the more will be our love for the University of Wisconsin.

Sometimes people say that the University should be grateful to those of us who have worked for it. This is of course pleasant, but wrong-side-to. When a little child plucks a golden dandelion for his mother, she thanks him and both are delighted; but the gift of the flower is not commensurate with her gift of life and nurture. We always remain in debt to our mothers; and we always remain in debt to our Alma Mater.

Part III

To Students

A Talk To Freshmen

First, may I give you the very cordial welcome of the College. How could it be anything but cordial since you are the chief reason that the College exists? Although we are not here to give you an education, we are here to afford you the maximum opportunity of getting one. We sincerely welcome you!

I must frankly warn you that what I have to say today is somewhat in the nature of a sermon. In fact, when I outlined this talk to my family the other evening, my fourteen-year old, also a Dodger fan, said, "If you are going to preach, don't forget to mention Preacher Roe." This is a sort of commencement address given at registration when it is conceivable that it might do some good rather than at graduation when there is certainly no such chance.

What is the universally-used outline for a commencement address? It is: (A) You are the recipients of a great opportunity; (B) Such a gift carries with it great obligations. The fact that this outline is so used that it shows signs of wear does not mean that it is lacking in fundamental truth. It is chock-full of it. I propose to spend what time I have with you today in analyzing the opportunities and the obligations that you face.

First, there is the opportunity of living in America, especially in Wisconsin, right now. The press, the screen, and the air are so full of accidents, of crime, of war, of political name-calling, and of the sordid, the cheap, and the trivial, that one could for a moment doubt the privilege of existence at this exact time and place. Life can be,

and for some actually is, pretty rotten right now here in Madison. It also can be something very fine. Today I am not talking of what you are guaranteed, but of the opportunities available.

On an economic level we are immensely prosperous. The man of good health and reasonable ability who is willing to work may have the necessities, comforts, and even some of the luxuries of life beyond the dream of any other age or clime. This prosperity is partly the result of living in a new country of rich soil and endowed with tremendous natural resources. It is partly the result of a system that gives large scope for individual effort and of the people who have put forth that effort. There are inequities in the system that should be eliminated, but not by eliminating the basic structure which has provided us with our present prosperity.

We are also in a time and place of great public health. War and the automobile take a tragic and, I believe, largely a needless toll of lost lives and crippled bodies. And yet, at no period in the world's history has the mortality rate been as low or the freedom from disease as great. The last twenty years have been spent by life insurance companies in paying dividends on their insurance policies and by charging more, and ever more, for their annuities. In fact, one of the chief problems you will have to face in the next thirty years is how to take care of so many of us older people.

Thirdly, you live in a country and a time where the individual has inherited great freedom. There is no such thing as general, absolute freedom. The laws of nature restrict us; the laws of man protect the freedom of each from abuse by the freedom of others; but the freedom of the individual is immense compared with what it has been in the past. You may choose your occupation without restriction; your religious beliefs are not prescribed but rather are respected by others; and no caste bars your choice of friends or even of husband or wife. The laws of nature themselves have been used to enable man to flit where he lists and to free him from want. All these we take for granted but all these, in the past, have been the exception, not the rule, and still are the exception in many parts of the world.

May I point out that even in the matter of security we are not worse off than at other times? We are constantly threatened by war—man usually has been. The Black Death of the Middle Ages

wiped out a greater percentage of the population than I have ever heard described as a possible result of atomic warfare. In fact, this is one of the few ages that have dreamed of even measurable security as an attainable goal.

But enough of arguing the obvious. I more particularly want to point out the peculiar opportunities that derive from coming to the University of Wisconsin and, particularly, to the College of Letters and Science.

First of all, you are coming to an institution whose chief contribution to society is intellectual and the opportunities we have to offer are chiefly intellectual. Athletics, social life, even politics, are available in every community. Only a few places in the world offer the intellectual opportunities you have here.

The University of Wisconsin is a great community of scholars devoted to public services, the chief of these services being education. What is the ideal of the College for its teachers? First, that they should be men and women of character, of integrity, devoted to the truth in word and deed, and with a deep sense of responsibility for the effect of their lives upon the lives of others. Secondly, that they be original investigators, sources of living knowledge. Of course, much knowledge is old; but the connoisseur of the well-used, the true, and the beautiful is different than the peddler of second-hand junk. Thirdly, that they will give joyously to those who seek. This is a community of human beings and hence it does not live up one hundred per cent to its ideals, but the large measure to which these ideals are fulfilled is the basis for the high standing of this institution.

The University of Wisconsin is also a community with certain traditions that aid in fulfilling its function. I shall mention three: The tradition of scholarly freedom; the tradition of informal friendliness; and the tradition of public service.

The greatest instruments for the finding of truth are not microscopes or balances or syllogisms, but human minds; and they are fallible, prejudiced, erratic and variable. Only by comparison of data, thoughts, opinions, and judgments can progress be made. That comparison must be made with the utmost freedom; and if it is to be really useful, must also be made in good faith and with great courtesy. The society which will not allow the scholar to err will also

and for some actually is, pretty rotten right now here in Madison. It also can be something very fine. Today I am not talking of what you are guaranteed, but of the opportunities available.

On an economic level we are immensely prosperous. The man of good health and reasonable ability who is willing to work may have the necessities, comforts, and even some of the luxuries of life beyond the dream of any other age or clime. This prosperity is partly the result of living in a new country of rich soil and endowed with tremendous natural resources. It is partly the result of a system that gives large scope for individual effort and of the people who have put forth that effort. There are inequities in the system that should be eliminated, but not by eliminating the basic structure which has provided us with our present prosperity.

We are also in a time and place of great public health. War and the automobile take a tragic and, I believe, largely a needless toll of lost lives and crippled bodies. And yet, at no period in the world's history has the mortality rate been as low or the freedom from disease as great. The last twenty years have been spent by life insurance companies in paying dividends on their insurance policies and by charging more, and ever more, for their annuities. In fact, one of the chief problems you will have to face in the next thirty years is how to take care of so many of us older people.

Thirdly, you live in a country and a time where the individual has inherited great freedom. There is no such thing as general, absolute freedom. The laws of nature restrict us; the laws of man protect the freedom of each from abuse by the freedom of others; but the freedom of the individual is immense compared with what it has been in the past. You may choose your occupation without restriction; your religious beliefs are not prescribed but rather are respected by others; and no caste bars your choice of friends or even of husband or wife. The laws of nature themselves have been used to enable man to flit where he lists and to free him from want. All these we take for granted but all these, in the past, have been the exception, not the rule, and still are the exception in many parts of the world.

May I point out that even in the matter of security we are not worse off than at other times? We are constantly threatened by war—man usually has been. The Black Death of the Middle Ages

wiped out a greater percentage of the population than I have ever heard described as a possible result of atomic warfare. In fact, this is one of the few ages that have dreamed of even measurable security as an attainable goal.

But enough of arguing the obvious. I more particularly want to point out the peculiar opportunities that derive from coming to the University of Wisconsin and, particularly, to the College of Letters and Science.

First of all, you are coming to an institution whose chief contribution to society is intellectual and the opportunities we have to offer are chiefly intellectual. Athletics, social life, even politics, are available in every community. Only a few places in the world offer the intellectual opportunities you have here.

The University of Wisconsin is a great community of scholars devoted to public services, the chief of these services being education. What is the ideal of the College for its teachers? First, that they should be men and women of character, of integrity, devoted to the truth in word and deed, and with a deep sense of responsibility for the effect of their lives upon the lives of others. Secondly, that they be original investigators, sources of living knowledge. Of course, much knowledge is old; but the connoisseur of the well-used, the true, and the beautiful is different than the peddler of second-hand junk. Thirdly, that they will give joyously to those who seek. This is a community of human beings and hence it does not live up one hundred per cent to its ideals, but the large measure to which these ideals are fulfilled is the basis for the high standing of this institution.

The University of Wisconsin is also a community with certain traditions that aid in fulfilling its function. I shall mention three: The tradition of scholarly freedom; the tradition of informal friendliness; and the tradition of public service.

The greatest instruments for the finding of truth are not microscopes or balances or syllogisms, but human minds; and they are fallible, prejudiced, erratic and variable. Only by comparison of data, thoughts, opinions, and judgments can progress be made. That comparison must be made with the utmost freedom; and if it is to be really useful, must also be made in good faith and with great courtesy. The society which will not allow the scholar to err will also

not allow him to discover. Moreover, the richness of diversity is a treasure beyond price. The respect for the customs, tastes, and creative accomplishments of others is as important as respect for their opinions. The scholar must have great freedom even to make mistakes, and the teacher must not be bound. Neither must he bind. Defend your right to have your judgments respected even if you should meet (and I hope you will not) a teacher who, while claiming freedom for himself, denies it to you.

The second great tradition of the University is one of informal friendliness. Wisconsin is the unhappiest of places for the "stuffed shirt." I know some members of this faculty who seek every opportunity to see and to know more students whether in the classroom, the church, the Union, or the fraternity. I know others so shy that they never take the first step to know anyone. I can honestly say I know none who is not happy to be a friend with the students, to give and to gain, to welcome into the community of scholars all who really wish to enter.

The last of the great traditions which I would mention is the tradition of public service, a tradition for which this University is known throughout the world. The University brings the results of scholarship to the service of the State and its citizens and, in doing this, the scholarship of the institution is deepened and its teaching enriched.

As stated, the University is basically an intellectual enterprise, and it has traditions that aid it in fulfilling its purpose. The University of Wisconsin is also a notably complete institution. For instance, few universities have on one campus colleges of agriculture, engineering, medicine, and letters and science. We have these and others, each playing its useful role. Few institutions are so fully conscious of the obligation of each part to the whole. Since the basic sciences, social studies, and humanities are grouped together in this College, it is this College more than any other that is called upon to serve the whole. You will be in classes with students from all the colleges, men and women who will go forth to lead in every walk of life. This will be one of the valued parts of your experience here. Many of you who enter this College do so without having decided upon your special field of work. For some of you, that is the reason you are in Letters and Science. Don't worry about that. In fact, rejoice! For purposes of research and teaching, knowledge is broken into fragments;

nature is not; nor should human life be. I am everlastingly grateful that as an undergraduate majoring in Economics and minoring in History and English, I did not know that I was going to be a Mathematician. If I had, I probably would have saved three or four months by majoring in Mathematics and lost an education.

The University of Wisconsin, and especially the College of Letters and Science, invites you to join this community of scholars, share its traditions, and partake of the opportunities that an institution of unusual breadth and of the highest standards offers you.

May I remind you that our opportunity to live in a free America and be at the University of Wisconsin has been costly to others. First, we should give thanks to that group of persons whom we somewhat vaguely call "our forefathers." Sweat, tears, blood, and thought went into building our society and this institution and, to be honest, the thought was the hardest to secure. The freedom we have was fought for by Athenians before the Golden Age, by Swiss in their mountain cantons, by the nobles of England who would not grant it to their own serfs, by Cromwell and his Ironsides, by the settlers of our Colonies, by the soldiers of the Revolution, and by our servicemen—twice in my lifetime and once in yours. Our prosperity is the result of labor unending: to plant trees in the prairie and to clear them from the forest, to traverse the sea and the mountain, to cultivate the plain, and to build industry. Our institutions were discussed in the town halls of New England, by burgesses of Virginia, by Continental Congress in words fully as bitter and almost as many as those you now hear, and they were developed and reinterpreted by legislatures and by courts. The marine life of the coral atoll is no more built on the lives of the dead than is our civilization.

Moreover, an institution like this is kept great by the daily effort of your friends and neighbors. Have you ever heard anyone complain of taxes? Surely. They represent real sacrifice. More than \$5,000,000 of the State taxes in Wisconsin annually go into the education of you and your fellow students at Madison. The Library, arising across the street, is dedicated to the memory of the men and women who served this country in World War II, but it is built on faith in learning and faith in you. Don't take yourself seriously, but, in the back of your mind remember, others do! And this opportunity for most of you was made possible in the very special sense by your

parents. I could not go into details about this without making you believe that I was running for office. But you should sometimes pause and think of it.

From these opportunities that are so great and are given you at such cost stem obligations. I shall mention six; there are many others. The first is to work hard at your studies. I believe that unless you are determined to make intellectual work your primary activity, you should leave as soon as this meeting is over. Go home now, not after wasting one or more semesters. Athletics, publications, social functions, Lake Mendota, all have much to offer provided you have done your primary job. They are hollow shells when you have not. There is much to learn from student activities, but throughout life there will always be primary jobs to be done first, and a person who substitutes busyness for business will fail. A student who learns the art of concentration can usually find time to do well in his University work and participate in outside activities. Effectiveness of effort depends on intensity as well as duration.

The second obligation I mention, and it is even more important than the first but is general rather than special to the University, is the obligation to maintain high moral standards. I don't believe this age has less high standards than others. They may even have better, but still they are deplorably low. In each age a few maintain a level of integrity far above the average and it is these few that give dignity to human life and bequeath the best of our heritage to posterity.

Many external restraints on social behavior are left behind when you come here. Be sure that self-restraints are sufficient.

In particular, I want to speak of one situation. You will find here, as elsewhere (and as I am afraid many of you have found in high school), a few persons who deliberately cheat in their work and many others who are too weak to resist the temptation when they resentfully note the unfair tactics of the cheater. It is a situation that our students deplore. The best students also wish that the educational nature of examinations were more constantly kept in mind when the examinations are constructed, for clearly their chief purpose is to teach. They also ask from the faculty whatever protection can be furnished by proctoring, etc. The faculty, for the most part, perform this disagreeable task conscientiously. However, the basic cure must come from the students, partly by creating an environment hostile to cheating but more by the firm resolution of

individuals not to participate in it. I asked one student leader what her attitude toward other students who cheat was. She replied that she was friendly with them, sometimes enjoyed their company, but did not respect them. The respect of others is one of the greatest prizes next to self-respect that you can win. You forfeit both when you cheat.

I believe in the competitive system but if it ever breaks down, it will be because the outward signs of success—be they dollars, clothes, or grades—have come to mean more than integrity and honor. Cheating is dishonorable and is corrosive of character.

The next three obligations I shall mention together, and then say a few words about each. They are the obligations of making effective, economic contributions to society; of being an intelligent and active citizen in the common affairs of the community; and of being a cultivated human being. I mention these obligations together because, while we should strive to meet all three, we must realize that both in preparation and later in accomplishment they will compete for your time and your energy.

A man should support himself and family in a way that will not only maintain a good standard of living but tend to raise that standard; and this support should be earned by means that are useful to society. A man is peculiarly blessed if his work is absorbingly interesting. (In that respect I can claim success.) Preparation for one's life work these days is long and often calls for great specialization. I shall not stress this need to be professionally trained, not because it isn't important, but because it is clearly recognized. In fact, it often pushes aside the preparation as a general citizen, and as a well-rounded man or woman.

If the State of Wisconsin only secures trained lawyers, doctors, engineers, chemists, teachers and so forth and so on from the University of Wisconsin and if these men are not public-spirited citizens, intelligently ready to lead in community enterprises, it is wasting vast sums of money. It is chiefly as you go forth to make your contribution beyond the narrow bounds of earning a living that the State secures value received for value given. No matter if you break test tubes, toot a flute, or come along with me and solve quadratic equations, be sure you gain the basic knowledge in our social studies to enable you to be a wise citizen. You have not dealt fairly with your fellow man if you fail to gain reasonable un-

derstanding of our social, political and economic institutions—an understanding that is based not only on a knowledge of what they are at present but also of their origins and development.

You should gain an understanding of other people and of their problems and institutions. For world citizenship is now an American's obligation. Do not forget the contribution that languages can make to such citizenship.

Moreover, come to know and appreciate the democratic means by which orderly changes may be made. These means are among the finest fruit of American institutions making progress possible without the agony of disorder or revolution.

And don't miss the chance to develop interest in our cultural heritage. In law there is a statute of limitations by which collections cannot be made if no action is taken for a certain number of years; for instance, six years for a claim against an estate. If you do not start promptly the process of acquiring your cultural heritage, Nature's statute of limitations will catch up with you and you will have lost your patrimony. There are so many aspects of this subject, especially as it deals with the contributions of the humanities, including the arts, that I almost was tempted to talk on that alone. In this connection may I say that, in general, I strongly defend the present-day college student and young graduate; but also I admit two tremendous failings in our educational process. One I have already discussed: cheating. The other is the deplorable reading habits of most college graduates. For many the habit is non-existent; for others, trivial, tawdry, or sordid. No one habit will enrich life more than spending much time on good reading: sometimes serious, even heavy; often light, humorous, or even thrilling; but always meeting certain standards of excellence in thought and craft. No one should be without a book he is currently reading.

Moreover, consciously cultivate the intelligent appreciation of the beautiful, whether in art, science, and literature, or in shadows on the snow, in the summer sunset, or, perhaps better yet, in the sunrise.

Last on the list of six is the need of recognizing that most obligations are personal and cannot be shuffled off on society. I believe in Social Security and retirement systems; I also believe each individual should try to provide for himself and family beyond the

minimum level which society, for its own protection, may guarantee to all. Society must furnish a fair and open ballot; the individual must do the voting. Society or philanthropists may furnish libraries; individuals must read the books. The University should protect as far as possible the large majority of honest students from the unfair competition of the dishonest. However, no failure on its part can possibly excuse the individual from scrupulously avoiding any cheating. The legal standards of behavior which society permits are far below what the individual should observe. In fact, one should judge oneself by standards higher than he judges others. Judge others in the light of your failures and yourself in the light of your ideals. Society offers you the greatest opportunity for an education that any person may get. If you do not get it, do not blame it on poor advisers, an occasional inept teacher, or a crowded library. As an all-University committee said, in winding up a long and often highly critical report on instruction at the University, "When all is said and done the student must recognize that the shortcomings of the University, no matter how unfortunate, should never obscure the fact that here the hard-working intelligent individual has magnificent educational opportunities, and that if these are missed, it will be chiefly through his own negligence."

And what will the University's official attitude be on these matters? One of offered opportunity but little compulsion. For instance, we have the Health Service, but the doctors will seldom know you are ill unless you inform the Clinic. You will get most attentive care when you do. We have a Guidance and Counselling Service. It will not force advice upon you, but you can secure it. We have in books a great Library and long before you graduate we shall have a great building to house them. Little of its riches will be forced upon you. If you loaf or misbehave, your warnings will be mild. Perhaps for some of you, however, the time will come when it is clear that the University is contributing nothing to you or you to it. Then you must leave. Don't then complain that someone should have been harsher along the way.

The records of your predecessors show a goodly company who have realized their opportunities and met their obligations. I hold open the door of welcome to you and invite you to enter and do as they have done.

