THE MACCORDION FORMAT

An Integrating Mosaic of American Society

William J. Regan

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by

William J. Regan

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CONTENTS

IP: ENTER P. NOS. LATER

ILLUSTRATIONS

Diagrams

Figures

PREFACE

Rationale and Prologue to the Maccordion Format

For twenty-five years of teaching business administration subjects at the University of San Francisco, I had been using a highly simplified but wordy one-page version of Formats as a model of society. (In this book, "formats" stands for *frames of reference for minding action and thought systems.)* Its purposes were to provide students with an overview of our contemporary society and thus provide a better perspective of where the business institution fitted therein, and to encourage discussion into where and how all institutions must necessarily both compete and cooperate at various levels in discharging their distinctive missions.

Upon my retirement in 1990, I began to expand this model and wrote several expository chapters about it, but I didn't have any clear idea of where it could be used. The more I thought about it, the more I came to believe that the holistic model and its components might best be packaged as an introductory general-education textbook for college students. At this level, it could usefully serve as a conceptual model to provide students with a manageable or at least "graspable" overview of their contemporary society—something almost totally lacking in today's college curricula. Comparative models could then be developed to provide contrast for different cultures with alternative dynamics and organizing methodologies.

A Successful Experiment

In the late 1960s, I successfully energized several classes of students with a course-project assignment of creating in three-dimensional form their own models of society. My one-page model of society was the springboard (see Figure 3, Chapter 8). Up to three students were allowed to

collaborate on any one model. The energy and excitement this experiment generated were remarkable among the 250 students involved in multiple sections of an introduction to business class. A three-night viewing was staged in the university auditorium and the academic community including students' parents and friends was invited to attend. Coffee, punch, and cookies were served as our guests munched along trying to comprehend the student versions of society.

Many of the student models inspired puzzlement and intrigue as the guests and viewers tried to follow the students' logic in how the various parts of their models functioned and interrelated with other components. Students' imaginations had come alive with wild concoctions depicting the structural elements or institutions, the functional operations, and the goal directives of their usually tortured analogies. There were six-foot-tall floor pieces, wall pieces, and many free-standing pieces.

Since this was the late 1960s, there were no less than five full-sized coffins, each with a badly mangled but multi-labeled mannequin depicting the structural, functional, and directional pathologies associated with the Vietnam War and the student rebellions of that decade. There were dart-throwing games, miniature baseball, basketball, and football fields—even a portable toilet with all parts labeled. There was a large head of President Richard Nixon with his head filled with critical newspaper headlines predicting total gloom and doom.

Not only did students get better acquainted doing a hands-on project like this, they learned something about teamwork, collaboration, execution. Many of their models were shown regionally in a seven-minute coverage provided by a local TV station during its 10:00 P.M. news program. And, of course, the instructors provided surprise awards for superior conceptual skills, craftsmanship, artistry, and aptness.

Professional Behavior Requires Overviews

But the major benefit was the implantation of a frame of reference into youthful minds, providing potentially useful lifetime benefits for both general-living situations and career applications. The general premise for this assertion is that one's judgment and decision-making ability should be greatly improved when decisions are based on specifics seen in a contextual whole. This is the rationale for extended training in most professional fields, which provides overview perspectives even for those who will be narrow specialists in a restricted field. Proper diagnosis of problems surrounded by frequently ambiguous and camouflaged symptoms requires such overviews.

And the need for better overviews is at least as great for system managers in large organizations. So many long-range plans of large organizations have failed in recent decades that most of such planning today is regarded with great skepticism and might not even be attempted except

to satisfy funding requirements. As organizations have grown larger, their many influences have broadened to more and more sectors of society. As the factors that must be accounted for in any strategic plan grew exponentially, it became easier and easier for planners and managers to get lost or overwhelmed in the maze of vague, unproven, or ignored assumptions. This permitted their wishful thinking, emphasized by in-house politics and deadlines, to dominate complicated and too frequently cross-purposed proposals. Clearly, better planning will require better foresight than presently exists.

What Is the Right Educational Content?