Choice: The Limitation and the Expression of Freedom

It is with a sense of irony that I find myself speaking to you today. Four years ago next fall, from this platform, I welcomed many of you as freshmen in the College of Letters and Science. I quote: "I must frankly warn you that what I have to say today is somewhat in the nature of a sermon. . . . This is a sort of commencement address given at registration when it is conceivable that it might do some good rather than at graduation when there is certainly no such chance." I also stated: ". . . we are not here to give you an education, we are here to afford you the maximum opportunity of getting one."

Obviously, therefore, this time is inappropriate for advice and clearly you are a group that does not need it now and probably did not four years ago. You have had the chance to make the right choices and have done so. Yet I am glad to speak of some of the things that mean much to me and I shall do so under one broad heading: Freedom.

I shall not dwell on the freedoms that are protected and limited by government, or on the Bill of Rights—its uses and abuses, or on the four freedoms of the Atlantic Charter. I wish to speak of the freedom of choice that the educated, energetic, and intelligent person has which is not possessed by the ignorant, the apathetic, or the dull. Hence I am speaking of certain freedoms which in a

peculiar sense you have partly earned and partly inherited as individuals. I shall speak mostly in terms of illustrations but illustrations of importance in themselves whose meaning exceeds that of mere examples.

An educated, energetic, and intelligent person may choose to be a scholar. I wish all would! President Wilson, when asked the purpose of a university, said: "To produce scholars." This did not mean that he wished all graduates of Princeton, where he then was, to have academic careers or write for the *Yale Review* instead of the *Saturday Evening Post*. It is broader than that. The world needs persons who approach their professional work and their civic obligations with analysis based on rigorous thought and accurate information accompanied with an understanding of what others think and of what others feel.

Moreover, there are many who are scholars in limited areas whose reactions are spinal rather than cerebral elsewhere. There are scientists justly renowned for their accomplishments who are both naive and listless in understanding social phenomena. There are clear-headed economists who are dumb-witted suckers for patent medicines. There are skilled physicians who would not understand a painting if they could be dragged into a gallery or a sonnet if required to read a book. And to complete the circle, there are humanists who try to give expression to the spirit of this century without appreciation of either its science or its technology.

A man must have intelligence and be at least partially educated to succeed in any professional field. It takes vastly more energy, vastly more self-discipline but is also vastly more rewarding to bring the intellect to bear on life as a whole. What are some of the things this approach entails? First, we must realize that there is no conflict between information and thought. The educational cliché is: "We should teach people how to think rather than make them memorize facts that they will forget right after the last exam." This was more vigorously stated by a young lady I overheard as I entered my office in South Hall: "You can memorize the whole book but it won't mean a damn thing." From this I dissent. I have never known a person whose thinking I trusted who was not well informed. In dealing with a particular problem, the required knowledge is of course both that which one should have available at all times and also that special

information which is held in mind only during the period of its relevance. A well-stocked memory that also has the ability to cram is a handy gadget. Actually, the well-informed person is far more apt than not to be a reasonably clear thinker, partly because the nature of memory is to retain patterns rather than isolated facts and the forming of constructive patterns of knowledge is of the essence of logic. Secondly, the man whose approach to life is intellectual must appreciate the records of human thought through many types of expressions including the arts but most of all through books and the reading thereof. I am not a professional bewailer but I cringe when I think how many college graduates rarely read any literature. Perhaps they believe that literature is as dull as textbooks. It seems that men are more willing to lay down their lives for a cause than to read a book. Courage is a bulwark against enemies from without. It would be a disgrace if our country were demeaned by illiteracy from within. A scholar welcomes those clashes of opinion which lead to collective wisdom and that diversity of expression and taste from which spring the arts to enrich life.

Finally, the intellectual life demands that we understand others even when they themselves do not know, or at least cannot state, what they mean. This is an effort of the heart as well as the mind but is one of the basic duties of the scholar.

This does not give a rounded picture of the scholar but suggests the value, no matter what our walk in life, of choosing to be one and of the fact that that choice entails many other choices—as for example, the choice to be humanly sympathetic, the choice to be literately perceptive, and the choice to think clearly based on knowledge.

A second choice that an intelligent, energetic, educated person can make is that of earning one's living in an interesting and satisfying manner. Of course I am not deluded enough to believe that anyone can succeed in any field and still avoid all that is disagreeable and all that is boring. There is drudgery in all jobs: the book dealer will sell texts as well as classics; the investigator will correct proof as well as discover; the teacher will grade papers and may never inspire; and my wife tells me that washing dishes is worse than grading papers. But these drudgeries are illuminated by purpose and relieved by intervals of intense accomplishment. The drudgery that is not so

relieved and illuminated can be avoided by those with broad abilities and the willingness to change. I speak from personal experience since the first few months after World War I were spent by me in a business that would clearly have brought me cash and no other satisfaction; and my undergraduate major was not that which I later went into. Stick-to-it-iveness is often a virtue but persistence in a mistake is a vice. One's life work should provide a living but it also should be a calling—not just a business. A call depends on the ear to hear as well as the sound of the clarion. To me mathematics is a calling and bacteriology would only be a chance to peer through a microscope at objects whose images would appear ugly even to a mother and to wash the glass which they contaminate. To Mr. Fred it is a fascinating means of improving public health. To me teaching is a calling while selling would be a boring prelude to starvation. I tried it once—the boring was so prompt that I gave up before the starvation resulted. To you, however, it may be an interesting and socially useful road to prosperity. True, much of the human race still must seek a livelihood in uninteresting ways. However, although the intelligent suffer greater agony from boredom than do others, yet when educated, they have greater resources for avoiding it.

Another choice that is open to the strong is whether to express that strength through courtesy or through arrogance. That choice is one for the individual; it is also one for the group, be that group an institution of learning, a congressional committee, or a nation.

In fact, the highly educated, those who have been exposed to learning and have been infected by it, have many important choices to make as a group. As intelligent people they know they are intelligent and that it is their birthright to excel. That is not snobbery. It is snobbery if they remove themselves from the problems of all mankind or, if instead of being expositors of wisdom, they expect to be served because of a potential that does not express itself in service. It is snobbery if, because they have the insight to better understand the means to an end, they assume they also understand the needs of their fellow man better than he does.

The fate of democracy depends on the attitude of the most gifted and privileged. If it is one of neglect, democracy will fail through ignorance. If it is one of selfish aggrandizement, democracy will fail through betrayal. But if it is one of devoted service, no other form of

government will be either as worthy or as strong. And in making that collective choice we also determine whether society will allow its members the freedom of which each is capable.

Of course the fundamental choice of each person is between integrity and laxity of character. A sense of obligation should be our constant companion without our becoming a moral bureau of standards for our neighbors. Perhaps the hardest and most important synthesis which we have to make is that of tolerance and of devotion to duty. Four years ago I said to you, "We should judge ourselves in the light of our ideals and others in the light of our failures."

So far I have discussed chiefly the choices open to the intelligent, energetic, educated person which are not open to others. I wish to turn now to examples of choices that need not be made.

One dilemma that is often presented is that between being a successful specialist but a boor and being a cultivated human being but a dilettante. That choice need not be made; moreover, it is certainly not determined by one's formal education. Many a specialist grows in breadth of interest as he deepens the knowledge of his own field. Strange as it may seem for one in my official position to admit it, I have known cultured engineers (the plural is used correctly); and, on the other hand, a broad education is no guarantee that one has the energy to keep wide interests when faced by the demands of a specialized career. The man who has looked from the mountain top too often is content to dwell in the ravine. However, Newton was master of the mint as well as the greatest of scientists; Leonardo was an engineer, an anatomist, and an artist; and the universities that demand that men be both teachers and investigators seem still to produce more basic science than the directly oriented industrial and government laboratories, and excellent teachers as well. The obligation of being a professional success, an intelligent and active citizen, and a cultivated companion to oneself can still be met by the individual.

Another demand that is made is that one accept a label. One must be a reactionary or a radical, a conformer or a non-conformer, a scholar or a man of the world. Of course this is not the only age where labels made true self development difficult. I found on a second-hand bookshelf an introduction to the calculus, written in 1777, by the Reverend F. Holliday. In its preface he says that if this

subject were studied more carefully, "... we might hope to see united in character, what has been sometimes thought incompatible, the Gentleman and the Geometrician." Incidentally, while I am on the subject of the Reverend Mr. Holliday, let me give just a bit more of his plea for mathematics: "... Mathematics is not only an agreeable and beneficial amusement in a retired and country life, but is the best expedient for forming the minds of youth, by taking them off from the fruitless and airy exercises of the fancy, and rendering them serious, diligent and inquisitive in the search of knowledge and truth." He warns of degradation if mathematics is not studied: "... ; for now-a-days [1777] 'tis too common to see licentiousness pass for humour, dissimulation for honour, and vanity for every accomplishment." It is not new for decisions to be real and serious.

We need not be classified. Let's not be! Of course we conform: we drive down the right side of the street; we wear a necktie to the President's reception; we believe in free enterprise; and our differences stop at the water's edge. Of course we don't conform: we split our tickets; we hate teas; we won't eat spinach; and we cheer the Dodgers. These illustrations are trivial but not nearly as trivial as the reasoning of a man who is afraid to try something new because it is new, or to hold fast to that which is good because it is old, who feels he would lose face if he were not conservative, or who thinks he should maintain a reputation of being progressive. The word "liberal" is the same as the word "free" and the true liberal not only resents outside controls to his thoughts but those prejudices that might keep his own mind from being clear. Labels are very useful. My friend, whose five-year-old soaked all the labels off a year's supply of canned goods, was in a quandary. I want my canned goods labeled. If the product is standardized a label is appropriate. A person should not be standardized and an individual should not be treated as a hybrid tomato.

Of course I recognize that compromise is essential. Because the appeasement of evildoers is wrong does not mean that compromise itself is an evil process. Life should be full of both adjustment to others and the expectation that others will adjust to oneself. Moreover, our ideals themselves must be adjusted one to another: for instance, the ideal of democracy, the ideal of freedom, and the ideal of order. Without order disease, poverty, death, and perhaps

government will be either as worthy or as strong. And in making that collective choice we also determine whether society will allow its members the freedom of which each is capable.

Of course the fundamental choice of each person is between integrity and laxity of character. A sense of obligation should be our constant companion without our becoming a moral bureau of standards for our neighbors. Perhaps the hardest and most important synthesis which we have to make is that of tolerance and of devotion to duty. Four years ago I said to you, "We should judge ourselves in the light of our ideals and others in the light of our failures."

So far I have discussed chiefly the choices open to the intelligent, energetic, educated person which are not open to others. I wish to turn now to examples of choices that need not be made.

One dilemma that is often presented is that between being a successful specialist but a boor and being a cultivated human being but a dilettante. That choice need not be made; moreover, it is certainly not determined by one's formal education. Many a specialist grows in breadth of interest as he deepens the knowledge of his own field. Strange as it may seem for one in my official position to admit it, I have known cultured engineers (the plural is used correctly); and, on the other hand, a broad education is no guarantee that one has the energy to keep wide interests when faced by the demands of a specialized career. The man who has looked from the mountain top too often is content to dwell in the ravine. However, Newton was master of the mint as well as the greatest of scientists; Leonardo was an engineer, an anatomist, and an artist; and the universities that demand that men be both teachers and investigators seem still to produce more basic science than the directly oriented industrial and government laboratories, and excellent teachers as well. The obligation of being a professional success, an intelligent and active citizen, and a cultivated companion to oneself can still be met by the individual.

Another demand that is made is that one accept a label. One must be a reactionary or a radical, a conformer or a non-conformer, a scholar or a man of the world. Of course this is not the only age where labels made true self development difficult. I found on a second-hand bookshelf an introduction to the calculus, written in 1777, by the Reverend F. Holliday. In its preface he says that if this

subject were studied more carefully, "... we might hope to see united in character, what has been sometimes thought incompatible, the Gentleman and the Geometrician." Incidentally, while I am on the subject of the Reverend Mr. Holliday, let me give just a bit more of his plea for mathematics: "... Mathematics is not only an agreeable and beneficial amusement in a retired and country life, but is the best expedient for forming the minds of youth, by taking them off from the fruitless and airy exercises of the fancy, and rendering them serious, diligent and inquisitive in the search of knowledge and truth." He warns of degradation if mathematics is not studied: "... ; for now-a-days [1777] 'tis too common to see licentiousness pass for humour, dissimulation for honour, and vanity for every accomplishment." It is not new for decisions to be real and serious.

We need not be classified. Let's not be! Of course we conform: we drive down the right side of the street; we wear a necktie to the President's reception; we believe in free enterprise; and our differences stop at the water's edge. Of course we don't conform: we split our tickets; we hate teas; we won't eat spinach; and we cheer the Dodgers. These illustrations are trivial but not nearly as trivial as the reasoning of a man who is afraid to try something new because it is new, or to hold fast to that which is good because it is old, who feels he would lose face if he were not conservative, or who thinks he should maintain a reputation of being progressive. The word "liberal" is the same as the word "free" and the true liberal not only resents outside controls to his thoughts but those prejudices that might keep his own mind from being clear. Labels are very useful. My friend, whose five-year-old soaked all the labels off a year's supply of canned goods, was in a quandary. I want my canned goods labeled. If the product is standardized a label is appropriate. A person should not be standardized and an individual should not be treated as a hybrid tomato.

Of course I recognize that compromise is essential. Because the appeasement of evildoers is wrong does not mean that compromise itself is an evil process. Life should be full of both adjustment to others and the expectation that others will adjust to oneself. Moreover, our ideals themselves must be adjusted one to another: for instance, the ideal of democracy, the ideal of freedom, and the ideal of order. Without order disease, poverty, death, and perhaps

human extinction follow. Only in a free society will the individual fulfill his own potential; and in a democracy the community itself has the best chance to be an active agent for greater human welfare.

However, in their extreme form order, freedom, and democracy are incompatible. The orderliness of a static society, without provision for orderly change, the anarchy of unrestrained individualism, and the tyranny of the majority are excesses, precursors of misery, that only the compromise of reasonableness can control. We believe in heads in spite of two-headed calves; and without just proportion the body politic as well as the body physical is monstrous.

Democracy, freedom, and order have always been in danger. Today I believe the dangers of international disorder and of internal encroachment on the rights of the individual are even greater than the by no means negligible dangers to our democratic system.

Compromises vary. The compromises of the intelligent and courageous are themselves intelligent and courageous. Our Supreme Court gave us an example of this in stating that racial segregation in public education is in conflict with the Constitution while recognizing the complexity of the problem and the time and patience needed for the required changes.

No freedom is absolute. Compromise is necessary; choice itself restricts freedom; and there is always a limit to capacity. However, compromises may be those of generosity and wisdom, not of weakness; the intelligent, educated man may make his choices at a high level and, if in addition he is blessed with energy, some need not be made at all. One should consume many courses of life's repast, not sate oneself on a single item. It is a wonderful thing to love food and have a capacity equal to the menu—be that food bread or be that food those things of the intellect and of the spirit by which men also live.

As I prepared for today I was worried, for I found myself vacillating even in regard to single sentences between feeling I had said what I wished to say as I wanted to say it and fearing that I was speaking like a pompous fool. Certainly I have talked in platitudes and yet what we care most for stems from the experiences and emotions we share with mankind; and if what we say is to be valid, it will contain much that is commonplace.

For starting I considered two other sentences, namely: "There is nothing of which I am so scared as a baby," and "In 1928 President Coolidge said: 'I do not choose to run.' " The baby has tremendous potentialities but little present power. It has no freedom and hence all your relations with it are ones of responsibility. If it is to sleep you must keep quiet; if it is to grow you must feed it correctly; and its head gives every indication of falling off unless it is held just so. Its growth in strength is also the growth in making decisions and relieving you of responsibility. The making of decisions for oneself is not solely a responsibility but is also a privilege; the making of decisions for others is only a responsibility. When President Coolidge stated that he did not choose to run, many Americans failed to understand what he meant and even believed that he was just wishing to be coaxed. Those who had spent any considerable time in northern New England knew that he was not only expressing his determination not to run but also asserting his right to make that choice. The progress from baby to president is a progress in that self determination which gives the meaning to education.

And now for a few minutes may I turn from the individual to the University of Wisconsin. The University does much to make possible our freedom besides opening its classrooms, its laboratories, and its library to us. It sets us certain fundamental examples. It makes the life of the mind its constant preoccupation. It honors both the professional and specialized training and the liberal humanistic education. It remembers its obligations of research, of teaching, and of public service. And finally, it maintains an atmosphere of freedom as perhaps its most cherished tradition. Without the freedom to err there is no freedom to discover. Without the freedom to prattle there is no freedom to prophecy. The opener of the gates of opportunity cannot be the prison warden of the mind. The proud statement on Bascom Hall and the proud statement made by the last legislative committee examining the University's policies are not the empty eloquence of irrelevance but assertions gaining content from controversy. It is a privilege to live where the extent of freedom is so great and the abuse so little.

Four years ago I read to the freshmen from a report as follows: "When all is said and done the student must recognize that the shortcomings of the University, no matter how unfortunate, should

never obscure the fact that here the hardworking intelligent individual has magnificent educational opportunities, and that if these are missed, it will be chiefly through his own negligence." I could not have faced that freshman class if you had not been there. I did not know which individuals you were but I did know that in that class there were those of high intelligence and high purpose who would be sitting here now. Moreover, I know and you know that many of your classmates who are not with you today will in the years to come show that they too have made full use of the opportunities of the University and will honor it by service to their fellow man. I hope these years at the University have been pleasant and I know that they have opened choices to you that others cannot have. The University has given you nearly four years of freedom and opportunity of which you have made good use and for which you are grateful. But may I speak personally for a moment. The University has given me more than thirty years of freedom and opportunity. You are its reason for being; I but one of its servants. Yet it has treated me with a bounty and consideration that no loyalty could repay. I wish my farewell word to you, her sons and daughters, to be my thanks to your alma mater.

"The Good is Oft Interred with Their Bones"

I am getting tired of hearing that one generation cannot communicate with another. Those of my age assume it is true and blame it on the young who will not listen; the old, therefore, do not speak. True, they use many words, but not words concerning matters about which they really care. I wonder if, although the ephemeral fashions of each age group belong to its secret rites, it might not be true that if either generation would expose its deeper feelings, the other would understand. At least today I am going to list, with comments, some of the things that mean most to me. This is, therefore, a partial inventory.

I start with the most personal: affection within the family. One is scarcely born before the love of parents and of brothers and sisters are our comfort and elicit emotional responses from us. These increase throughout life but are magnified on several occasions. Two I mention: First, when you have children, you realize, in a way never before possible, how your parents felt. You not only share emotions with them which you never shared before, but begin to understand their worries that you considered, perhaps correctly, to be foolish. When you have grandchildren, you find not only an enlarged and more complete family circle, but that your own children begin to understand you. I wonder what changes great grandchildren might

bring. A fine family life is the greatest joy. Any misfortune or fault that destroys it, is the greatest hardship.

The next most personal element of our life is friendship. Friendship, though often allowing for strong disagreement, is usually based on common interests—interest in sports, interest in music, interest in public service, interest in mathematics. Friendship can connect persons of different ages, for instance student and teacher, but it chiefly links people of the same period in life—though as age progresses, the span of “same” increases. A twelve-year-old and an eight-year-old are separated by many barriers, but men of fifty and seventy find their common interests are greater than their differences. Next to the family, friendship involves our deepest affections.

It was a bit hard for me, who has a certain Anglo-Saxon reticence about my deepest feelings, to talk in public about friendship and the family. But these two are central to life. To omit them when discussing human fundamentals would make it clear that I am only shadow-boxing.

It is difficult to find the correct word for my next topic: Compassion is, perhaps, the best. One generation in translating the Bible called it love, another called it charity; but the first of these words, “love,” has taken a much more personal meaning, and “charity” has something of assumed superiority about it. There may be some people who have genuine affection for all other fellowmen. I cannot claim to have. I find the drunk, lying in the gutter, loathsome. My reaction to the man with the bullhorn, whether he is speaking against the draft or advertising the military ball, is indignation. But lack of knowledge of a man, or lack of compatibility, is no excuse for not caring about his welfare. Perhaps our compassion should even increase with our repugnance. Compassion is not only a personal virtue but its expression, a social obligation. It is my belief that our great social programs must help the aged who were improvident, the mother who is unwed and, of course, her child. It is the need of those we help, more than their worthiness, that we must consider. It is not any desire to advance national interests that makes me believe in foreign aid. Again, it is the need of those we help. Call it what you will: pity, sympathy, compassion, even “do-goodism,” it should

guide our personal and our national lives. It must restrain the hand which would push a button.

I care for the life of the mind. It is a duty to think clearly, it is a pleasure to play with the brain. Many people state that an education should teach one to think, and not overcrowd one's memory with facts. But clear thinking consists largely in relating facts into orderly structures. I have known a good many rather irrational persons who are full of facts, yet it would be hard for me to conceive of a rational one who is not. In some subjects, such as mathematics, there is little to remember, since the structural elements predominate; but there are other subjects, such as language, where a major part is played by memory—by knowing the vocabulary, for instance, as well as by the patterns of words that express both thought and feeling. One of the most interesting lectures I ever heard was embedded in a conversation where the philosopher-mathematician, Whitehead, discussed why the British had defeated the Spanish Armada. The clear-cut analysis of cause and effect was based on a knowledge of the type of sails the boats carried, the draft of the boats, the state of the winds and the tides, and the depth of water above various sandbars. To witness the play and the work of a mind like Whitehead's is like watching Koufax pitch—inspiring and discouraging at the same time.

Another part of the life of the mind is recognizing and experiencing excellence. Much of education should be based on this. It has always seemed puerile to query whether Shakespeare is relevant and should have a place in the curriculum; whether Gibbon's *Decline and Fall* contains the latest historical research; whether the Parthenon has been superseded by Frank Lloyd Wright; whether electronics have replaced the integral calculus. Of course, reading Frost, doing archeological research, observing modern architecture and programming the computer are all good; yet a revelation of excellence is always relevant, is never out-of-date, cannot be superseded. If education does not pass along the greatest monuments of the human spirit, it is sterile and you have been cheated.

We should learn not only to do but also to appreciate. The green fields between here and Madison on a June day, with white clouds

drifting across a blue sky, followed by the long summer twilight, are a treasure which we should not neglect in order to make one or many "fast bucks." Incidentally, it is a treasure that seems very wonderful in mid-January. If poetry and painting and music and wild flowers mean nothing to you, you have made a bad bargain with life. There are times when we should heed Longfellow's admonition to be "up and doing," but there are others when we should listen to the greater poet Wordsworth, "the world is too much with us, getting and spending, we lay waste our power."

I care about the structure of society. I will touch upon three aspects and I place them in the order of increasing importance: democratic rule, freedom of the individual, orderly procedure. The democratic form of government is pretty bad. By and large, it is the best we know and also better than no government. If there were some way of being ruled by the wise and the beneficent, it would be fine indeed; but wisdom is not inherited and is by no means the identical twin of beneficence. Ability often turns to self-interest. The self-interest of the many is preferable to the self-interest of the few, be they selected by birth, wealth or chance. With no particular illusions as to the virtue or sanity of the common man, I still plunk for democracy.

But even more important is freedom: freedom of speech, freedom of religion, freedom in the choice of work, freedom to be a fool or at least to be considered so. I have just spoken for democracy, but I would rather live under a monarchy that grants freedom to the individual than under a democracy that denies it. Our Bill of Rights is as fundamental as our form of government. Moreover, there are not only the freedoms that a government grants; there are those it must protect from the encroachment of one individual upon another.

At least at present of these three essentials I place orderly procedures as the most needed and the most lacking in our civilization. I particularly want to mention two forms of disorder.

The first is war. For a long period the number of groups that can make war has been in the process of being reduced, but the wars between the remaining states have been intensified. The nation, to some extent, is a blessing. No longer are there wars between England, Scotland and Wales or between Prussia, Bavaria and the

Palatinate. France includes such erstwhile pugnacious states as Normandy, Burgundy, Aquitaine, Provence, Languedoc and the Isle de France. Wisconsin cannot declare war on New York—even if some of our citizens would like to. Lesser sovereignties have been merged, but nations have not ceased to fight. I do not deny that Russia acts like a bully, that North Vietnam acts like a brat; but I fear we, too, do not show "a decent respect to the opinions of mankind." When it comes to matters of war and peace, we need an organization that can say to any nation, including the United States, "Thou Shalt Not."

But that power is not the SDS. If I plead for international order, I also plead for internal order. Our international conflicts at least have the excuse that there is no recognized orderly method of bringing about change, or resisting change, on the international scene. This is not true within the nation. I do not claim, I do not even believe, that revolution has never been justified; but the misery entailed by revolution is not justified where procedures for change are available when the people as a whole want the change. Our right to speak and to persuade is protected in theory and to a large extent in practice. Our right to listen is less protected—for hecklers would destroy it. Yet, with the press, the radio and the TV supplementing the meeting, it is fairly well protected. Our right not to listen is in danger. The bullhorn and the supersonic plane menace it. They violate my right not to listen. Eyelids are a blessing. I wish we had earlids.

A method of orderly change is, of course, required. New problems demand new answers; but sometimes old problems demand new answers. The other day a colleague of mine was complaining about the students whose religious beliefs kept them from taking examinations on certain days, such as Saturdays for some, the Jewish New Year for others, or again, Mohammedan festivals. He was describing how hard it was to develop new questions for make-up examinations, but said this did not bother professors of economics. They used the same questions but just changed the answers.

I care about integrity of personal conduct. I include the negative as well as the positive virtues. We should value such positive virtues as courage, generosity, and hard work; but we should also cherish

such negative virtues as honesty, sobriety, and marital fidelity. The Ten Commandments are by no means out-of-date. Seven of them start with, "Thou shalt not;" two of the others are keyed to the word "no." The one positively worded is: "Honor your father and your mother."

Again as to personal conduct, I care also about courtesy: The consideration of the sensitivity of others. Some of its forms are worn-out hand-me-downs of another time; yet some of even its formal aspects are still valid. Moreover, there often is something more important to do than opposing uncongenial formality. For instance, I don't like academic garb, but I would rather wear it today than offend those whom I wish to have listen to me. Form may not be important, but the heart of courtesy is important. The soft voice, the obvious desire to understand another's point of view, the remaining in place in the cafeteria line are not signs of weakness but of strength—whether it be vocal, intellectual or physical. Courtesy to a superior is desirable and often prudent. Courtesy to those who dare not return discourtesy is essential. When I was Dean I once told a faculty member that he was free to tell either President Fred or myself to "go to hell," but he must not tell a waitress at the Union to do so. Frankness is not discourtesy unless it is unwilling to be answered in kind.

I care about the art of compromise, and I use the word in two senses. First, there is the compromise between individuals who must somehow work together although their opinions and interests may be diverse. Some of the faults of our Constitution are due to compromises and so are many of its virtues, certainly also, its viability. Every tax law is a compromise. But the compromises I wish chiefly to stress are the compromises the individual makes between attractive but contradictory ideals which in moderation are good but in extremes are evil. I give two illustrations: First, the compromise between humility on the one hand and self-confidence and pride on the other. Many men lose their effectiveness if they lose their self-confidence. At any rate they become tortured. But too great self-esteem, especially if it takes the form of being patronizing, or being touchy or, worse yet, both, tortures others. Humility is a virtue when not carried to excess. Cromwell's famous statement, "I beseech you,

in the bowels of Christ, think it possible you may be mistaken" needs repeating to both the student agitator and to the President of the United States. A certain unobsequious graciousness is the mark of the man who has found the happy mean between servility and amour-propre.

Another compromise that involves constant hard-thinking is between standards and tolerance. The person who does not have standards of personal conduct is a social liability. Those with high standards who wish to impose them on others may be noxious. But where does one stop? Clearly a man who is not a shoplifter should insist that others also not be shoplifters and should use the power of police to do so. Clearly the man who refrains from telling off-color stories should not turn himself into a censor. But there are problems in between. Within this century the country as a whole has given opposite answers as to whether the teetotaler should control the drinking of others. Perhaps I am trying to say two things: First, that the theocratic puritan and the libertine are opposite to each other and are both harmful, and that society must constantly be analyzing its standards and deciding which are to be attained by persuasion and which deserve the sanction of force. And secondly, that there should be dual standards even in our own thoughts, for we should judge others in the light of our failures and ourselves in the light of our ideals.

By this time you must think that I'm a crabby old grouch. You don't know the half of it. Do I think your generation is pretty bad? Yes I do! Do I think my generation is pretty bad? Yes I do! Do I think the past generations were pretty bad? Yes I do! And perhaps some things are getting worse—for instance, manners and the unwillingness to learn from the experience of others. But that is only one side of the picture. There are more in your generation who take a world view than in mine, and more in mine than in my father's. There are more in your generation who truly hate racial discrimination than in mine. There are more in your generation who believe that any preventable human misery is a disgrace. We have failed, but we have also succeeded. The finest in man's actions and in his ideals have always been good and, I believe, are getting better. The ethical ideals of Christ or of Buddha, the political ideals of

Plato or the very different ones of Jefferson, the zest of Leonardo, Theodore Roosevelt or John Kennedy can be built upon.

I could keep on but if I did, you would be looking at the calendar—not the clock. I close with four sentences:

My generation inherited failure and rich accomplishment. We have added to both.

You will inherit the evil that we do. I hope you will not inter with our bones, but receive as a heritage, our accomplishments and our aspirations.

Talk at Honors Convocation at Ripon College

Mr. President, honor students, ladies and gentlemen:

I like an honors convocation. Indeed it is about the only formal event which I find congenial. (I detest commencement.) The birth-right of excellence is to excel, and I congratulate you and all those who take pride in you.

But I wish to disqualify myself to speak on this occasion. I am on the untrustworthy side of thirty, have a natural prejudice in favor of hair parted down the middle, have put in more time on administration than on "productive scholarship," and will defend a conservative point of view on two of my three main topics: the family, the life of appreciation, and the changes needed to enhance them.

Consider the family. There are few things as emotionally demanding or rewarding as the affection of mother and father for each other and for their children, or the children's love for parents and for brothers and sisters. There are few ambitions more worthy than the creation of a happy and healthy family life. This statement has many corollaries, some of which follow.

The desire to earn an adequate income in a socially useful manner, to support the family and aid children while they form new families is laudable. That part of education that helps one to know how to earn money and, of equal importance, how to spend it wisely

(mayhap on Ripon) is amply justified and relevant to securing an abundant life for the individual.

In a crowded society the success of the family is connected with the success of the community and the actions of the community. The warmth we are sharing, the light by which I am reading, are the results of an intricate economic system. Three centuries ago probably half of us would not have survived infancy. We are here because of science applied to public health. You have benefited by an education through the schools and Ripon College—a gift from society past and present. One's obligation to the community is in part one's obligation to the family. Any education that helps us serve the community is relevant to one's individual duty.

Those influences that protect the family's integrity and develop trust and a sense of security within the sanctuary of the family are to be cherished. Those that disrupt the family are evil. Given the complexities of human nature and its sustained passions, fidelity within the marriage bond and continence without are restraints productive of happiness rather than sorrow. Education in self-control is relevant to the good life.

And my last corollary: A happy family life demands not only tolerance but also the enjoyment of diversity. Next to marrying Katherine, perhaps my greatest good fortune was to have been brought up in a debating society—mother, father and seven children, I the youngest. As one minister said: "The Ingrahams prove that instead of two points of view on every subject, there are seven." But it is not just the diversity of views on debatable subjects of which I speak, but also the diversity of personalities, tastes and activities. My wife and I delight in canoeing or in exploring the backroads of southern Wisconsin together. But that is no reason why she should climb mountains with me or I play bridge with her.

I honor the men and women who create happy, healthy and reasonably prosperous families, who serve their communities, who respect diversity, and who live upright lives according to the so-called "old-fashioned" standards.

My second topic is the life of appreciation. I have already touched on the ability to do. I recognize the need to acquire knowledge and discover truth, and to protect the intellectual freedom that makes that discovery possible. Probably these have been preached to you—

if not, *ad infinitum*, at least *ad nauseam*. But education for appreciation increasingly is being neglected. The natural philosopher who enjoyed the song of the robin, while perceiving that it was a thrush, is replaced by the demographer; and I presume the various classifications of birds can be retrieved from the electronic tape in a split second—after finding a programmer, learning to ask the right questions and securing a priority on the computer. The course in which the gaiety of Chaucer or the beauty of Milton, evident to the professor, became evident to the student, is omitted; for the Chaucer scholar is making a word count and the Milton scholar has become a college president. This is not all bad. I helped start a computing service. Word counting is better than my compulsive counting of the number of cars in a freight train, and we need administrators who not only know *Paradise Lost* but who would like to know *Paradise* regained.

Life must not miss the lift of spring or the inspiration of the great poem. As to spring this year, I heard the first mourning dove on February 15th while trying to chip ice off my sidewalk. I felt like a man who, fearing he was in Hell, found that he was only in Purgatory—which brings us to Dante, to me the greatest of poets. I doubt if anyone here accepts his theology. I am sure none accept his cosmology, and he writes of times long past. But note two things: First, he describes people we know—from Francesca in Hell to Beatrice in Heaven, and those of us, partly sinner and partly saint, who are struggling in Purgatory to straighten things out. And second, Dante's grandeur of concept was expressed in language so exact that he not only chose the right words but often fixed their form or meaning. The songs of birds and of supreme poets should be heard.

The devotees of science proclaim its utility, but at times are almost embarrassed to uncover its beauty. It takes little knowledge to respond to a starlit night, but to me the heavens have an augmented fascination because a slice of a cone, the second-degree equation, and the motion of the earth around the sun are basically identical.

Appreciation is threatened by specialization. People used to put blinders on horses so that they could see only straight ahead. Thus man treated beast. Do not treat yourself as a beast. As a community of scholars, a college or university should be composed of people

who can talk to each other about broad areas of the intellect, not just about riots or about the Packers.

An individual who cares for his family and serves his community has also the right to the joys of a life of appreciation.

To preserve or, better yet, increase the values inherent in the family, to transmit knowledge, to discover truth, and to make possible lives of intense appreciation, we must make changes as well as adhere to that which is good. I shall speak of three needed changes. There are many others. But these, although examples, are far more than trivial examples. Even if the first two are constantly discussed, it is useful for each of us to take a stand upon them.

First and most important, changes should be made through orderly means. When there are no means for a change in an orderly fashion, revolution may at times be necessary; but our whole history shows that in this country changes may be made through legal processes. It must also be recognized that some changes are not acceptable to the community and should not occur. The human suffering entailed in violence is so great that it seldom can be justified. But the violence of the individual or even of small, hard-core groups, though deplorable, is petty compared to the violence of nations. We desperately need to secure worldwide order and the means of change within that order. The time has come to curb unbridled nationalism. This involves developing loyalty to humanity even above loyalty to one's country.

It was tragic that the loyalty to Virginia of so noble a man as Robert E. Lee was above his loyalty to the United States even when he believed that Virginia was making a mistake. I doubt that a single one of you would place Wisconsin above the United States. The strength of the nation is the devotion of its citizens. We now are a nation, not just a collection of fifty nations. The same sort of personal devotion to humanity above devotion to Japan, to Rhodesia, to Russia or to the United States by Japanese, Rhodesians, Russians and Americans is needed. I would prefer a world in which Russians alone survived to a world in which no one did. But this is not a real option. Our choice is whether both Americans and Russians survive or neither. I desire a world where nations, like states, may have the force to maintain internal order but not to create international disorder. A United Nations, with true

international authority, even if it made mistakes—bad mistakes, would be better than the present chaos where two countries may not only incapacitate each other, but civilization. I think we cannot naively attain such a goal by unilateral action, but we can lead and be the first to extend the hand of friendship, and we need not believe that our national interests are the supreme interests of mankind. It is strange how often the most insistent on local order is the most resistant to world order. May I add that one of the essential components of order, both local and worldwide, is courtesy.

Why should we worry? The dinosaur and the passenger pigeon have departed, and the world is still full of life and beauty. Why not man? Because beyond biological heritage man has a history and an intellectual heritage: Van Dykes, the binomial theorem, Chartres cathedral, Homer. We can inherit acquired characteristics through books if not through genes. Moreover, I do not know of any other species that has had a chance to make a conscious choice between annihilation and a magnificent future. Let us do our part to prove that this experiment of nature is viable.

But the most likely outcome is perhaps a continued but troubled existence. It is on this premise I consider the two other needed changes.

We must give opportunity to those who by circumstances of birth are at a disadvantage. This includes the populations of undeveloped countries and in this country it includes those born in slums, urban or rural, and all those affected by racial prejudice—particularly the Negroes. The unwed mother in the ghetto may be no worse off than the wife in Appalachia; and the children not much more underprivileged. Both the poor white and the poor black must pass the barriers of poverty and ignorance—but that being done, the Negro has the additional barrier of the racial prejudices of the majority race to overcome. In order to claim and to increase our heritage we must rid society of the effects of prejudices even as we go through the slower process of eliminating the prejudices themselves. Difference is always apt to trouble us. I can remember a certain shock when I saw an albino brownthrasher.

I am not sure to what extent races may differ in the averages of their abilities, but their overlap is complete. It is quite possible that a greater proportion of Italians than of Englishmen have musical

talent, yet I am glad that Sir Thomas Beecham had a musical education. It is quite possible that a greater proportion of Jews than of Anglo-Saxons have mathematical talent, yet I am glad that this did not bar Newton from going to Trinity College. We must judge a person by what he is and what he is capable of, not by the a priori probabilities that he might have been different.

We should devote as much money and national concentration to giving our disadvantaged an opportunity as we devote to protecting the government of South Vietnam. If we cannot do both, I prefer the former. This, I realize, begs the question as to whether the latter is desirable at all.