Aristotle framed the basic dilemma nicely when he wrote the following *(Politics,* 1337 at 33):

> That education should be regulated by law and should be an affair of state is not to be denied, but what should be the character of this public education and how young persons should be educated, are questions which remain to be considered. As things are, there is disagreement about the subjects. For mankind are by no means agreed about the things to be taught, whether we look to virtue or the best life. Neither is it clear whether education is more concerned with intellectual or with moral virtue. The existing practice is perplexing; no one knows on what principle we should proceed—should the useful in life, or should virtue, or should higher knowledge, be the aim of our training; all three opinions have been entertained. Again, about the means there is no agreement; for different persons, starting with different ideas about the nature of virtue, naturally disagree about the practice of it.

The riddle so well articulated by Aristotle still perplexes us. Indeed, most objective assessments of achievement or accomplishment in each of the three educational directions for our collective society would probably receive unsatisfactory grades. While a very small percentage of highly accomplished individuals might rank high in all three dimensions, most of us would be lucky to be judged "fair" in any two.

How can one explain this poor educational performance? Have we spread our educational resources too broadly? Were we too ambitious in trying to educate everybody? Must we settle for "the opportunity to learn" instead of the "right to be educated"? Has modern man lost some of his interest and/or ability to concentrate on learning? Has the amount of basic information and necessary application skills increased faster than his learning capabilities? Has the wide band of diversionary activities available reduced the time available for constructive learning? Has the amount of educational content swamped or confused the traditional or-

ganizational orthodoxies and methodologies in education? Perhaps there is some truth in each of the above questions, which when compounded together contributed to our present dilemma.

Of the three levels identified by Aristotle, education for the useful life has clearly dominated in twentieth-century America. Overcoming an institutional bias strongly favoring introductory courses in "higher knowledge" or the traditional liberal arts education, vocational training in many directions grew steadily at most colleges and universities all through the twentieth century. The training for moral virtue fell between the widening institutional cracks of the family, school, church, and state. This most basic level is perhaps more important, for what good does the overlay of any educational concept have when too many elementary and high-school students lack fundamental training not only in academic subjects but more importantly, social civility? A wake-up call is urgently needed at this level!

In a democracy the answers to Aristotle's questions must come from the consensus among educators, educational administrators, government officials, the students themselves, their parents, and the taxpaying public. Any curriculum in any school represents such a consensus built over many decades of continuous planning, improvising, and adapting in trial-and-error starts and stops. The consensus for courses offered in the first two collegiate years generally supports the idea of a broad historical and ideological base.

Jambalaya?

Most people, nearly all, do not carry around in their minds any truly comprehensive model of objective society since they received no such training or education. Why should they when the idea was never even presented? What they do have in their heads is a widely varying and fascinating jumble of remembered data about people, places, events, dates; some linear technical procedures from training programs, hopes, ideas, aspirations—many with synaptic connections, many without. The more successful apparently have developed their own mental systems to classify and use central, supportive, tangential, and miscellaneous information in appropriate situations.

More than two thousand years after Aristotle's time, philosopher Alfred North Whitehead expressed his exasperation with the state of educational attainment or perhaps rather with educators' inability to synthesize its multiple parts into a unified whole in the following quotation (Whitehead, pp. 528–529):

> There is only one subject matter for education, and that is Life in all its manifestations. Instead of this single unity, we offer children—Algebra, from which nothing follows; Geometry, from which nothing follows; Science, from which nothing follows;

> History, from which nothing follows; a Couple of Languages, never mastered; and lastly, most dreary of all, Literature, represented by plays of Shakespeare, with philological notes and short analyses of plot and character to be in substance committed to memory. Can such a list be said to represent Life, as it is known in the midst of living of it? The best that can be said of it is, that it is a rapid table of contents which a deity might run over in his mind while he was thinking of creating a world, and has not yet determined how to put it together.

That we have created such a complex society without better guiding models is awesome and a tremendous tribute to our founding fathers who laid the principled foundation of government, including timely feedback from the people who made it all possible. But now the social and physical infrastructures have become so overloaded, our executive, legislative, and judicial branches of government so contrived and counterproductive that we need new approaches to continue building on the basic building blocks.

A Sobering International Comparison

Derek Bok, a retired president of Harvard University, recently published a perceptive report in a book titled *The State of the Nation.* While recognizing America's strengths overall, he nevertheless concluded that "over the past few decades, America has moved ahead more slowly than most other leading countries in most areas of activity that matter to a majority of the people" (p. 387). This study, delving deeply into all existing credible sources of international statistics, identified the following areas of deficiency (pp. 406-407):

1. The high cost and limited coverage of America's healthcare system.
2. The inability of many families to provide for adequate care in the event of chronic or long-term illness in old age.
3. The exceptional risks of being victimized by violent crime.
4. The difficulty employees have in establishing any form of organization to represent their interests to employers (such as unions or work councils).
5. The limited safeguards given to workers in case of layoff or unjustified discharge.
6. The relatively high risk of suffering a job-related illness or injury.
7. The failure to meet national goals for vaccinating infants or to do more to provide adequate nutrition to small children, make quality child care or preschool opportunities widely available, or guarantee parental leave following the birth of a baby.
8. The disappointing performance of American students in math and science.

9. The lack of effective job training, vocational education, or school-to-work programs.
10. The excessive burdens of rent borne by many low-income families.
11. The existence of urban neighborhoods marked by high concentrations of poverty, high rates of unemployment, and heavy incidence of crime, drug use, and teenage pregnancy.
12. The small proportion of families rescued from poverty by government programs, including families headed by full-time workers, persons who are disabled, and persons too old to work.
13. America's comparatively modest performance in reducing pollution, and the excessive costs of many of its environmental programs.

Can we do better? Some would look to educational institutions to provide leadership but little has so far been exhibited. Unlike in most other basic institutional areas in society such as health, science, government, business, labor, and law where useful applications to large and small problems are eagerly sought through multiple layers of syntheses and integrations of all received knowledge and techniques, education persists in treating each subject as an independent whole in itself. Twenty-five years after several dacades Whitehead's previously mentioned lament was published about education's sterility, little has changed: algebra, geometry, science, history, languages, literature and the rest all continue to be treated as secular fiefdoms to be insulated against dilutive "propaganda" from neighboring disciplines. Lost in this puristic pursuit is the compounding benefits of the hybrid offspring or the leverage gained from the cross-association of relational concepts.

A Bold Blueprint for Future Higher Education

The author has attempted in this volume to lay out the rationale for an in-depth look at conceptual frames of reference as a desirable first step and basic beginning for a college education and for a more insightful and responsible participation thereafter as a citizen, parent, and career participant in any contributing organization. This conceptual frame of reference, called the Maccordion Format, will visualize the structural, operational, and directional components of our objective, institutionalized society. This frame of reference will incorporate innumerable more specific frames of reference that focus on the widely varying and separate institutionalized activities of modern-day life. The concept of "frames of reference" will be developed in the beginning chapters, leading to development of the acronym "formats," which means "frames of reference for minding (or managing) action and thought systems." Later chapters will fuse the countless specific formats existing for nearly every organized individual and group activity into one all-encompassing format to be called the Maccordion Format, an original term derived from a metaphoric comparison.

Unlike Hegel's approach, which attempted to develop a comprehensive system for "all thought" both objective and subjective as differentiations of consciousness, this approach will concentrate on showing only the more obvious connecting relationships between and among all physical units as they both compete and cooperate in the discharge of their distinctive missions. Elements of phenomenology and other philosophical explanations may be applied later if desired.

To begin progress in the direction suggested by Whitehead, two steps are visualized:

1. The Maccordion Format as outlined in this work is suggested for all college freshmen in order to provide a comprehensive intellectual format to which all or most of their past and future objective learning can be related. It identifies the major dimensions of human interrelationships on both cooperative and competitive levels and sheds light on how the various occupational careers satisfy different needs and aspirations of the individual while contributing to the welfare of society. Thus, it can help in orienting students to make better selections on academic majors and career alternatives.

After comprehending the major outlines of the Maccordion Format through various chapter exercises and classroom discussions, students can then turn their attention to the concluding chapters discussing the role and interplay of principles and applying them to improving the ongoing dynamics of institutional and individual behavior in everyday life as reported in the media. With this grounding in both abstract and applied principles, the students will also be better prepared to look for, comprehend, and understand the more important concepts in future courses while pursuing their baccalaureate degrees.

2. The Maccordion Format might also be the centerpiece of a required senior course during which each student should be required to review the Maccordion Format and write a one-hundred-page thesis (or at least a fifty-page term paper) about how their major and its component courses fit into the holistic frame of reference. Additionally, they should present their ideas on how modified execution or suggested improvements to specific parts of their majors or careers could improve or benefit society at large. Further exercises on applying principles could also be implemented.