The colleges and universities have a part to play but not the only, or even the chief, part. They must always work within the area appropriate to their nature and remember that in this, as in their other functions in society, they will be of little use if they do not maintain their quality and their intellectual integrity.

There may be times when we should change our goals but these are rare. Changes we need, but not the discarding of ideals—rather their fulfillment. My ideals for the family and for the life of rich appreciation cannot be fulfilled in a society that denies a man the opportunity to earn a living or to live in a neighborhood of his choice—with himself, his wife and his children treated as neighbors. And Shakespeare should be the possession of all, not of an elite.

The third change of which I wish to speak would bring our educational calendar into closer accord with the biological calendar.

Physically we are ready for parenthood in our late teens. Athletically we reach a peak at about twenty-six. It is probable that not far after that age our minds reach a maximum combination of quickness and power to concentrate, though not of knowledge and experience. We insist that formal education go on and on and on. More courses! More qualifying exams! More exacting theses! This would not be so bad if this were recognized as part of a career, not just preparation for a career. What do we do to our bright young man? We insist on a Ph.D. degree. The year after he gets it he spends teaching, doing research and serving on committees; and we pay him enough to live on reasonably well with wife and children if he doesn't have debts. He usually does have debts, because the year

before he gets his degree, which he also spent teaching, doing research and serving on committees, we paid him a pittance and made borrowing almost socially mandatory. If society, for its own welfare, believes that people should continue formal education to the age of thirty (in my opinion, nonsense), it should see that they can have a normal economic career, a natural family life and make major contributions to society long before that age. There are many reasons for this: justice, compassion and the nurture of creativity. There is also expediency. If in my dotage I dislike rebellion, I should not alienate and frustrate a generation. Moreover, those who have been hazed wish to haze; and our present scheme produces rigid elders.

You have ability and you have used it to acquire knowledge. I trust that knowledge will be used to acquire wisdom—not the wisdom of the worldly wise, but the wisdom of the mind—deep in its affections, full of zest, manifold in its interests, appreciative of beauty and the servant of the compassionate heart.

talent, yet I am glad that Sir Thomas Beecham had a musical education. It is quite possible that a greater proportion of Jews than of Anglo-Saxons have mathematical talent, yet I am glad that this did not bar Newton from going to Trinity College. We must judge a person by what he is and what he is capable of, not by the a priori probabilities that he might have been different.

We should devote as much money and national concentration to giving our disadvantaged an opportunity as we devote to protecting the government of South Vietnam. If we cannot do both, I prefer the former. This, I realize, begs the question as to whether the latter is desirable at all.

The colleges and universities have a part to play but not the only, or even the chief, part. They must always work within the area appropriate to their nature and remember that in this, as in their other functions in society, they will be of little use if they do not maintain their quality and their intellectual integrity.

There may be times when we should change our goals but these are rare. Changes we need, but not the discarding of ideals—rather their fulfillment. My ideals for the family and for the life of rich appreciation cannot be fulfilled in a society that denies a man the opportunity to earn a living or to live in a neighborhood of his choice—with himself, his wife and his children treated as neighbors. And Shakespeare should be the possession of all, not of an elite.

The third change of which I wish to speak would bring our educational calendar into closer accord with the biological calendar.

Physically we are ready for parenthood in our late teens. Athletically we reach a peak at about twenty-six. It is probable that not far after that age our minds reach a maximum combination of quickness and power to concentrate, though not of knowledge and experience. We insist that formal education go on and on and on. More courses! More qualifying exams! More exacting theses! This would not be so bad if this were recognized as part of a career, not just preparation for a career. What do we do to our bright young man? We insist on a Ph.D. degree. The year after he gets it he spends teaching, doing research and serving on committees; and we pay him enough to live on reasonably well with wife and children if he doesn't have debts. He usually does have debts, because the year

before he gets his degree, which he also spent teaching, doing research and serving on committees, we paid him a pittance and made borrowing almost socially mandatory. If society, for its own welfare, believes that people should continue formal education to the age of thirty (in my opinion, nonsense), it should see that they can have a normal economic career, a natural family life and make major contributions to society long before that age. There are many reasons for this: justice, compassion and the nurture of creativity. There is also expediency. If in my dotage I dislike rebellion, I should not alienate and frustrate a generation. Moreover, those who have been hazed wish to haze; and our present scheme produces rigid elders.

You have ability and you have used it to acquire knowledge. I trust that knowledge will be used to acquire wisdom—not the wisdom of the worldly wise, but the wisdom of the mind—deep in its affections, full of zest, manifold in its interests, appreciative of beauty and the servant of the compassionate heart.

The Framework of Opportunity

Thanksgiving is my favorite holiday. Some say it is because I like to eat. That is certainly a contributing cause, but there are other reasons. I was born and brought up in Brooklyn where Thanksgiving combined many of the traditions of Halloween with those that are customary for the day in less notable centers. Then, too, on New Year's and Christmas we visited relatives, but on Thanksgiving they visited us. That meant a shorter period of being clean and dressed up and a greater period of freedom than on other Holydays. Moreover, Thanksgiving always supplied opportunity for individual expression within the framework of tradition. You always wore a false face, but whether it was the devil with horns or an old man with purple whiskers was your choice; the horn that you blew might be green, yellow, or pink; it might be shrill or base. There was, of course, turkey and mince and pumpkin pies, but whether the dressing would be sage, chestnut, or oyster, and what the other pies should be was determined by your mother, with your advice. Also by Thanksgiving, the sting of disappointment had always worn off and the glory of the next Dodger baseball season was in prospect.

Whether we trace Thanksgiving back to the Pilgrim fathers, or to the Harvest festivals of the Greeks and the Romans, we always find the same elements, disaster avoided and enough supplies in store, and stability in the community to give opportunity for the immediate future. It seems to me, therefore, to be not unfitting to consider the relation of opportunity to order, to tradition, to history.

Consider for a moment the first chapter of Genesis. "In the beginning God created the heaven and the earth, and the earth was without form and void." After the earth was formed and ordered on engineering principles and populated on biological principles, man was created. Chaos presents an opportunity only to the Deity. Man's opportunities arise from an ordered universe. We must discard the clean slate theory as a means of building the future.

If we can not start from scratch but must assume the handicaps of the past and present, it is fair to ask "Can one be intellectually honest and thankful at the same time?" I believe the answer is "Yes." I realize, as any scientist must, that the elements of world disaster are present. I understand the reasons for the Los Alamos definition of an optimist as "a man who thinks the future is uncertain." Yet along with the seeds of world disaster exist the seeds of world opportunity.

Let us go back to 1621. "Could the Pilgrims be intellectually honest and thankful at the same time?" I believe they were. The Pilgrims after a disastrous winter had had a summer of health and a bounteous harvest. They were at relative peace with the Indians. They were removed from the tyranny of the home government. They were young men and women with a civil leader forty-two years old and a military leader of thirty-seven. Future disaster and opportunity were walking hand in hand. The Pilgrims now had a larder that would take them through the winter, but another year could bring starvation. They were settled precariously on a little strip of cleared land between a forest full of potential food and potential enemies and a sea of marvelous fishing, but far too stormy for the little Mayflower overloaded with furniture. New England agriculture has usually furnished subsistence, but the soil is not that of Iowa nor the pasturage that of Dane County. A government that would not tolerate religious freedom at home would perhaps only temporarily tolerate it in a distant colony. They had the chance to establish freedom for themselves and for others in their new land. The Pilgrims must have shuddered at the ever present possibility of catastrophe and yet they gave thanks that not all that they had feared had occurred and that opportunity was also present. As we look back, and the past is often the mirror of the future, we find that the worst of the disasters never happened, the greatest of the op-

portunities were not fully seized. The future actually held more of plenty than of want. The Indians did not destroy the settlement, but the chance to become their friends was forfeited. With their own freedom hanging by a hair the Pilgrims were unwilling to grant freedom to others. Bigots persecuted Baptists and Quakers; the superstitious in Salem hung men and women as witches. We have just sung of the "pilgrim feet, whose stern impassioned stress a thoroughfare for freedom beat." We must admit that often there was more sternness and passion and less freedom in those feet. Yet the idea of freedom as a sound principle in itself grew in the land. The hopes of the Pilgrims came nearer the truth than their fears.

The greatest present danger of disaster and the greatest opportunity stem from the same fact, the amazing progress of the scientist in making possible the control of nature. Our greatest fear today is caused by the possible destructive use of atomic energy and of micro-organisms. This danger is not only that of war, but also from the power for evil that may be concentrated in the hands of individuals or groups of individuals, power of insane destruction, power of military dictatorship. Man can do more to destroy life than ever before and as yet we have little in the way of social controls that we did not have before the last two wars, except fear, and fear has always been a tragically weak reed upon which to lean.

On the other hand there is a different side to the picture. The conquest of sources of energy has till now been the road of progress. Slavery was doomed as much by the steam engine and the electric turbine as by the moral sentiment of the west. We do little enough to feed the world, but the tragic famines of Europe and Asia would not even be touched by us except for modern transportation. The picture of bacteriological warfare is scarcely more horrible than the plagues of cholera or the black death actually have been. The accounts of physics, chemistry, mathematics, and bacteriology with the human race still have a favorable balance. The opportunities are vast. Controlled use of atomic energy will inevitably be economically valuable, while the medical and scientific use of radio active isotopes of various elements is already proving to be a marvelous tool. The knowledge that makes bacteriological warfare possible makes the control of bacteriological disease also possible. Life is being pro-

longed. If you want to see a glum group, talk with actuaries about their annuity business. The Carnegie Foundation withdrew their implied promises partly because "those damn professors live forever." The quotation is not from an official document. Further progress is expected. Life insurance companies are hedging against how much longer they expect you and I will live after we retire as compared with how long we would live if we had now reached the age for retirement. With proper social controls the human race already knows enough to live in a condition of health and plenty that has been unknown to any previous era.

Let us for a moment examine the sources of this opportunity. Have we just grasped science like "Excaliber," a brand new sword thrust up by an unknown arm from the lake of our past ignorance. No. We will date some of the discoveries that were necessary to this development: the solution of the first non-linear equation (i.e., quadratic equation) which may go back to the Babylonians nearly 4000 years ago; the development of Greek mathematics and science culminating in Archimedes about 220 B.C.; the discovery of the telescope by Galileo, 1609, and the development of the use of the microscope by van Leeuwenhoek, ca. 1675; the development of the calculus and the study of the nature of light by Newton, ca. 1666; the biological work of Darwin in the first half of the last century; the fundamental bacteriological work of Pasteur and Koch in the latter half, and the discovery of radium by Curie in 1898, are only a few of the more dramatic steps which preceded the veritable flood of scientific advances that have marked this century. If Einstein had had no scientific predecessors he might have been genius enough to discover the wheel or the arrow, certainly nothing more. The arrow had some advantages. Primitive man did not worry as to whether the bear would also learn to use it.

As were our forefathers we can be thankful that as yet the ultimate disaster has not happened and that there is opportunity not only to avoid it, but to create again a new world. I must be honest, however, if you asked me whether I am glad that the physicists were able to produce the chain reaction that makes the atomic bomb possible I would have to say "no." I hoped that they would find it impossible to do so. Man is a very unreliable psychological animal to be allowed

to play with such toys. But also remember the choice we had was not between the bomb and no bomb but between science and no science. Among the forces that created science, were human curiosity, human imagination and human freedom; those forces could not have come to the threshold of the knowledge of atomic structure and stopped short of that knowledge; those forces could not have created the science of immunology, of anti-biotics, of preventive medicine, and not have known how to produce anthrax, psittacosis, and botulism.

Certainly at no time since Galileo could the progress of science have been checked. If it could have been done then, would it have been well? By no means. Even today science taken as a whole must be one of the things for which we are thankful.

The other great choice between disaster and opportunity that we have to make is in our social structure. We may lapse into anarchy or become a totalitarian world. However, we have a chance to make liberty, freedom and democracy work. If we are to do so we must grasp firmly certain great social traditions. I mention two: first, the great tradition of the unity of western civilization, better yet the religious tradition of the brotherhood of man, and, secondly, the realization that methods are usually more important than ends.

Instantaneous communication and air transportation may lead to misunderstanding and ill will as well as to affection and peace. There must be a common core of things taken for granted to make differences pleasant or even tolerable. I recently heard one of our diplomats state that international sports only led to bad feeling, but the exchange of students was a great force for understanding. After all, the manners of my home town as exhibited at Ebbetts Field will not be understood on the cricket fields of England, but the sharing in common of the intellectual riches of our race can bring men close together. The man who neglects his family is despised. The family who shirks its duty to the town is of no account. The town that brings disrepute upon the state is branded with shame. The state that will not cooperate with others is looked down upon with derision. But the nation often glories in its unmitigated sovereignty. This is not an old tradition; it is not at all in the tradition of Christian Europe; that tradition assumed that nations too had greater

loyalties. Nationalism as against internal disunity, as against local self interest, is of value. It substitutes a greater for a lesser loyalty. Nationalism held to as against the rights of humanity is the road to perdition. We must see that our loyalties are large enough. Today nothing short of loyalties to humanity is sufficient. One world or none is perhaps the newest platitude, but platitudes are just truths of which we happen to be tired.

Another lesson we must learn is the importance of method as compared to ends. Perhaps the most disruptive force of war is the emphasis that is given to ends rather than means. In order that a nation may impose its will on another, not only the rights of the other nation are abrogated, but the individual loses much of his liberty.

The world's opportunity for progress depends upon a keener appreciation of methods. I wish to speak at some length of three: the method of democratic control; the method of freedom, especially intellectual freedom; and the method of legal and orderly procedure. This country to a greater extent than most has all three, but not to a great enough extent, and in particular they are not used intelligently enough. The interrelations are not understood and the conflicts between the three not fully analyzed.

The rule of the people, the rule of the majority, is by and large the best rule we know in practice. It has many drawbacks. It is not swift in making detailed decisions; it is not analytic in considering complex problems; it is frequently abandoned to gain some limited end. It is amazing, however, how effective it is with even a relatively inexperienced people, and in most difficult situations. For instance, in war the democracies seem to bewail their inefficiency, and win the war. And democracies do move forward with the aims of the people in mind in a way that no stratified rule has ever done.

I believe in democracy; it is part of the framework of opportunity. Yet I do not believe in democracy as strongly as I believe in the fundamental freedoms. I shall discuss only intellectual freedom. There can be tyrannies supported by the majority of the people, totalitarian states in response to the will of the people. Germany was probably such, Russia appears to be. The Bill of Rights was not to protect us just from the tyranny of a king, or of a monied class, or of

a military caste but to protect us against infringement of certain fundamental rights by any one, even by the majority or their representatives.

The threat to intellectual freedom is ever present. I have known deans (not here) who believe that membership in a teachers' union is sufficient cause for the dismissal of a professor. I have known radical leaders who would not support the professor's right to state what he believed to be the truth, but only his right to state the truth, they being the judge of what that truth is. I have had a citizen of this state urge upon me the muzzling of a professor because he openly supported a certain candidate for state office, and I have had students urge the muzzling of a professor whose sympathies were with certain prewar totalitarian governments (the students themselves favoring groups that are still more likely to be muzzled by the public). Don't for a moment assume that everyone favors intellectual freedom, academic or otherwise.

No rights are absolute, but the limitations on the freedom of speech should be only those that are clearly necessary. Here, I will remind you of the masterful opinions of those great jurists Holmes and Brandeis that even speech inciting disorder was not illegal unless there was a "clear and present" danger of such disorder actually being caused by the speech. A magnificent article by Arthur Schlesinger, Jr., in the *New York Times Magazine* of November 2 [1947] applies similar doctrines to the civil rights of communists and of those under suspicion of disloyalty. He squarely faces the problem of how to protect key governmental services from disloyal employees while protecting all citizens from infringement of their civil rights.

Perhaps discourtesy is an even more dangerous abuse of free speech than is evil propaganda. The constant rudeness to which public servants are submitted must dull their sensitivities and discourage many men of the highest qualifications from entering or continuing in public life. We may disagree with our political leaders or even criticize the effectiveness of their work without subjecting them to vilification. The president of the United States, the United States senators and representatives, the governors and legislators of our states, should be accorded the consideration, the courtesy and

the respect that both their offices and their services deserve. American life would have a better tone and in the long run the American people would be better served if courtesy were the rule. However, it is custom not police power that must enforce such a rule.

I personally believe that the teacher should be especially careful in how he uses the platform he is given. This is quite different however from concluding that the administration has either the duty or the right to make him conform to what they believe is good sense or good form. The right of the professor to express his opinion on topics relevant to his subject must be maintained. The right of the teacher outside the classroom to exercise the freedom of speech of any other citizen must be maintained. The right of the faculty member to criticize the administration of the institution must be maintained. And although these rights should not be abused, it is safest to allow the individual to determine what is the proper use and what the abuse of such privileges. I take this rather uncompromising stand not because I believe the teacher should personally be an extraordinarily privileged character, but because I believe scholarship can be of the maximum use only when it is given the greatest freedom of expression. Frequently I have heard it asked, "You don't really think Professor Jones has a right to make a fool of himself with impunity, do you?" I think the answer is clear, "No. I am not at all interested in Professor Jones' right to make a fool of himself, but I do think I have the right to have Professor Jones permitted to make a fool of himself." It is terribly difficult to distinguish between the ten persons who because of stupidity, maladjustment, desire for notoriety, or pure cussedness want to change the status quo to something worse, and the one seer who gives us a real glimpse of how to make the world a better home for our race. The world that prosecutes the fool will too often persecute the sage. I would rather live in a world with both the fool and the sage than with neither.

Even academically there are other freedoms to be protected and in particular that of the student. The student has a right to have the subject he elects the topic of discussion, not the pet peeves of the teacher. The student has a right to form his own judgments and to express them. Academic freedom must apply to all members of the

academic community, to professors, to students, yes even to deans and presidents.

Freedoms are not absolutes. They could not be. Absolute freedom is self-contradictory including as it would the right to enslave others. I am merely stating that in my opinion we are at present in more danger from suppressing freedom, especially intellectual freedom, than we are from its abuse—in spite of the latter danger being very real. And I am glad that there are constitutional safeguards to our freedom even against the democratic process.

Above both the democratic method and our untrammelled freedom, I place at the present time the necessity of legal and orderly procedure.

Let me give two illustrations. I cannot see that the doctrines of socialism and of communism are very different. I do not happen to agree with either. However, as they have developed in this country, I believe that the socialist party and the communist party are poles apart. The socialists wish to persuade America to follow an economic course far from that which it has in the past and far from that which the majority now wish to follow. Yet in general they use legitimate means to try for their goal. I happen to disagree with their perennial presidential candidate Norman Thomas. However, I also believe he is a great American. The means he uses to forward his beliefs are the democratic method of the ballot box, the use of his right to free speech, and respect for the laws of his country and for his fellow citizens. The difficulty with communists is not their economic doctrine which they have a right to hold and proclaim, but their methods of forwarding that doctrine by following the dictates of a foreign power, by party discipline that is the negation of intellectual freedom, and by willingness to use illegal means to forward their ends. I believe it is of utmost importance to distinguish between opposition to economic radicalism which, no matter how we disagree with it, has a right to be debated openly and considered fairly, and our abhorrence of disloyalty to our country, our contempt for the abdication of intellectual individuality, and our determination to enforce our laws, such, for instance, as that dealing with perjury. We must insist on orderly and legal methods of change; incidentally, we must also insist on orderly and legal methods of resisting change.