By reviewing the overall format near the conclusion of their baccalaureate education, students would benefit from applying their own thinking to their own majors and gain better appreciation of that elusive integrating or synthesizing benefit that is now almost totally missing in today's college education.

It Ain't "Just Academic"—It's the Real Maccordion

So much of today's educational content has been presented piecemeal without integrating linkages and without application handles that the phrases "it's only academic" or "it's just academic" have become modern clichés by which many in all fields dismiss or denigrate as irrelevant large chunks of academic learning. The basic concepts in this volume have been united into a comprehensive frame of reference by which to observe, judge, and modify as needed the ongoing dynamic interplay of major forces in a complicated society. The concluding chapters on principles are regarded as the major means of comprehending and then engineering desirable change to ensure long-run progress. It is hoped the Maccordion Format and the concepts presented therein will contribute to a better understanding of what makes our society tick.

Purpose: To Stimulate Intellectual Growth

With the necessary fortitude one can master individual concepts ad infinitum in today's educational world and eventually become a competent practitioner of whatever and all without understanding the "why" or the connectedness of significant relationships. But a far more basic satisfaction comes from assembling these countless artifacts into a holistic mosaic that represents a society in its various conditions of well-being. It provides the means or the judgmental capacity to become a more learned diagnostician of society's problems.

And the personal satisfactions gained, although not measurable, are enormous. Fresh insights all through life's journey are the bright lights that keep us searching, keep us alive and young in spirit. As syndicated columnist George Will writes: "The process of learning, for which college is today's most luxurious setting, produces delightful astonishments with a wondrous prodigality. But then, all of life is littered with astonishments for adults blessed with a childlike capacity for amazement" (Will, p. A25).

It is to encourage the search for new insights over a lifetime that the Maccordion Format was conceived. It has the capability for different individuals of variously synergizing and/or cross-pollinating and/or providing significance to the many thousands of disconnected thoughts loosely maintained in our memories and file cabinets. Its potential is to restore a better balance between mind and body. To the extent that the mind has been undernourished or stifled and the body overfed through boredom, the Maccordion Format could serve usefully.

Many years ago at Stanford University when the author was awarded his doctorate of philosophy degree in business administration, he received this perceptive advice from a friendly professor: "Good luck in your career: Now you are finally free to begin your real education." At that point the seeds for the Maccordion Format were planted and its growth

was erratic and randomly eclectic. It has been the happiest ride in this lifetime!

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CHAPTER 1

The General Education Context in Perspective

College and university educators have been wrestling with relatively little success during the course of the twentieth century to find ways to distill the wisdom of history into their four-year educational programs and still leave time for occupational specialization. If the four-year mandated cycle could have been expanded to six, eight, or even ten years, the pressure to consolidate so much would have been easier, but they accepted the challenge without attempting to alter the time frame.

Thomas Jefferson had planted well the idea that democracy could survive only if the masses were truly educated and responsibly involved in the running of their country. But what does being "truly educated and responsibly involved" mean in a country dedicated to preserving individual rights and freedoms? What content mastered or what percentage of ever-increasing knowledge should be comprehended in order to be considered "truly educated"? How should evaluation examinations be administered? These and many similar questions without definitive answers suggest that we haven't even begun to address the question of "education for the masses." If the condition of being "truly educated" is considered a prerequisite to becoming "responsibly involved," shouldn't education receive a far higher priority than now exists?

The rapid industrialization and movement into the cities in the latter half of the nineteenth century provided the impetus for growth in the numbers finishing high school and contemplating the prospect of college. Elementary and secondary enrollment in public schools rose from just under seven million in 1870 to over forty-five million by 1970 with the corresponding percentages of enrolled youth aged 5 to 17 rising from 1.2 percent to 86.9 percent over the same time period *(The World Almanac,* p. 195).

For a variety of reasons, eligible young women began attending colleges and universities in rapidly increasing numbers over the course of the twentieth century, thus swelling greatly the total numbers enrolled in those colleges and universities. But general education did not benefit correspondingly because the vast majority of all higher-education students were far more concerned about their personal needs such as occupational specialization, athletics, and the mating game than about general education.