This does not mean that I believe revolution has never been justified. But I do firmly believe that our form of government provides for orderly change to such an extent that there is no possible excuse for the disruption and misery that extra-legal means entail.

The second illustration of legal methods that I wish to consider is the method of due process in the administration of justice. It should be remembered that the protection of due process is protection for the innocent, not for the guilty. It must be applied to all in order to protect the innocent. Lynchings are evil whether they arise from the vile motive of race hatred, or from the highest moral indignation, or from a combination of these. They are evil not because we would protect the degenerate from summary justice, but because society must be protected from a process that can bring cruel injustice to the innocent.

This is not a judgment for all times and all places. But in America of 1947 I believe of the three great methods I have discussed that of orderly and legal procedure is primary, that of intellectual freedom which under our basic law should have complete protection is second, and that of democratic rule a very important third.

I wish to mention one other realm in which disaster and opportunity bid us make our choice: that of holding fast to our intellectual and cultural heritage. There was a time when the educated of Western civilization had one language in common, Latin. They have not now. There was a time when the peoples of Western civilization had a religion in common. They have not now. We may go the way of giving up our literary classical heritage, the way of secret science, of considering Aryan and non-Aryan mathematics, of letting art become the means of neurotic expression. Or we can use our means of communication and of travel to build an even larger cultural heritage for the world.

The framework of opportunity is constructed from the accumulated heritage of the race, in knowledge, in methods of procedure, in culture, but something more is necessary or the opportunity will not bring fruition. Knowledge must include the knowledge of good and evil, methods must be directed by good will and foresight, culture must be spiritual as well as intellectual. The framework of opportunity is not just the traditions we inherit, but a

selection of those that should survive and a suppression of those that should perish. There must be a sense of values to inform the whole.

On Thanksgiving Day 1947 I frankly face the fact that the world is not secure—not only not secure for the individual, but not secure for the race. I also believe that never in history has man had the means we now have of making this world a world of plenty, of orderly progress, of cultural unity.

And especially here at the University of Wisconsin I am thankful that we share in all these elements of opportunity. We have a University that has for a century participated in bringing economic plenty to the people of the state, a University that has led in helping government through orderly processes enrich the meaning of democracy and enlarge the freedom of the individual, a University which brings to us the cultural heritage of the race, a University where, I firmly believe, many have developed a sense of values that gives meaning to the whole. Yes, at the University of Wisconsin here and now we can be thankful and intellectually honest at the same time.

Part IV

A Little Fun

of many. I should add that I have once or twice before touched on this subject and will feel free to quote myself without acknowledgement.

At the start we must make clear some of the things this paper is not—just as at several points we hope to make clear some of the things that are not food.

This paper deals not with liquor. There is frequently something antithetic about ethics and esthetics. Hence my approach to liquor or rather my recession from it would hardly have a place in a critique of a major art. Nor is this paper a set of recipes strung together by a story. It deals with results even more than with techniques. This is not even a paper on happy marriage although it is germane thereto.

Throughout I will touch upon some of the items that the book would have dealt with at length although here they can be only mentioned.

First of all there is the literature of food. Extensive as it is, it is unworthy of the subject. Naturally the first place to seek the literature of any subject is in the records of this club. I believe that until tonight the word "food" has occurred only once in a title of a paper presented to this body. On February 11, 1884, Professor William Willard Daniells of the Department of Chemistry read a paper entitled "Food and Air." His only other paper was on "Public Education and Suffrage." Evidently a purposeful scientist. I have made no search for the paper. I have met sober-minded chemists before who believe that some day they will synthesize substitutes for beefsteak or invent a flavor more luscious than apple pie even with cheese. I fear that Professor Daniells' paper does not belong to the literature of food, but rather to that of public health.

On February 11, 1907, Edmund Ray Stevens read a paper on "The Divorce Problem." This must have touched on our subject.

Many of us have read with delight Dean Slichter's paper first read to this club on April 10, 1922, entitled "The Royal Philosophers." This was the first meeting of the organization that I attended. What an introduction! Dean Slichter listed some magnificent menus, but the real subject is not food, nor even the prowess of men who could eat such dinners, but the marvel that

these men could then attend and stay awake at the meeting of the Royal Society.

It would seem therefore that in about seven hundred papers read to this Club, a major interest of its members has been neglected.

The time is out of joint.

Oh! Cursed spite that ever I was born to set it right.

Parenthetically may I add that I do not approach this topic apologetically. The subject of food should not be neglected at the site of the University of Wisconsin whose government has been described as a soviet of dining clubs. Moreover, my personal preparation is based on extensive research including the eating of over fifty thousand meals, some of them breakfasts without even pie.

When we seek outside this Club for the literature of food we also meet with disappointment. Lamb on "Roast Pig" is a satire on the conservative point of view and on the inductive method in science rather than an essay on pork. Irving deals with the trimmings of a Christmas dinner rather than with its essence.

There are of course the cookbooks. Information a plenty, but no sense of selection. Take for instance that popular wedding present, *A Thousand Ways to Please a Husband*. It has some excellent recipes, but it also contains between oyster patties (the diminutive should not be used for such a fine dish) and pumpkin pie the following:

"Bettina's Surprise Salad" (Six portions)

6 apples	1/2 cup sliced diced pineapples
1 green pepper chopped fine	2 tablespoons chopped nut meats
1/2 cup diced celery	1 cup salad dressing
1/2 cup seeded white grapes	1/2 teaspoon salt
	1/2 cup diced marshmallows

Remove the insides of the apples, add the green pepper, celery, grapes, marshmallows, pineapple, nut meats, and salt, mixed thoroughly with the salad dressing. Serve very cold.

To make the Hallowe'en Sandwiches

When the bread is a day old, cut in slices one-third inch thick. Match in pairs. Cream the butter and spread over one side. Place the other on top. Press firmly. With a thimble cut out circles on one piece of the bread, cut

nose and mouth with a knife. The butter showing through gives the resemblance to features.

Is this a nightmare or did they forget the footnote? "If your guests won't eat it, wrap neatly in newspaper and place in garbage can before husband comes home."

In general cookbooks have too many pitfalls for the inexperienced young woman. Pitfalls for which colleges, especially schools of home economics, do not prepare them. Perhaps by carefully clipping from the articles of Crosby Gaige in the *Atlantic*, a better book may be developed. Until I came to Madison and learned of this club I had been brought up to understand that the *Atlantic* was the only source of literature in America. This periodical introduces Gaige's articles with a few wise remarks among which are the following:

There is nothing for *Atlantic* readers, as we see it, in the literature of Household Hints, the I-served-tuna-fish-instead-of-chicken-for-my-bridge-club-and-nobody-knew-the-difference kind of advice. This school goes in for novel table decorations, perhaps little men made of toothpicks, prunes, processed cheese, gherkins, and peanut shells. It believes maraschino cherries and chopped nuts are just as basic a part of the salad as olive oil and vinegar. Its disciples are all tomato stuffers, sculptors in orange peel and green peppers. They like whipped sweet potatoes topped with marsh-mallow and they add peas to all soups and sauces. A slice of roast beef would seem as outlandish to these people as American bison or shark fin. Their tables make many a four-color page in the illustrated magazines, but fortunately the *Atlantic* does not use photographs.

And while we are on the subject of novel appearance versus edibility, I insert a quotation furnished me by Professor Agard from the "Swallow Song," an anonymous poem from the Greeks of the sixth century, B.C. It is appropriate to the Hallowe'en season. Children dressed as swallows sang this song at the doors of the wealthy.

The swallow has come, white on his belly, black on his back. Bring out a fruit cake for him, a beaker of wine, and a slab of cheese, in fact a good substantial meal the swallow will not refuse. Shall we go away, or shall we get it? If you give it, well and good; but if you don't we won't let you be, we'll cart away your door and lintel or your wife who is seated within—she's a little thing, we can carry her easily. And if you do bring something, let it be no little dainty! Open, open your door to the swallow, for we are not old people, just little children.

There is also the cookbook disguised as a story or a set of episodes. If it were not for one example I would condemn all such efforts as dismal and necessary failures. They are a dreary lot. But Della Lutes proves that even this medium has possibilities. Sound doctrine is given through her father as a mouthpiece.

"I'm going to have eggs pickled in beet juice for one thing," she told my father. "I read about that in a paper."

"Beet juice!" he echoed scornfully. "What in tunket you want to spoil good eggs for, picklin' 'em in beet juice?"

"And Dutch cheese and raspberry jam. I read they was good together." Communing with her managerial self, she paid him small attention.

"Well, what you goin' to give 'em to eat?" he persisted with some show of hospitable defense. "Eggs in beet juice—huh! And Dutch cheese—that's a dinner, is it?"

Her description in *The Country Kitchen* of food as it was in Michigan sixty years ago is ideal for family reading and yet can scarcely be read aloud. The effect on the salivary glands is too great. Reading her description of Strawberry Shortcake is about the most drooling experience I know.

Well enough of other books! Although our book was to contain a review of the literature of the subject, it was to be an addition to rather than a survey of that literature. Moreover this chapter was to have been written by bibliophiles, not by me.

Another chapter would have dealt with "Who should Cook What?" I doubt if there are any universal cooks, although I boarded one summer in a home where the wife claimed that if she tasted a dish she could cook it. Cooking by taste is more credible to me than playing music by ear. Moreover this woman's powers as a cook were of the highest order. However, I still believe there are no truly universal cooks. Consider the differences of nationality. I have been told of the wealthy bachelor of Zurich who in the days before the war kept two cooks, one French and one Hungarian, as representing the two great schools of Europe. Each morning he decided whether he felt like Hungarian food or French food and allowed the other cook the day off. Then, too, there is no answer to the question as to whether men or women are better cooks.

Take, for instance, apple pie (of course with cheese) and steak. I have never known a man who could cook a really good pie or a woman who could do full justice to a steak. There is a certain

delicacy of seasoning, a luscious fragility in the crust, a watchful care to get just the right shade of brown that is the seemly product of feminine artistry. But steak! The cooking of steak starts with the buying. A woman's instinct stops at about an inch in thickness, education can persuade her to add another inch, but the idea of three and a half to four inches and no trimming of the fat is purely masculine. Moreover, who but a man remembers after having what seems the right amount of onions to add three more before doubling the whole. Then too a certain degree of athletic skill is needed to get a really large steak out of the fire before it is injured. All women will insist on its being burned to a pink instead of merely warmed to its natural state. It is all right to have equal rights, coeducation, woman suffrage, but there are distinctions. Paul Bunyan and rare porterhouses spring from the mind of Jove, not Minerva.

The question of "Who should Cook What?" cannot be answered statistically. One must travel to understand the specialties. The birds' nests of China, the curries of India, the soups of France, the chestnuts of Italy, represent arts passed on from generation to generation until they are almost as much a matter of the chromosome as of the environment. America too has its great traditions that should be thoroughly known. New Orleans, San Francisco, New England are culinary as well as geographic regions. Travel alone is not enough—the mode of travel is of the greatest importance. An auto trip even in company with Duncan Hines will be a disappointment. The Good Eating will be there, but not the adventure. Food is as standardized for the autoist as his car: reliable, well-prepared and frightfully uniform.

As a mode of appreciation of the world about us walking is rivaled only by canoeing. I pity the man who doesn't like soft comfortable dirty shoes and an old hat better than a new. Walking should not be confused with hunting whether it be with gun, rod, butterfly net, camera or even a bird list. Birds can be noticed, observed, enjoyed without being listed or shot. A second bluebird should be as great a pleasure (I think a greater) than the first fox sparrow of the spring. A thousand geese flying south in the autumn is more soul stirring than the hundred and thirty-second bird on a summer list. A sunset viewed directly is more beautiful than through the finder of a camera. Walks should be non-acquisitive except as to appetite.

The art of eating can best be combined with the art of walking. In

1916 I spent a day with a friend getting a companion over a mountain on which the timber had been cut, blown and burned down, then covered with raspberry bushes and other scrub growth. No lunch. That evening at a small Vermont hamlet an enormous meal led to conversation about food. "Do you ever have maple sugar substitutes?" "No, they are too expensive." More hints. Then, "We didn't think you'd care just for maple syrup," was followed by a supply of hot biscuits, butter (Ah! the good old days) and maple syrup which if it had been thicker could not have been poured.

The next day took two of us across to New Hampshire, but not without lunch at a farm where the cream was almost as thick as the syrup of the preceding evening, and where we were allowed to pay 10 cents each for a plenteous meal because if they didn't let us "tramps might start coming."

That night we asked a farmer if we could sleep in his barn. "Yes, if you don't have any matches." We gave him the box we carried to reassure just such skeptics. Morning brought an invitation to breakfast. The menu needs no elaboration but to say that the quality was as good as the quantity. Oatmeal and cream, pancakes and maple syrup, ham and eggs, blackberry pie and chocolate layer cake. No, we did not have doughnuts because as our hostess explained the hired hand had gotten up early and finished them. The ambulatory and gustatory faculties should be cultivated simultaneously but exhibited in that order. Travel on foot and eat indigenously.

Akin to the proper locale for certain foods is the proper occasion. As will develop later I have the highest regard for apple pie, of course with cheese. Still I believe that plum pudding should be served at Christmas. Compared with apple pie, of course with cheese, a cake is quite secondary, yet for a birthday I would be the last to insist on pie. As a breakfast dish, apple pie, thick cream permissible instead of cheese, is incomparable, but at Easter, ham and eggs should be preferred. And then on that greatest of all our holidays, Thanksgiving, the meal is almost prescribed. Goose in my opinion is as good as turkey, yet I would expect 364 days of calamity if such a substitution were made on our great festival. Moreover, if only two types of pie are to be served, they of course must be mince and pumpkin.

Thanksgiving brings me to an aspect of eating with which every

mathematician must deal, the quantitative. All sciences as they mature become quantitative. So does the appetite. The first sign of senility occurring sometime between twenty-six and thirty years of age is a sense of caution as to the amount of food that one should eat. For instance, since that age, it has been my rule broken only once to eat to repletion only on Thanksgiving day. However, such restraint is a concession to a sedentary life, not a virtue. I am told that the state of greatest contentment for an African native is when he is "kesheeba," that is, when he can still take another mouthful, but cannot swallow it. It is sad that with increasing years solemnity parading as wisdom makes a virtue of inability. Age and disability often bring scorn for the prowess we can no longer exhibit and for the arts in which we can no longer excel. If our book was to fail at any point, it would have been because no one with a really hearty appetite was to have been among its authors. However, we were all resolved not to let malicious envy creep into the pages that recorded what better men could do; just as I had nothing but admiration for the captain of the self-styled Cornell Eating Team who was to eat as much as the other two of us put together in case the team were ever challenged. He was also president of the Polyprandials which included a young Hebrew of great linguistic ability and unclassifiable features who could pose as belonging to almost any South European nationality and feast accordingly. He, the polyglot, is now a well know classicist. The Polyglut is a professor of speech.

Sometimes to get just the right quantity is difficult. Let me cite a near miss. When at a boys' camp at the age of sixteen, I bought six delicious ripe bananas. This was just the right number. But when I had finished five a small boy begged me to give him some. I divided my last with him. In that case virtue has never been rewarded. The golden opportunity once gone was gone forever.

But quantity deals with proportion as well as amount. Dietary balance is important. No portion of the subject is more miserably handled by most writers. Most of those that deal with the subject are either doctor columnists who seem to care more about a woman's figure than her happiness, or female professors of home economics, usually single who have never fed the brute, but who are engaged in training hospital dieticians. Even the infant is without protection from those who feed him limestone disguised as Pabulum or tacks in

the form of spinach. I remember with joy Professor Steenbock's dictum given at the above-mentioned table that "there is no ingredient of spinach not found in ample proportions in a normal adult diet." The University soon after gave him an honorary degree.

This subject of course must be divided into four parts, balance obtained in a single dish, balance obtained in a single meal, balance obtained over a short period such as a week, and balance obtained over a lifetime. I shall give a sample of the first two only.

Obviously the best balanced single dish is apple pie, of course with cheese. There is a combination of fruit, that fruit which taken once a day keeps the doctor away, animal fat rich in vitamins, and cereal, with the minerals and proteins of cheese.

As an example of a balanced meal I must mention again the only time in recent years except at Thanksgiving that I have really let myself go. Of course it was the balance that kept the experience from being unhealthy. I had been asked by one of Mrs. Ingraham's friends at a picnic if I had ever considered what was the perfect meal. "Certainly! A dozen large raw oysters, a large rare porterhouse steak with French fried potatoes and trimmings if you wish but not necessarily, and an apple pie with Roquefort cheese." I faced that meal a few months later. Think of it, iodine in the oysters, a touch of citric acid in the lemon juice, the vegetables eaten by the cow and turned into edible meat, the minerals dug through a whole summer by the potato and secreted in its flesh, the staff of life as a trimming, the heretofore explained ingredients of the pie and even the penicillin mold in the cheese. Also think of the connotations of such a meal, the loud booming of the surf beyond the oyster beds, the tidal margins where life first came ashore, the great plains with cowboys and Indians awaked by lordly bulls bellowing at dawn, the lowly potato of the Aztec and the Irish, the sunny Shenandoah or the Finger Lakes of New York represented in the apple, the wheat fields of Kansas in the flour, the porker of Iowa in the lard, and the Roquefort from the moldy cellars of quaint old houses beside the Loire, surrounded by sheep and dominated by the medieval battlements of a chateau in which for thirty generations the local cheese has been enjoyed. Do you believe that the selection of such a menu was the momentary whim of the pleasant picnic or the fruition of deep thought expressing the best so far discovered by our race?

Another finely balanced meal is that of which Professor Mendenhall fondly spoke, "All the hors d'oeuvres you can eat followed by crackers and cheese."

Yes, balance is important. But beware! The charlatans of all ages have used great words. Don't let any quack whether a newspaper columnist or a professor lead you away from that instinct bred by aeons of experience that recognizes the good, the true, and the beautiful. Shun those doctrines in which the "good for one" is substituted for the good.