Since it was clearly impossible to require even the most gifted students to read any significant portion of the well-regarded classics in the short period of two years, it was necessary to provide abstracts, abridgments, and consolidations of whatever the experts could agree on as the most important nucleus. Just reclaiming the lost, partly destroyed, and frequently damaged manuscripts over a 2,500-year period was a major task in itself. Translations from the original languages and subsequent editing and reediting into desirable formats for educational purposes continue today.

A Bridge Too Long?

Trying to make the abstract thoughts of Euripides, Plato, Aristotle, and the rest clear to concupiscent youth anxious to live now and get on with their careers was a monumental task doomed to defeat. John Dewey probably sensed this when he advocated in his landmark book on education published in 1916, *Democracy and Education,* that

> Both practically and philosophically, the key to the present educational situation lies in a gradual reconstruction of school materials and methods so as to utilize various forms of occupation typifying social callings, and to bring out their intellectual and moral content. The problem is not that of making the schools an adjunct to manufacture and commerce, but of utilizing the factors of immediate meaning, more connected with out-of-school experience (pp. 368–369).

Both traditional and innovative educational leaders, anxious to find ways to keep the classics in the foreground of college education but also interested in satisfying those wishing to integrate vocational training into the four-year time span, embraced the idea and thus made John Dewey the titular head of their progressive educational movement. Many combinations of general-education courses were spawned but the great growth was experienced in vocational education. Schools of business, nursing, engineering, architecture, journalism, and others were introduced and prospered. It was alleged that the idea of stimulating interest in liberal education by seeing it through the eyes of vocational callings resulted in the runaway growth of vocational training while doing little or

nothing to promote liberal education. Education through vocational training had in fact become education *for* vocational training.

It should be pointed out, however, that John Dewey's unambiguous position sought unity or harmony in the academic territorial struggle and that he was not a partisan of either liberal or vocational education:

> According to his view [that of John Dewey], the intellectual view and the practical, the cultural and the vocational, the consummatory and the instrumental—the means of grace and the means of control—are so organically related in any satisfactory community life that nothing but harm can come from tearing them apart in school (Childs, p. 432).

Straying Away from Educational Basics

The previous section suggested that over some 2,500 years the educational bridge or educational wealth to be absorbed became too long or too complicated or too detailed to be readily acquired by increasingly diverted and disinterested youth. Dewey's proposal to restimulate interest by partially vocationalizing the curriculum may have partially succeeded in the short run of the last eighty years but it may also have led us further away from those educational basics our forefathers had emphasized, namely, the elementary three Rs of "readin', 'ritin', and 'rithmetic." These were long considered to be the essentials to understanding and progressing in any field but especially in those that emphasized the systematic growth of knowledge, generally considered to be science in all of its associated parameters.

Indeed, a quick trip to the dictionary world would reveal that in defining science, *Webster's Third New International Dictionary* (p. 2032) provided one of the more comprehensive definitions:

> 3a: accumulated and accepted knowledge that has been systematized and formulated with reference to the discovery of general truths or the operation of general laws: knowledge classified and made available in work, life, or the search for truth: comprehensive, profound, or philosophical knowledge; esp. knowledge obtained and tested through use of the scientific method.

(By permission from *Webster's Third New International Dictionary,* Unabridged, 1993, Merriam-Webster, Incorporated.)

What could be a more fundamental definition of education and educational goals? And which educational branch of learning has benefited society most by sticking to its central message? Without question, it's science. The growth of knowledge applied via expanding technology has made the United States the envy of the world. So why not encourage wandering youth back into the central definition of education, the science basics and its derivative fields? Why encourage them to dilute their edu-

cations with short-lived vocational "how to's"? Surely, imaginative educators can apply their theatrics and magic to make science appear more attractive to intrigue youth. Hollywood has capitalized on this theme for decades with films such as *Star Wars.*

But over the past seventy-five years, college course curricula have expanded substantially into vocational areas and fostered the growth of many specializations. Indeed, their continued expansion has resulted in a reduction of required science courses in general-education curricula to the point where only a third of colleges and universities require students to take at least one course in the natural sciences. Since most academic administrators received their degrees in non-science fields, there is little support for recognizing the validity of science's claims for academic centrality. Like wandering sheep innocently straying into ever-new pastures, blindly seeking a sort of animalistic nirvana, our intellectual leadership has succeeded in cutting all the shepherding cords of restraint to embark on self-serving missions down noncompounding trails.

With science unbelievably relegated to subservient ranking in most universities, below the liberal arts and vocational studies, we can now take a look at the jousting between these latter two.