Most of the topics that I have touched on so far would have been in the introductory portion of our work. The main body of the work would have dealt with individual items one at a time, not in the cookbook fashion, although the errors of these books would have been corrected in passing, but aesthetically, philosophically, and in the best sense, dogmatically. There would have been an Index Expurgatorius. This would consist of two parts. First those items sometimes served that are inedible, and second, those items that can be eaten but must be thought of as additions to the meal instead of substitutes for food. In regard to the first of these lists I recall the embarrassment of a friend of mine from Minnesota. Before a dinner he expressed in no uncertain terms his opinion of wild rice. A few minutes thereafter it was served. Then some years later before dinner at our home he chose to describe this episode as his most embarrassing only again to face wild rice. As an aside I might mention that this dinner was the only one I have ever attended which lived up to the slogan "Chicken and Steak dinner." Always elsewhere it turns out that the conjunction should be "or." Hence, caution will prevail, and I will not even list the inedibles or discuss strawberry Jello or Brussels sprouts.

The second category, edibles that must be used as additions rather than as substitutes for food, is greater than the first. This class is hard to define exactly but by and large it consists of those articles which a man could eat all day without gaining on his appetite. Clearly this definition is somewhat subjective, but as a first guiding principle it will do. Moreover, even competent judges of taste might shift items from one list to the other. For instance, is parsley really not edible or is it simply not food?

Most salads would be on one or the other of these lists, but if the salad dressing is sufficiently good they would usually classify as

distinctly, sometimes even deliciously, edible. Take for instance a good tossed salad. It has nothing to do with filling the stomach. As a substitute for lunch it is a snare and a delusion. But as a trimming to be eaten while one regains appetite in passing from roast pork to apple dumplings it is really admirable, that is if there is a Roquefort cheese salad dressing. Head lettuce salad is also of this class and many can enjoy fruit salad in the same manner. Somewhat more akin to food is the alligator pear salad and the cottage cheese salad. Then, of course, there are those real foods, potato salad, chicken salad, etc., which are only called salads because the eating is made difficult by their being served on lettuce leaves which interfere throughout the process and totally inhibit the finishing of the helping although I concede that a few men go so far as to eat the lettuce in order to get those last morsels that adhere to it. I might point out that grape leaves are flatter.

If there are edible forms of Jello, a question not fully settled by our editors, they also are generally served on lettuce and likewise belong to the class of punctuation that sets off the more meaningful phases of a meal.

Another group belongs to the category of non-substitutes for food, not because of the quality of what is eaten, but because of the slowness of the process. Until recently I have always considered shad my prize example of a delicious dish from which, to prevent starvation, time had to be taken out to eat. This is no longer the case. Most of the so-called improvements in technology, such as can openers, and the process of desiccation have increased the convenience and safety of eating but decreased the quality of the food. Not so with boning fish. I do not wish to emulate the departed upon whose tombstone in the New England churchyard are the pensive lines:

She got a fish bone in her throat
And then she sang an angel's note.

Hickory nuts are so good and so impossible to shell fast enough that hunger gains apace. I presume that a South American native feels the same way about ants, delicious, though without the tongue of an anteater hardly a staple of diet.

I hope no one has gained the impression that the approach of our board of editors is a negative one. The chapters on approved foods is

the heart of the book. Tonight I will not deal with hors d'oeuvres though I could do so eagerly. Soup will be neglected, a neglect that does not reflect my esteem for many types including the French cream soups and onion soup at the top of the list. Fish, their catching, their cleaning, their cooking, and all except their eating, will be left to others. Clams, oysters, shrimps, scallops, lobsters of blessed memory, all the multifarious and sometimes nefarious shore dishes are for my palate rather than my pen. Even meats, the backbone of nearly every meal, are postponed for more ample treatment. Vegetables, less regretfully are omitted. In fact no subject will be treated in full, but since in the master work I was to have written on cheese and on pie, I will expand my remarks slightly about these two. The subject of pie will allow me to say a little about the nearly synonymous subject of desserts.

Have you ever known the perfect union, the marriage made in heaven, between a splendid man and a splendid woman each deserving a biographical sketch, but together meriting a complete family saga? So it is with cheese and pie.

Few individuals have such a unity of character, or so many facets to their personality as cheese. My cheese experience started late. As a boy I had many prejudices on the subject of food. Two of them turned out to be ill founded, oysters and cheese. The first cheese that I really sympathetically tried was at Alkmaar when I was about twelve years old. I had seen the fine old market with the golden cheese unloaded from boats, tossed expertly from person to person, and neatly piled for the official assessor to pass upon. I could not leave the town without trying one of those cheeses. Suddenly it came over me that I had willfully locked the door on a whole range of delightful experiences. I have not become an expert since, but I have tried desperately to make up for lost time and perhaps have become a creditable amateur in the effort. It would be impossible to arrange in order of significance the cheese eating episodes of nearly forty years. However, I must reminisce concerning the international aspects of my quest. French cheese at its best, perhaps I should say cheese at its best, was revealed to me because of my unpardonable sin of not drinking wine. Twice in France this churlish attitude was met by the invitation, "If you will not drink, you will at least try one

of our old cheeses." At Romarantin the old cheese came in the form of a small, almost spherical piece of something that first appeared to be nothing but gray fuzzy mold. By careful scraping there was exposed about a tablespoonful of creamy, almost liquid substance, totally free of mold. It was the quintessence of cheese. A jewel, hidden away in a little French tavern, and displayed with the true ironic courtesy of the race to only those with outlandish manners. Limburger at its best was given to me by a friend who persuaded the proprietor of a cheese factory that she was not scared of the most violent he had. Norwegian goat cheese can be good but it takes seven years to make it so. A Greek noblewoman informed me that even the Greeks would consider delectable the cheese she got for me at a small grocery in Milwaukee. My first experience with Russian cheese came this spring. A decade before I had given a little mathematical aid to the department of dairy industry. Last year over the roof of the world came samples of five types of cheese, a gift of the Soviet Union to our College of Agriculture in honor of Wisconsin's place in the world of cheese. My insignificant, and largely unsuccessful work, was not unrewarded. Of the five, the Karsaloff was the best, and was very good indeed. And do not neglect the home product. Wisconsin cheese, when made well and kept long, deserves to be high on any list. The best that I have ever tasted had been lost for seven years in a Janesville warehouse.

I wish that I could write like Macaulay. He could list names as majestically as any Englishman. Recall his description of the beacons being lit across England at the time of the Armada, or his catalogue of the princes that came to join Lars Porsena. Then I could do justice to cheese.

And haughty Gorgonzolla
With mold of aqua hue
Is plated on golden platter
Beside the Danish blue.

England's proud boast of Stilton
Bows not to Roquefort
While Cheddar's tasty morsels
Are steeped in aged Port.

Of cheeses smoked far strongest
Without a peer, alone
Pungent, hard and welcome is
Sap Sago's grey green cone.

The kid may leap in Norway
Beside the rock lined shore
And gjeitast nurtures heroes
The breed of valiant Thor.

In Isle de France the cyclist
Rich Camenbert may eat
Gruyer in mountain fastness
Sustains the faltering feet.

The broad canals of Holland
Bring cheese to Edam's quay
Or to the mart at Alkmaar
Hard by the Northern Sea.

The little children nibble
On Philadelphia cream
While strong men munch on Munster
To breast life's turgid stream.

The Limburger of Wisconsin
Smells like its Dutch forebear
Is that a cross-road vinery
Or cheese upon the air?

The green glens of New Glarus
Are filled with cattle brown
Whose sires for ages pastured
Outside the Alpine town.

The dairies of New Glarus
Produce a holey brand
With nut rich flavor captured
In happy Switzerland.

The fate of many races
Depends on cheese and wine
Success of far-called councils hang
On how the envoys dine.

The cruel gauge of battle
At hunger's call is sped
Or joyful peace serenely reigns
When diplomats are fed.

Had snow of grated Parmesan
Been served in royal home
Lars Porsena of Clusium
Had never marched to Rome.

Or perhaps the last four lines should be:

Had any cheese at all been served
By frugal Highland dame
The doughty Bruce and Douglass dread
Had gladly stayed at hame.

No I cannot do it. The style is too grand for the author and the subject for the style. But someone, someday, somewhere, will write of cheese as it should be glorified.

As a proper ending we come to the close of our repast. Each meal should be dealt with according to its desserts, but I will have time only to list some score or so of the most meritorious. The order might be subject to minor changes, but by-and-large it is accurate: 1. apple pie with cheese, 2. apple pie without cheese, 3. cheese without apple pie, 4. blackberry-blueberry pie, blackberry pie, strawberry shortcake, blueberry pie, mince pie, cherry pie, apple dumpling, gooseberry pie, pumpkin pie, elderberry pie, cranberry pie, fresh currant pie, plum pudding, peach ice cream, coffee mousse, Dutch apple cake, lemon pie, banana-cream pie, persimmon pudding, maple sugar cake, peach pie, and various other forms of pie not including Washington cream pie.

Of course all these items belong to the elite. Their number could be doubled and quadrupled before mediocrity would be reached. I'll make only four comments on the list. 1. Cakes are good and would begin to occur frequently if the list were only slightly longer. In general cakes should be served right side up. 2. I rate persimmon pudding on the basis of only one sample, but that was superb. 3. Strawberry shortcake really belongs as high as I put it, especially when made with wild strawberries as is a June custom with us. I

shall run the risk of reading the passage from Della Lutes that I warned you against earlier:

My mother made strawberry shortcake in a small dripping pan and of a very rich biscuit dough. (Four level tablespoonfuls of butter to the regular rule of two cups of flour.) When this was baked to flaky perfection it was turned on to a platter and split in two. The top half was laid aside and the bottom part lavishly spread with butter. Over this the berries (already crushed in a blue and white porcelain bowl) were thickly poured. Then the top half was laid over this (still piping hot), fulsomely buttered, while the remainder of the berries completely canopied the whole. The juice ran off and made a crimson lake on which the shortcake rested. It was then set in the oven to "ripen" for a few minutes. A pitcher of cream on the table acted as accompaniment for those who wanted it.

When we had shortcake we had but little else, nor needed more. Here was a dish complete in itself, perfect in quality, adequate in quantity, and presenting a feast sufficient for gods or epicurean man.

4. All the pies mentioned except banana-cream and possibly peach should be served with cheese. In these two instances, as in the case of the non-pies, the cheese should follow rather than accompany the dessert. For an apple pie, with tart apples, Roquefort or Cheddar cheese is best. If the apples are not tart, Limburger. Cheddar is good with all berry pies, but Munster or Brick goes well with blueberry or mince pie. Cherry, or gooseberry pie, is particularly acceptable with the strong cheeses. Mild cheese is proper for pumpkin pie. More than one choice of cheese to accompany pie is never resented and is quite necessary in post-dessert cheeses.

It is better to end in full swing than try to round out a paper with superfluous remarks. I only add, therefore, that the unwritten book was to have had a motto and a dedication.

The motto: "Pie, not calories."

The dedication: "To the women of Madison who, while preaching the value of abstemiousness, set tables which make the practice of that virtue impossible."

On Telling and Reading Stories to Children

I will spend most of my time discussing the telling of stories to my children, grandchildren, and the children and grandchildren of my friends. It has brought me much happiness and at times has entertained them. I have also read to them but not very much. However, before taking up this topic I want to go back a bit to my own early days to say a few words about the reading, reciting and storytelling I listened to.

My brother Olin, who had both a deep voice which at times was almost sepulchral and a vast body of knowledge, would answer almost any question that my curiosity would turn up. Also upon demand, and the demand was frequent, he would recite Tennyson's "Ode to the Duke of Wellington." I have just reread it; and although it is not in the spirit of today's poetry, it is a noble poem and I am glad that it stirred something in me as a boy. I particularly thrilled to the passage addressed to Nelson beside whose tomb in St. Paul's the Duke was buried. Nelson speaks and the poet replies:

'Who is he that cometh, like an honor'd
guest,
With banner and with music, with soldier
and with priest,
With a nation weeping, and breaking on
my rest?—

Mighty Seaman, this is he
 Was great by land as thou by sea.
 Thine island loves thee well, thou famous
 man,
 The greatest sailor since our world began.
 Now, to the roll of muffled drums,
 To thee the greatest soldier comes;
 For this is he
 Was great by land as thou by sea.
 His foes were thine; he kept us free;
 O, give him welcome, this is he
 Worthy of our gorgeous rites,
 And worthy to be laid by thee;
 For this is England's greatest son,
 He that gain'd a hundred fights,
 Nor ever lost an English gun;
 ...'

Also, such lines as:

Not once or twice in our fair island-story
 The path of duty was the way to glory.

My brother Edward, two years older than Olin and about fifteen years older than I, had memorized a great deal of poetry. He also loved to hike and frequently took me along. When I wearied he would swing me to his shoulders and continue the walk, reciting verse to keep me more content. My favorites were two of Macaulay's *Lays of Ancient Rome*—"Horatius at the Bridge" and "The Battle of Lake Regilus." Any martial lad, and I am afraid I was martial, would gloat at "And the good sword stood a handsbreadth out behind the Tuscan's head." Also, when the Roman leader Herminius and the Tuscan leader Mammilius slew each other in single combat, the grey charger of the one took flight through Tuscany and all knew that his rider was dead, while Black Auster stood waiting for a rider who would avenge his master's death and did not wait in vain.

Edward would also spin yarns about the house in the tree and the eagle, "Union Jack."

Among the poems I learned were Tennyson's "The Revenge," "The Charge of the Light Brigade" and Macaulay's "Ivry."

But not all that I received from my elders was bloodthirsty. My sister Ruth, senior to me by ten years, would read to me by the hour from *Alice in Wonderland* and *Through the Looking Glass*. I loved it and still find those books fascinating. There may be a short period in one's teens when *Alice* is not enchanting. As a child, the fanciful tale enthralls. This one may outgrow, only to grow into an appreciation of the logical play and the literary craftsmanship of the book. At first you applaud father William's "Be off or I'll kick you down stairs," but later you enjoy those most quoted lines: "Now, here you see, it takes all the running you can do to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that."

Mother often read the Bible aloud. As you know, besides its spiritual and ethical content, it includes some pretty gory accounts. I guess I especially liked the fate of Ahab and Jezebel, and Samson slaying a thousand Philistines with the jawbone of an ass. In our lifetimes much greater carnage has been done with the same weapon.

So much for my first childhood!

For some reason, changes of time and place and differences of temperament, my favorites were not those of my children. As to books read to my children, Katherine did much more of that than I did. Some of the books were very nice, such as *Honk the Moose*; and the one about the little old couple who, after befriending a homeless kitten, became hosts to "hundreds and thousands and millions and billions and trillions of cats;" or a favorite of mine and also of the mediaevalist, Gaines Post, *Father's Big Improvements*—each improvement was caused by a need but resulted in immediate disaster which was followed by complete acceptance, the improvements ranging from indoor plumbing (frozen), central heating (a coat left over the chimney and the house smoked up), to the telephone and the automobile. None of these was great literature like *Alice in Wonderland*, but all were pleasant and some of them had illustrations worthy of Teniel. My children also liked such classics as Stevenson's *A Child's Garden of Verses* and Milne's *When We Were Very Young*.

But now as to telling stories:

My experience has been chiefly with children between the ages of five, or even four, and about twelve. For those younger than about

four one can make faces but hardly tell a connected story. After twelve the stories must be too well constructed for spontaneous telling.

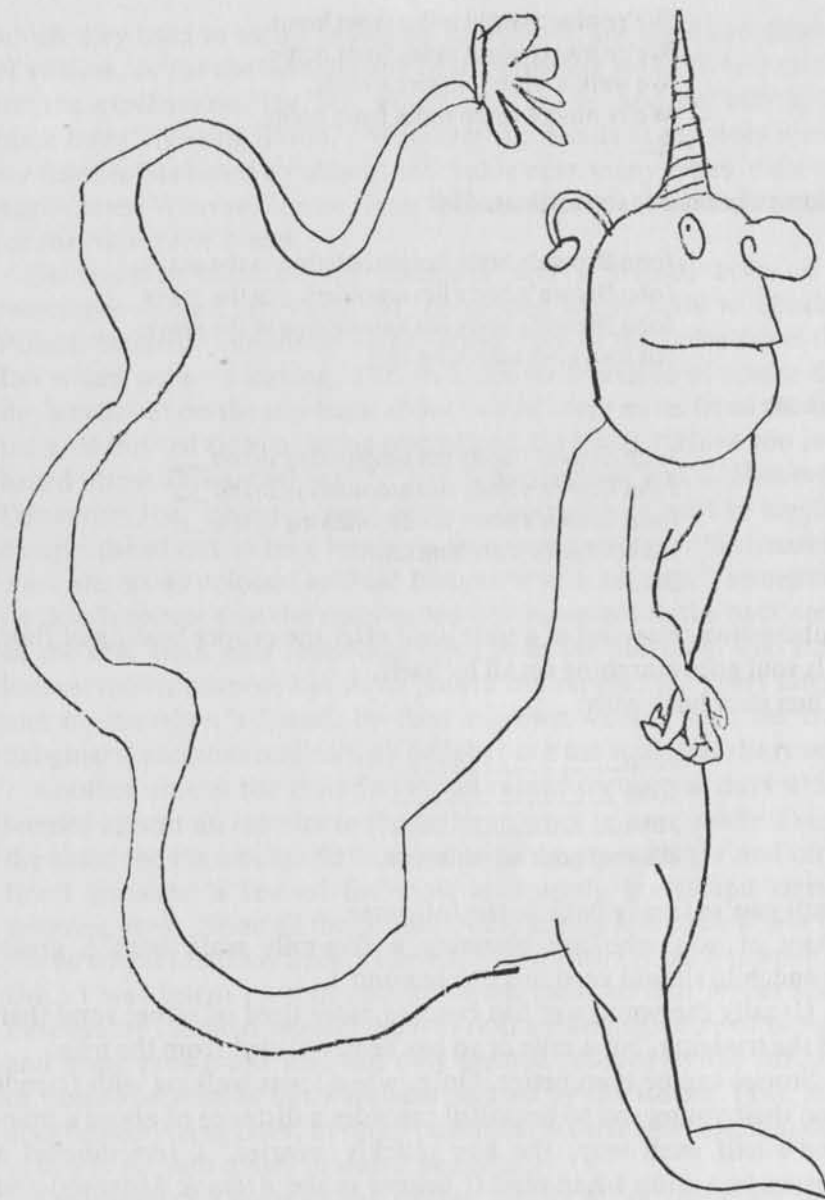
I cannot give any rules for good stories but I can make one positive statement about them, In the ages I refer to, you need not worry about being too improbable. Animals can, of course, speak English and can be grotesque; for instance, the chimpangroo (chimpanzee above and kangaroo below) obviously is the champion climber and the champion jumper and, as painted by Mrs. Ingraham on the walls of our daughter's room, looked not only like an amiable but also a perfectly possible beast. Guadaloupe, whose single horn had a hinge at its base to make it easier to go through barbed-wire fences, had a twenty-four-foot tail with a hand on the end, most convenient for stealing cookies from top shelves or doughnuts from window ledges, the doughnuts of course filed for future use on that single horn. Children like such inventions. They know they do not exist, but they are companions just the same.

Names of creatures can be attractive to children and fun for one's self. The tiny bird with which my daughter identified had a bald-headed eagle for her father and a bird of paradise for her mother. I enjoyed calling two small twin skunks "Rose" and "Lavender" as much as any child would. The names of Jim Bong for a snake as long as between a telegraph pole and the second one beyond, of How-How - How—a pig as big as a hippopotamus and much stronger, and their companion a little mouse Chew-much-chew with the long tail who always got the better of his two huge companions, added somehow to the fun.

When and why do you tell stories? There is no one answer. A good time is whenever you feel like telling them and have a youngster who wants to listen. But there are sometimes special reasons.

Consider the walks where a boy or girl begins to tire. Stories may help but they are not the only recourse. Singing may be an aid, especially suitable songs such as:

We're ninety-nine miles from home,
We're ninety-nine miles from home,
We walk a while, we rest a while,
We're ninety-eight miles from home.



Guadaloupe as drawn by David, age 6.

guess that if I had varied them I would have been corrected. Edward liked serials about the same characters. If the first sometimes bored me, the second was a strain on the creative imagination.

One series was about Tony the little Italian boy and his donkey, Corporal, and their friends in the invading American army. In fact, it is hardly conceivable that the American campaign would have succeeded without the help of Tony and Corporal. If Tony pulled Corporal's left ear, he kicked with his front feet; if he pulled his right ear, he kicked with his hind feet; and if he pulled both ears, he kicked with all four feet at once. Of course any boy could imitate the first two actions, but any attempt at the third was followed by a total collapse and usually raucous laughter. Two of Tony's friends were the sergeants Dirty Bill Smith whose pet exclamation was "Holy Mackerel!" and Biff Jones who always said, "I'll be hornawoggled." However, these two characters could not hold a candle to Buck Private Dunlap, the best shot in the American army and, hence, the best shot in the world. He could shoot a bullet at a forty-five degree angle and hit it with a second shot as it fell. One of his feats led to my realizing that my son might be a mathematician. B. P. Dunlap saw a perfectly trained German company marching to attack a much smaller American outfit. He trailed them and when they rested, they stacked their arms with true Prussian precision. This enabled Dunlap with one shot to take an eighth of an inch off the front sight of each rifle. I asked Ed what this would do. After a moment's thought, he said "make them shoot too high," which it did so that the Germans were easily defeated by the American squad.

I have seldom written down my stories, for it is too much fun changing them. Moreover, any editor above the age of twelve would want to alter them usually to their detriment. An editor once objected to my quoting from Stevenson's *A Child's Garden of Verses*:

The world is so full of a number of things
I'm sure we should all be as happy as Kings

at the head of the Table of Contents of a book on fringe benefits. On rare occasions I have written either nonsense verse or stories for my grandchildren—sometimes for them to illustrate. I will now read one of each.

The Story of The Unhappy Lizard and The Discontented Fly

or

How conservatives and liberals reach conclusions.

There was a lizard as small as a gnat
And a fly as big as a crow
The fly hated all of his fat
And lizard wanted to grow.

So the lizard ate butter and cream
And the fly he didn't take any
The lizard grew broad of the beam
And the fly as thin as a penny.

But the fly was hungry all day
It's awful how badly he felt
And the lizard used his money to pay
For a new and very long belt.

So now remember my boy
And also remember tomorrow
Remaining the same may be joy
And a change may only bring sorrow.

or if you don't like that moral put the next two verses in the place of the last two.

So the lizard he sat in the sun
And the fly he cruised in the air
And both had a great deal of fun
And each was heard to declare
"If you want to be happy and gay
And feel outrageously fine
You better resolve that today
You'll take up a wholly new line."

Willow Wouldn't

Once there was a Willow-wood who really was a Willow-woodn't. All the other Willow-woods liked willow trees. They liked to swing on the ends of the long leaves of weeping willows. They liked to see women make baskets from the long twigs of the ordinary willows and then come on picnics with food in those baskets and drop crumbs for the Willow-woods. They especially liked pussy willows for they used the little pussyes as mittens

called herself. But vocabularies change and this name has been preempted by a physiological function, so the golden little bird though still feminine is now "Billy-pink-toes" because the only parts of her not yellow are her pink bill and pink toes. The child may choose whether to call her "Pinky" or "Billy." The stories about this lovable, affectionate but insistent, small one take action on the part of the teller. For instance, when "Pink-toes" wants to wake the big, black bear, she starts to peck him on the back, and you tap the child's back or the back of the youngest in case there is more than one child listening. There is no success because the bear is so woolly that he continues to snore loudly. Snrrrr! Then she pecks at the base of the neck and you tap, tap, tap on the child's neck. But the snoring continues because the bear is so woolly. The head is tapped with the same result because the bear is so woolly. Then the little bird pecks the bare nose and the beast drowsily begins to come to. If the child has not known you, she will shrink from a stranger tapping her nose right off the bat, but by the time her back, her neck and her head have been tapped accompanied by loud snores, she is delighted to have her nose tapped and to find lazy old bruin finally waking up although still reluctant to play. "Pinky's" flight on the back of a honking, wild goose with its wings flapping also entails some acting and often brings success.

The above acting is just after the face-making stage. Making faces can be useful under many circumstances. The one I like best is that of the crying infant a few seats ahead in the bus. In an attempt to quell the yowls, the mother is sure to place the child standing in her lap looking backwards over her shoulder. There is a momentary pause in the complaining at this point. I wiggle my lips, east and west, *comme ça*. The child ceases to cry and fixes its gaze on me. The moustache helps (it did especially when it was rare). I repeat. The child tries to imitate but invariably moves its mouth up and down or in and out. I reply with a violent wiggle and the young one demands that the mother look at the funny man which she refuses to do telling the youngster that that would be bad manners. The whole process is repeated. By this time others on the bus are chuckling. Hoping that she can steal a look without being noticed, the mother attempts to take a furtive glance but without success. However, she does realize

that, besides being a funny-looking man, I have been amusing the small one on purpose and she soon enters into the game. I feel more nearly like the good Samaritan than at any other time. (Sometimes grandparents and great grandparents are grateful if they prefer the children to be listening to a story rather than crawling under the table while adults are still eating—especially when dining in public.)

The soft sell can be important. Once there was a reception, or some such shindig, given for Mrs. Ingraham and myself at Northwestern University by its mathematics department. I spotted the ten- or eleven-year-old daughter of one of the mathematicians looking out of the window, seemingly as bored as I was, and evidently not liking to mix with people whom she did not know. I went and stood beside her not looking at her or speaking to her, and started to tell a story to the outdoors as I also gazed out the window! Very soon I could tell she was listening. It was not long before we were sitting together and having a fine time—much more fun for each of us than the stuffy social affair. Her parents were astonished, for previously she had never been friendly with a stranger and had shrunk away from anyone who tried to become acquainted. Incidentally, I believe that the reason men get acquainted with small children easier than women do is that they do not try to engulf them.

Not every attempt at telling stories is a success. For two years in a row I was asked to entertain first graders at Edgewood Academy during a period they call the Winterim, an interruption of the regular program for a short time in the middle of winter.

The first of the two years was pure joy, chiefly because of Aaron, a wonderful small boy full of questions and full of suggestions. All I needed to do to be a hit was follow his lead.

The second year was dismal. There was no Aaron. Everyone lost interest after about ten minutes. Yet I was supposed to have somehow controlled the activities of a group of about a dozen very lively but very inattentive kids. I came away wondering if kindergarten teachers should not be paid more than deans and with a strong conviction that even if stories may be told by the mile, they should not be governed by the clock.

In one respect my daughter and my son had different attitudes toward stories. Winifred wanted the same stories over and over and I

and fur caps, for Willow-woods are bigger than honeybees but smaller than bumblebees.

But Willow-wouldn't didn't like weeping willows because they were so sad and cried all the time. He didn't like ordinary willows because men made switches of them and whipped bad little boys with them and sometimes forgot and whipped good boys too. And he especially didn't like pussy willows because they tickled and that made him giggle and sneeze at the same time, which doesn't feel nice.

It is hard to say what a Willow-wood looks like. He might look a little like a lion if he didn't have a neck like a giraffe. He might look a little like a giraffe if he did not have a head like a bull. He might look a little like a bull if he did not have a tail like a crocodile. And he might look a little like a crocodile if he didn't have beautiful yellow wings like a butterfly.

Remember, since Willow-wouldn't was just a bit bigger than a honeybee, he ate more honey than a honeybee; and since he was just a bit smaller than a bumblebee, he made less noise than a bumblebee.

All the other Willow-woods lived in the willow trees but Willow-wouldn't lived in a pine tree. He didn't live all by himself; he had two friends.

The first was a little ant. All his brothers and sisters lived in an anthill under the willow tree but this ant made his own tiny hill under the pine tree. He said to himself: "I will be different. If I had hair, I wouldn't cut it off. If I had a beard, I wouldn't shave it. I am a real Wouldn't-ant."

The other friend was a little red squirrel. He liked the pine cones like other red squirrels, but he didn't scold as the others did. Instead of saying as fast as he could ten times in a row: "I hate you," he said real slow: "I like you" twenty times. And they called him "Wouldn't-squirrel" because he wouldn't scold. Wouldn't-squirrel lived in the white pine tree where Willow-wouldn't lived. Each day he went up to the high branches and cut ten cones off the tree and let them fall to the ground, and then he would come down and pull the cones apart and ate the segments while Willow-wouldn't and Wouldn't-ant ate the sweet sap; and Willow-wouldn't every once in awhile had to lick Wouldn't-ant free when he got stuck in the sap.

They all agreed that they didn't like girls and wouldn't get married.

But one day Wouldn't-ant met a girl ant who said: "I like you because if you had hair, I wouldn't want you to cut it; and if you had a beard, I wouldn't want you to shave it; and I would rather live under a white pine tree than a willow tree." And Wouldn't-ant said: "You are a sensible girl;" and he enlarged his hill and they got married and had 1,237 children—and sometime you will find out that that is a prime number, just like three.

And one day Willow-wouldn't saw a girl Willow-wood with nice red wings flying around and singing: "I hate willows and I like pines; and I like

boys with yellow wings." And Willow-wouldn't said: "You are a sensible girl; and I'll ask red squirrel to cut down some extra cones so both of us can have plenty of sap." And they got married and had 11 children—and that is a prime number, just like three; and all the boy children had red wings with yellow spots and all the girl children had yellow wings with red spots.

Wouldn't-squirrel still said: "I'll never get married because all red squirrels scold." But right next to the pine tree there was a maple tree and in the maple tree there was a girl red squirrel and her mother taught her how to scold. One day she said to Wouldn't-squirrel: "I like you;" and he said "I don't like girls because they scold." And she said: "Of course they scold; but I would rather scold you than anyone else." And he said: "You are a sensible girl." And they got married and they lived all summer in the maple tree and all winter in the pine tree and each day cut down twenty cones for the 1,239 ants and the 13 Willow-wouldn'ts and the four squirrels—for they had two children. That is a prime number, just like three. And one of the little squirrels was a girl squirrel and she always agreed with her father; and the other little squirrel was a boy squirrel and he always agreed with his mother. And they were so happy that sometimes mother squirrel forgot to scold Wouldn't-squirrel—but not very often.

I will end by describing my pinch-hitting for "Ranger Mac," the 4-H Extension worker, at a cub-scout troop meeting. I am not by nature a scout and after one or two years my son gave it up, but once during that period there was a troop meeting at Randall School including all the dens of cub scouts in that school. Fathers, including myself, attended. After a few preliminaries we began to wait wondering when "Ranger Mac," who was to be the speaker, would arrive. (Later it developed that he put the appointment down for a week later—not worse than when Katherine and I arrived one week too early for dinner at the Mendenhalls.) When the boys became restless, Mr. Marsh, who was managing the affair, came to me and said that he had been informed that I could tell stories. Would I do so? I requested that they give "Ranger Mac" five more minutes which gave me five minutes to collect my whimsies. I do not remember all the stories I told, but I do remember the two most successful tales.

One of these was about Buck Private Dunlap. There was a huge German force under an extremely pompous general. Since Dunlap was only a mile away, he could of course have shot the general. But this would have done no good, for the general would have been

replaced by one of his juniors—probably a better officer. B.P.D. had a more effective idea. He waited until the general had his side toward him and with one shot he severed his suspenders. A self-important Prussian could hardly retain his dignity as he went around trying to hold up his pants, in fact the control not only of himself but of his staff completely broke down and the hostile army lost its effectiveness. The cub scouts also nearly went out of control.

The other story that I worked in was told me by James Monroe Buckley, a Methodist minister, when I was a small boy. (Perhaps some of you remember the magazine called *The Christian Advocate*; he was its editor.) This story explained how the donkey got its bray. The donkey then, as now, was a stubborn brute and, in spite of Noah's pleading, not only refused to enter the ark but declared that it was not going to rain. So Noah battened down the hatches and left the donkey peacefully grazing. But the rains did come. The donkey climbed higher and higher, finally reaching the top of a high hill with no other place to go and the water was still rising around him, lapping at his feet. Then in the distance he spied the ark and let out a horrendous call, "Noah! *Noah!* NOAH!" Noah heard him and called back, "I'm coming." So the donkey, in relief, sighed, "Aaarh." And ever since the donkey has said: "Noah! *Noah!* NOAH! Aaarh!" The evening seemed to go well; but it was a long time before the Randall school teachers forgave me for causing the first-, second-, and third-grade boys to bray in the halls for the next two weeks.

Three Limericks

The following was thought up climbing Sandwich Dome in the White Mountains when Jasper Dodd kept telling us that he wrote verse but would recite none.

Now Dodd is also a poet
He cares not a bit if you know it
He'll tell it to all
Both great ones and small
For 'tis easier to tell than to show it.

The following was written soon after Mrs. Ingraham and I moved to the Attic Angel Tower in Madison. The third line was completely successful. The fourth line seems to have had some effect. No results from the fifth.

A very old duffer said, "Please"
As he beggingly fell on his knees
"Give us jam with our bread
Keep the beef a bit red
And no more carrots and peas."

The following was composed at a dinner of a few mathematicians including both Professor Marie Weiss of Tulane and her Ph.D. professor, E. T. Bell of the California Institute of Technology, in reply to Miss Weiss's remark that I was too sober to write limericks. Needless to say, it would not have been written if both Miss Weiss

and Bell had not been beyond reproach, for as Oliver Rundell used to say, "Never twit on the truth."

There was a young lady named Weiss
Whose girlhood was gentle and nice
Till she met E. T. Bell
When she shouted, "OH! Hell
What's virtue when one can have vice!"

Fragments

- a. Much modern art seems to me to either have little structure as in the case of collections of broken bells and worn-out machinery (inferior indeed to the much-scorned feather pictures made by our Victorian grandmothers) or, as in the case of much abstract art, to have no reality from which it is drawn or to have only a psychopathic connection with such reality. Men who wear one earring and no shoes; men who arrange rusty wheels, old pipes and rotten wood with glue and wires which are the only substance of quality in the whole collage; men who compose verse from phrases that sound as if they had a meaning but do not, should be permitted to do these things—the law must be tolerant! What I resent is that these men think they have as good brains as the rest of us.
- b. A good while ago at an educational meeting, a fellow dean from another university boasted that one of their survey courses, I believe called "Effective Living," was so well organized that it was not just integrated it was "homogenized." I rose and commented, "Coming from a dairy state I can give a definition of homogenization. Homogenization is a process by which the surfaces of the particles of cream in the milk are increased in proportion to their contents until they cannot rise to the top, thus making the milk more digestible for infants."

Part V

Somewhat Personal

Letter of Resignation from Deanship

THE UNIVERSITY OF WISCONSIN
Madison 6

College of Letters and Science
Office of the Dean

April 5, 1961

President C. A. Elvehjem
The University of Wisconsin
158 Bascom Hall

Dear President Elvehjem:

Recently I became sixty-five years of age.

I have come to the conclusion that it would be best for me to relinquish my deanship in the near future and to return to other duties chiefly in the Department of Mathematics.

There are, of course, many considerations that enter into such a decision. I would like to list three of them.

First, I find it difficult to keep abreast of my work and at periods of greatest pressure fail to do so. This may be in part due to increasing age. Another cause is the accretion of interesting and important peripheral duties that one acquires merely by length of

service in an administrative post. I do not wish, because of the last years of my term, to be remembered as the man who did not answer his mail and could not make decisions. Moreover, I would like to pace my work by considerations of quality rather than deadlines.

With the increase in the size and the complexity of the College, it is apparent that a material increase in the staff of the dean's office and in the space assigned to it will be necessary. With such an increase some reorganization may be desirable. It would seem better for my successor to carry out this program rather than for me to bequeath to him a situation that he might not wish.

Secondly, and perhaps most important, I do not sympathize with certain tendencies in our current civilization which to a greater and greater extent control our universities as well as other social institutions. I shall mention two.

The emphasis on science and technology leads to an imbalance in our culture. It also leads to competitive pressures that go far to determine the policy of any university. A hierarchy in American intellectual life, descending from mathematics and the physical sciences through the biological and social sciences to the humanities, is unfortunate. I say this in spite of my love of mathematics. A hierarchy in reverse order would be equally bad. I believe that the opportunity, recognition and pay of an individual in a university should be determined by the quality of his character, mind and accomplishments rather than by the field of his interest. It has never been entirely possible to do this but, through no fault of the University, it is rapidly becoming less so. However, few universities have done better than Wisconsin in this regard.

I am sorry to see a tendency toward excessive specialization. Each of us has an ideal of what man should be. Mine includes breadth of interests and an awareness of the outlines of the major intellectual fields. It also includes the wise use of reasonable vacations not only for the recreation of health but also for the broadening of the mind. In many fields the persons who strive for this ideal are not encouraged. I fear the humanities are no better than the sciences in this regard.

These social forces bring pressures—often irresistible pressures—upon the administration of a university. Constantly I find myself, of

necessity, taking actions or making recommendations which are inconsistent with my own sense of values. This cannot lead to effective administration. This is my reaction to social forces and definitely not to the actions of anyone in the University other than myself.

I recognize that what I have said above may be merely evidence that I can no longer make proper adjustment to change. If this is true, it is a cogent reason for my not continuing in my present position.

The third reason I have to mention is more personal and hence less important. For years I have tried to defend academic freedom but at the same time have observed certain restraints due to my administrative position. For instance, the expression of the ideas given above might lead on the part of some to doubts as to my fairness or impartiality. At times I would like to champion within the College one side of an academic argument rather than weigh the arguments of others.

I would suggest that I be relieved from the deanship some time during the fall semester of the next academic year. I strongly desire to have my successor prepare the 1962-63 budget.

It is with great reluctance that I have reached this decision since I have enjoyed intensely my work as dean. The constant consideration that you and your predecessors have shown me has meant much to me. I wish I could express fully the respect and affection I have for you and your colleagues in the central administration and for my fellow deans. It is indeed great. So is my esteem for the faculty of the College of Letters and Science of which I shall remain a member. My gratitude to my own administrative staff, both secretarial and faculty, is beyond words.