The Arguments for and Against Liberal Education

Liberal education is generally considered to be that found in the best thinking in the subjects of philosophy, history, and literature. Its substance assists us in recognizing basic problems, in appreciating distinctions and interrelationships among phenomena and in comprehending or understanding ideas. Its spirit is that of inquiry, of wanting to know for the sake of knowing rather than for the benefits of application, although these will be accepted too. It seeks to answer such universal questions as: What is man? What is the good life? How can man quell or tame his animal nature and emphasize what is good?

No obvious conflict exists between liberal and practical education. They can be complementary as when an expert in educational or business methodology discovers applicable principles in the classics that support his ideas. Or conversely, a classical historian might be able to bring a lesson of history to bear on contemporary problems.

There seem to be no valid arguments against including a generous dose of liberal education into the college curriculum other than that most college-age students are not yet ready or willing to work diligently enough at accepting or understanding it. In its original form, much of it seems convoluted, abstract, and irrelevant to the interests of contemporary students. Many instructors have tried mightily over the decades to bridge this gap but with limited success. Many others succeeded in getting watered-down or compromise-content courses accepted as substitutes. But when increasing numbers of students continued to avoid these

strongly recommended courses, an angry establishment relabeled them as requirements for graduation, thereby encouraging more evasion.

If the long-range goal of education is to unify the world community in the name of peace and progress, however, then more attention should be paid to identifying and shoring up those principles that unite or harmonize us. Liberal education would seem to offer far more hope in this direction than vocational education.

The Time for Closing the Cultural Gap Is Now

The twenty-first century might well be the crucial testing period for a meeting of the minds between Eastern and Western thought, between Eastern and Western cultures. Either significant progress will be made in this direction or the possibility—even likelihood—of massive destruction and chaos looms large. China has opened its doors wide to Western technology but minimally to Western thought. Russia and Central Europe are struggling along, trying to find the handles for increasing economic productivity and a compromise ideology.

The oil-rich countries in the Middle East use their one resource for the wherewithal to shore up their anti-West posturing. The benefits of Western technology are selectively introduced but their general position toward Western thought and ideology remains confused at best.

Clearly, Western technology is being accepted worldwide without much discussion about its impact on the ties that bind or separate us. As the instruments of technology such as transportation and communication systems draw us closer together, it would seem likely that contrary ideological positions would become more important, perhaps ultimately to stifle trade and cause other angry positions to be taken. Regularly we have witnessed technology from the West being used everywhere not only to create powerful weapons of mass destruction but to have those weapons selectively used to "solve" personal problems. This overt reality clearly suggests potentially disastrous covert possibilities.

If we perceive this situation as a threat, there would appear to be at least three major ways to address it: 1) maintain "defensive" military strength; 2) increase attention to educational means of revitalizing liberal education to help defuse the situation; or 3) dismiss the dangers as unrealistic and accept the consequences. We are now in the process of cutting back on military expenditures, although there are still some congressional voices recognizing the threat. The higher-education establishment has not improved its potential contribution to the matrix while the general public seems content to permit the country to coast on its Western leadership laurels and dismiss the potential threat.

Advancing technology has a built-in growth momentum far greater than any ascribable to growth in the understanding of ideological differences that divide us from other cultures. Indeed, our comprehension

of other cultures in the short run seems to be supported mainly by the continuing growth of tourism on a pleasure-bent and shallow basis and in the long run by the much slower process of cultural diffusion. At some point in the future this gap may boomerang back on us such that the technology spear that we helped to launch on the world may come back to harpoon us as in persistent terrorist attacks. Fortunately, there is still an indeterminate time left to close the ideological gap. But new tools will be needed and the time remaining, though perhaps indeterminate, may be relatively shrinking because of the rapid growth of technology and weapons of mass destruction.

The Arguments For and Against Vocational Education

The arguments for vocational education are nearsighted but compelling. We are still committed to the idea that every able-bodied person should earn his own living through useful work. The age of specialization has made useful work far more complicated than formerly. It now requires specialized training, lengthier preparations, and more on-the-job training plus midlife training than ever before. Many are now so consumed by the prospect, challenge, and rewards of vocational education that they regard liberal education as a waste of time. The pragmatic rewards of successful vocational training may be conspicuous when compared to those achieved through liberal-arts education. And since vocational training promises to provide greater economic benefits, it reinforces the strong hold that materialism has already achieved in our culture.