Few persons are privileged to have such a satisfying experience as my work has been to me for the last nineteen years.

With warmest regards,

/s/ Mark H. Ingraham, Dean
College of Letters and Science

2

Retirement Dinner Talk

I announce without apology that this will be a highly personal talk.

It is pleasant to be praised, even unduly praised, by friend; and the best occasion for such praise is a retirement celebration. A funeral is too late from the point of view of the recipient, and giving praise before retirement might impair his usefulness. So what you have done, 'tho not deserved, is fitting. If it is received without humility, it is at least received with joy.

It may seem that I was bold to write the preceding before I heard what was said, but I am a veteran of these affairs and I was sure that the rigors of scholarly accuracy would be tempered by the sense of the artist working within a conventional form, and by the milk of human kindness. Nor do I doubt the sincerity of these tributes, for I know how happily I could place laurels upon the brows of the tributors. I am thankful. In fact, gratitude is my theme tonight: Gratitude to the intellectual community but particularly to the University of Wisconsin and its enveloping connections.

I was born into a debating club. Mother and father presided with love and informed wisdom. We were a large family with strong ties, but we rapidly passed over our agreements in order to argue about our disagreements. I was the youngest, but the right to my own opinions was never questioned. (I fear that it was in writing this that I realized for the first time how foolish I must have seemed to my elders—although I was, of course, aware of how foolish they seemed to me.) Guests participated in our discussions and they were chiefly

Methodist ministers and professors from Wesleyan University. One of the most frequent visitors was John Monroe Van Vleck, father of Edward Burr Van Vleck for whom our mathematics building was named. (I believe that the only credential I had for my first appointment at Wisconsin was Mrs. Van Vleck's memory that my father and brothers had done well under John, The First.) This home was a most satisfactory environment for me, but I believe ours was an astonishing and perhaps a trying family into which to marry.

It would be inappropriate and, still worse, tedious to speak further of my pre-Wisconsin youth—even about the Dodgers. But it is appropriate to speak of the family so many of you have known. I cannot detail my debt to Katherine, yet there would be a great void in not acknowledging it. It was at the University of Wisconsin that I met her, and it was Mrs. John R. Commons, standing about where the southwest corner of the Elvehjem Art Center is to be, who introduced us. Only subsequently did I realize that the meeting was memorable (Katherine doesn't even remember it); but since our engagement, she has been the center of my life—a source of spontaneity, diversity, companionship and strength. The satisfaction of this occasion is that it is for us together. I must warn her, however, that after tonight her efforts to keep the girth of my head within bounds will be in vain; she had better specialize on the midriff. There is more hope for the belt than for the hatband. The focus of our lives has been our children, Winifred and Edward (whose birthday party this is); and the children they brought to us, Grover and Margaret; and the five beloved grandchildren, the oldest two of whom, Ann and Pat, are here. Not even a grandfather can believe that the three under age five, Gardner, Mark and David, are precocious enough to enjoy being with us tonight. Without the grandchildren it would be easy at my age to spend much of my time recollecting a pleasant past, but with such grandchildren I live a life of prospect, not retrospect, hoping that the next seventy years will turn their aspirations into happy certainties.

I shall continue in just as personal, but not as familial, a strain.

Our happiness is determined by our family, our friends and our work. The University of Wisconsin has given me the stimulus and the means to do the work I wanted to do.

Elementary mathematics was easy for me and therefore the

puritan turn of conscience, which I claim to have, made me rather look down on mathematics—but not to the extent of keeping me from using the A's I got in calculus with little effort to offset the low grades in French which I struggled unsuccessfully to avoid (both subject and grades). It was here with Van Vleck, Dresden, Slichter and others that I learned that the simplicities of elementary mathematics were the fruit of intellects far above my reach. But to be a colleague of Fermat and Gauss in major appreciation and minor production of the glorious structure of mathematics was a privilege that was attainable. One member of the department into which I came in 1919 is with us tonight. I regret that I never had Professor March as a teacher, but he has been a grand colleague.

Just as the best way to repay a mother and father is to be a good parent, the best way to repay one's teacher is to serve well our students. It is also a most rewarding experience. How often we would like to introduce two friends who should know each other! To introduce the young person to mathematics offers like prospects. I have never been much of a matchmaker between boy and girl. I hope that sometimes I have been the cause of love affairs between good minds and mathematics.

I am glad the University of Wisconsin has many brilliant students, but I am also glad it is not composed only of brilliant students. It must be very frustrating for a superior mind to meet nothing but outstanding minds. The birthright of excellence is to excel, not to be humiliated. I have had many students brighter than I am, but not such an overwhelming proportion as to make me a recluse, seeking sanctuary in the seclusion of routine research or in the protective coloring of the committee. It is fun to spark brilliance and see it soar out of sight. It is also fun to help develop breadth and depth in the minds and personalities of those who are called "solid citizens." Then there are those whom somehow the teacher does not reach. He may feel superior to such dumb beings, or he may decide that he is a poor teacher. I fear we often make the more self-satisfying assumption. There are also many in each young generation that the elder generation does not understand. Some are determined that, although they cannot blaze a trail, they will at least leave a scent. But, really, even if it is less efficient, I do not think it is any worse morals to try to keep your ears and chin warm with your own fur

than with that of a seal or a raccoon. Students surely add to the variety of life!

I repeat: I am grateful that the University of Wisconsin stimulated me to be a mathematician and allowed me to be a teacher.

But glorious as these two occupations are, I am also glad that the University of Wisconsin is willing for its faculty to do other things besides search and teach. It has magnificent opportunities for the dilettante. Frankly, I could not and would not drive myself to let Gibbon and *Alice in Wonderland* gather dust while I spent all my evenings exploring the gizzard of a matrix, although truly a beautiful bit of anatomy. Once I symbolized a decision to remain at Wisconsin by the realization that if I left and if I wanted to know some fact concerning the relation between Dante and Giotto, I would have to travel hundreds of miles for an answer, while here the answer was right at the same luncheon table with me at the Club. The freely shared wealth of knowledge and thought at Wisconsin is taken for granted. Thank goodness!

There is one policy that I have for at least twenty-five years tried to help maintain, from which I expect to benefit, namely, that of furnishing space and facilities to those retired faculty members who wish to work. There must be a retirement plan so that neither the student nor the State budget is injured by those whose effectiveness is diminished by age; and the calendar is not the worst possible measure of this. At Wisconsin there is, and should be, a limbo between the payroll and the moth-balls. Of course, no one relishes having a salary disappear, but to be devoid of the opportunities for effective work would add a major distress to whatever hardship retirement entails. It is not only the effect on the individual who retires and it is not primarily the accomplishments of those past their prime—it is the kind of society we wish to exemplify that makes this important. The University should strive to be a model society within the broader society of American life. My model would be an affluent society, but it would not be a society of leisure. Enforced labor in our first childhood and enforced leisure in our second are both bad medicine. That neither is forced upon us at Wisconsin is another of the blessings of my life.

I have cherished the official life of the Wisconsin faculty. The governance of the University is shared by many: legislators, regents,

students, civil service, and faculty within which category I include the administration. The role of the faculty, if not *de jure*, is *de facto* the greatest. When we discuss the curriculum, we know the faculty's decision will be honored. When we discuss the Rose Bowl, we know the faculty's decision will be honored. When we discuss oaths and affidavits, or the preservation of the trees, or the size of the campus, or, more heatedly, the size of the parking lots on the campus, we know that our advice will carry weight. I have heard brilliant faculty discussions and I have heard vapid faculty discussions, but never vacuous ones. We nominate the departmental chairman; we associate ourselves with the president in picking a dean and with the regents in picking a president. If a faculty member cares about the affairs of the community of which he is a part, Wisconsin gives significance to his concern.

I am happy I was dean, but only in a structure such as ours could I have held the position with self-respect. I entered the deanship respecting the faculty; when I left it, my respect for the faculty was even deeper. However appointed, the dean is an officer of the faculty and a member of it. His usefulness depends upon its support and is greatly enhanced by the independence that comes from knowing that he may move back to his department at any time that he wishes. Such conditions are not shifting sands; witness: the tenure of deans in the College of Letters and Science. One more word about the deanship: Every man has within him certain sources of pride he speaks of only on special occasions such as this. In my position as dean I had two predecessors and I have had two successors. To be one with these four, whether merited or not, is a title of nobility.

I have spoken much of the faculty; it is magnificent and congenial. But how fortunate that, while we of the faculty were gathering our esoteric moss of learning, there were other intelligent people who were acquiring the more practical skills of the business office and the secretariat. Many of you know of my early impudence when the principal of my high school called me in to query: "Mark, how do you expect to succeed if you can neither spell nor write?" To which I replied: "I will have a secretary." Years later I was able to tell him that I had. Rarely do departmental chairmen show the dismay at the loss of a promising young scholar that they evince when a secretary is married or promoted beyond their office. The University of

Wisconsin is recognized as distinguished because of the distinction of its faculty; but what a mess we would make of it if left to our own devices!

I am grateful that the University of Wisconsin is a free university. I care deeply for freedom of speech because I care deeply for American education, but I almost apologize when I admit that my opinions and, I believe, my manner of speaking would not jeopardize my tenure in any respectable university. But there are freedoms, other than the freedom of speech, which have been of greater pertinence to me personally. One of the greatest of gifts is to have the freedom and the facilities to do what one believes is useful and interesting. When I decided to work in algebra at the expense of statistics, I think that some regretted it, but no one remonstrated. When my work led me into matrices instead of general analysis, I fear that no one even cared. Of course, no university can be completely permissive. It must seek those of ability who intend to help in fulfilling its mission and who strive to participate of its nature as a community of scholars, especially those who believe that their greatest contributions are in the fields of their competence rather than their incompetence, but it gives wondrous freedom within these limits. I say here what I have said in many places across America (and I say it now without risk, for it is too late to break the spell) that I do not remember a time, when I declared that thus and so was the thing I thought was the most useful and the most interesting to undertake, without being fully backed in my decision by the University.

To me the University has not just been a community of scholars. I shall use a glorious phrase which has been appropriated for exclusive reference to an admirable sect. For me it has been "a society of friends." Next to the charms of the family circle, to live in friendship with a host of intelligent people of wide diversities of interests and experiences, who are both purposeful and have integrity of character, is the greatest privilege. My portion of this blessing has been abundant.

Within this life of friendship, clubs have meant a great deal: The University Club, where I take my daily defeat in billiards, and whose level of food has varied from year to year but whose standard of conversation has remained stimulating; the Madison Literary Club,

where the gown welcomes its contact with the town, and which provides the pleasantest way to appear before our jurists; and two dining clubs. It is my experience, as a member of these two dining clubs and as a guest at many others, that has led me to declare that the government of this University is a soviet of dining clubs. One of the two has had five chairmen of the University Committee without, I believe, having had membership on the committees that nominated them. All of these clubs are but a little of the connective tissue within the body of friendship.

How much of the spice of life my friends exhibit! There are some who moan about change. I do not know if they are against change as such. They just don't like any sample of it that they have seen. Of course we need motion, but we also need inertia. I suppose motion without inertia is a fairly good definition of chaos. And we have our reformers. I truly admire reformers and like to spend much of my time with them—but not all of it. For they, like Limburger, add to the zest of life but would pall as a complete diet. If they had their way, the world would be a better place in which to live—provided they did not remain reformers after it was perfected. The positive quality of Utopia derives from the fact of evil. Even the virtue of a teetotaler depends on the existence of alcohol. I am glad that the University of Wisconsin is a place where those with a social conscience can flourish, whether they are pulling me forward by my tie or backward by my coattails, and I am glad that the University is a place where, when I want to work or, for that matter, relax, I can shed both my coat and my tie.

Sometimes the academic world forgets how intelligent, devoted and companionable the people are who serve it in capacities other than through the universities. Each of you could bear witness from your own experience. A large amount of my activities have been in contact with the American Mathematical Society, with the American Association of University Professors, with the Association of American Colleges, with the National Science Foundation, and with groups such as the Retirement and Investment Boards, and with the Teachers Insurance and Annuity Association (that rare combination of business acumen and social imagination that has served us all so well). The threads that we have between the various disciplines holding the University together and the threads that go above and

below the local strands of the University are the warp and woof of our academic life. Much of the richness of our lives, as well as the strength of our society, arises from the multiplicity of the communities to which we belong. To some degree there may be a division of our loyalties, but not truly so for the individual with a hierarchy of values that can give structure to this diversity.

One advantage of the University of Wisconsin I have enjoyed elsewhere, rather than at Madison, in working in many national and international groups: The University of Wisconsin furnishes us with a great platform. No one has a better hearing than he who comes from this University. It seems to have a reputation for distinction without stuffiness, social purpose without preachiness, innovations without self-consciousness. After such a statement I suppose I cannot add: confidence without conceit.

Of course, if, instead of pointing with pride, my topic was to view with alarm, I could find subjects: For instance, the increased regard for status—how else can one interpret the concern for salary raises by the same man who fails to sign the card which would materially increase his retirement benefits? Or, the high degree of specialization in a community—which should present to the world an example of the society in which well-rounded men may flourish, but which is rapidly losing even the means of communication among its own members—that is something about which I feel strongly. Or, the cases where differences of opinions, rather than being the subjects for reason, are the subjects for scorn. Or even the vacuum cleaner of the barber, the use of which was introduced years after its need disappeared with the cootie. In any generation the puritan conscience can find things to bewail. But, in perspective, these are small compared with the fact that I have lived and now live in a community that I regard with pleasure and admiration. I just had to complain a bit lest you leave this evening saying: "Mark is losing his grip."

And we must not forget that we live in a pleasant land. To me, as a boy, not only the two voices of liberty but the two voices of beauty were of the sea and of the mountain—and the mountain had the greater voice. When I came here the pastoral loveliness of Wisconsin did not appeal to me. After the granite of Mt. Washington, it was not until I went to Devil's Lake that I found any respectable rocks. I

still feel that the finest October is that of New England, but June is at its finest here, for then there are the green rows of corn not quite high enough to entirely hide the brown earth; the clouds mottling the glorious blue of the sky with their whiteness while blessing the earth with the respite of their passing shadows; even the cattle producing cheddar cheese (which transfers the contentment of the cud-chewing cow to the pie-eating man). Moreover, it is not just the countryside that enriches our lives. A town, such as Mineral Point, is interesting for its history, charming for its old-world houses, valued for its people, and a gustatory delight. Yes, Wisconsin has won over the spirit which perhaps was pretty resistant to her wiles in 1919. (After all, she was far removed from tide water.)

You ask me how it feels to be seventy? I am supposed to bemoan the hung-up tennis racket, the less skillful paddle, the shortening length of my hikes, all of which belie the statement that the senior citizen is living through his golden years. However, the world is still a venturesome and interesting place. Perhaps our favorite family saying comes from an episode that happened about 1920. I and three other men paddled across Mendota to Fox's Bluff—then a delightful oak knoll. We were rolling out our blankets and lighting a fire when an eloquently profane farmer descended upon us. We were ruining his pasture; we would burn his trees. Vandals, trespassers, and blackguards are pallid translations of what he called us. After a bit I said: "Well, if you feel that way about it, we'll move along." An incredulous look came over his face and he gasped: "God! boys, tain't that bad!" And that's the way I feel.

I suppose I would describe this talk as a paean of gratitude containing about a dozen sermonettes. I am sure you expected the latter from me. And now one final word: It seems to be good form in mathematics to state a theorem and then prove it. I am reversing the process. From what I have said you will understand the "Therefore" with which I end.

THEREFORE, if the Fates should say to me: "Mark, would you like to live a second life?", I would say: "Yes." But I would do a little negotiating. I would ask that two conditions be fulfilled, namely, that I serve the same institution and that I marry the same girl.

We're ninety-eight miles from home,
 We're ninety-eight miles from home,
 We walk a while, we rest a while,
 We're ninety-seven miles from home.
 Etc.

Somewhat more sophisticated is:

John Brown's body lies amoldering in the grave,
 John Brown's body lies amoldering in the grave,
 John Brown's body lies amoldering in the grave;
 His soul goes marching on.

Then:

John Brown's body lies amoldering in the __,
 John Brown's body lies amoldering in the __,
 John Brown's body lies amoldering in the __;
 His soul goes marching on.
 Etc.,

subtracting one word at a time until after the proper beating of time,
 his soul goes marching on all by itself.

Then start back with:

John _____,
 John _____,
 John _____;
 His soul goes marching on.

until you're finally back to the full verse.

(Any of you who are planning a five-mile walk with a great-grandchild should keep this one in mind.)

Usually the youngster has become more tired of either song than of the trudging, but a mile or so has been whittled from the hike.

Stories can be even better. Once, when I was walking with friends and their young son to beautiful cascades a distance of about a mile-and-a-half each way, the boy quickly wearied. I remembered a phrase in a story I had read (I believe in the *Atlantic Monthly*) and developed a tale that I have almost completely forgotten but guess was about a boy and his goat that practiced butting until the lad and, of course, the goat had developed their heads into lethal weapons

which they used in many situations to foil evil, for the discomfiture of villains, or for the demolishing of imprisoning walls. When asked for the explanation, the boy would say that he and his billy goat came from "Butting Blood." Whatever the details of my story were, my listener has heard equally unbelievable ones many times, since he was Warren Weaver, Junior, later the correspondent in Washington for the *New York Times*.

On another occasion my daughter and a friend, both—if I remember—about ten years old, persuaded me to walk to Greeley Ponds, beautiful mountain tarns, about five or six miles from the Inn where we were staying. The walk out went well as of course did the lunch, but on the trip back about two or three miles from the Inn the girls showed signs of being really tired. So I said, "Have you ever heard about Dynamite Joe?" "No!" But neither had I. However, Dynamite Joe, invented very near to the ruins of an old logging camp, turned out to be a lumberjack whose exploits with dynamite were almost as colossal as Paul Bunyan's with his axe. I remember no details except that the story ended just as we got to the back steps of the Inn. Both girls seemed as fresh as in the morning. The story had served its purpose but never joined my repertoire. Years later I met my daughter's friend, by then a grown woman with her own daughters, and she recalled with delight both the walk and the ruse.

Another time at the same Inn it had rained for several days which seemed almost an eternity to the children who, in turn, made it seem the same for the adults. So in front of a big, open maple and birch fire I gathered a few of the most completely bored and started spinning yarns. Soon all the children were sitting in a circle about the fire to which I had my back. (I love to stand with my back to an open fire.) I was intent enough on interesting them so that it was some time before I looked beyond them to find a standing circle of parents and other grown-ups who not only seemed relieved by the surcease of noise and motion but were also pleased by the stories. (Tall tales also helped young ones, or more particularly their mothers, standing in line to get into diners in war-time trains.)

I suppose that most of my stories, nearly all of those for small children, have been about animals only sometimes of known species and never of known habits. My daughter's favorite, I believe, was about the "Wee-Wee" bird—the name taken from what Winifred