Perhaps the arguments against the dominant position of vocational education in our culture were best presented by Robert Maynard Hutchins when he wrote the following:

> Vocationalism, scientism, and specialism can at the most assist our people to earn a living and thus maintain the economy of the United States. They cannot contribute to the much more important elements of national strength: trained intelligence, the understanding of the nation's ideals, and devotion to them. Nor can they contribute to the growth of a community in this country. They are divisive rather than unifying forces (Hutchins, pp. 61-62).

A Significant Contribution

The author of the above quotation, Robert Maynard Hutchins, was in 1951 the chancellor of the University of Chicago and the editor in-chief of *Great Books of the Western World, a* movement in which he, Mortimer Adler, and other leading intellectuals cooperated in the monumental task of identifying and organizing the format for the collection and publication of those carefully selected books that contributed most to *The Great*

Conversation over the preceding 2,500 years. In order to help tie all of the fifty-four volumes together, a two-volume *Syntopicon* was developed with some 202 broad themes ranging from angel and animal to wisdom and world to help guide the reader with special interests into weaving his own mosaic from the best thinking of the Western world.

Realizing that college-age youth were not generally mature enough to appreciate the philosophical wisdom contained therein, the group aimed the educational challenge at the adult population, with a ten-year suggested reading program starting with Plato in volume 7 and ending with Freud in volume 54. There was instant acclaim as reading and discussion groups started all around the country, many of which continue to this day.

Given the strength of symbolism, especially in a materialistically dominated culture, one can wonder why a prestigious graduate degree, say the MGB for Master of Great Books, was not promulgated and provided as a goal for those still needing incentive to begin, persevere, or finish the great crusade. A timely and provocative question could provide the yearly test for degree seekers and a thirty-page response might be the means by which the top twenty percent or so of applicants earned advanced degrees. A yearly or more frequent publication could reprint the winning essays and thereby contribute to a national debate on significant issues.

Rationale for promoting liberal thought in *The Great Books of the Western World* as opposed to the vocationalism that already was well-entrenched included the following arguments from *The Great Conversation:*

1. The reiteration of slogans, the distortion of the news, the great storm of propaganda that beats on the citizen twenty four hours a day all his life long mean either that democracy must fall prey to the loudest and most persistent propagandists or that the people must save themselves by strengthening their minds so that they can appraise the issues for themselves (p. xiii).
2. Is not the study of occupations the way to hasten the disintegration of such community as still remains, through emphasizing our individuality at the expense of our common humanity (p. 15)?
3. This set of books explodes sociological determinism, because it shows that no age speaks with a single voice. No society so determines intellectual activity that there can be no major intellectual disagreements in it. The conservative and the radical, the practical man and the theoretician, the idealist and the realist will be found in every society, many of them conducting the same kind of arguments that are carried on today (p. 9).
4. His book [referring to John Dewey's *Democracy and Education*] is a noble, generous effort to solve this *humanization of work dilemma* and other social problems through the educational system. Unfortunately,

the methods he proposed would not solve these problems; they would merely destroy the educational system (p. 15).

5. If we are to take the assembly line as the characteristic feature of Western industry, we must regard industrialization as at best a mixed blessing. The monotony, impersonality, and uncreativeness of such work supply strong justification for the movement toward a steady reduction in the hours of labor. But what if the time that is gained for life off the assembly line is wasted, as much of it is today, in pursuits that can only be described as subhuman (p. 22)?
6. Many claims can be made for the American people; but nobody would think of claiming that they can read, write, and figure. Still less would it be maintained that they understand the tradition of the West, the tradition in which they live. The products of American high schools are illiterate; and a degree from a famous college or university is no guarantee that the graduate is in any better case. One of the most remarkable features of American society is that the difference between the "uneducated" and the "educated" is so slight (pp. 44-45).
7. It is impossible to believe that men can long be satisfied with the kind of recreations that now occupy the bulk of their free time. After all, they are men. Man, though an animal, is not all animal. He is rational, and he cannot live by animal gratifications alone; still less by amusements that animals have too much sense to indulge in. A man must use his mind; he must feel that he is doing something that will develop his highest powers and contribute to the development of his fellow men, or he will cease to be a man (p. 53).
8. I do not believe that industrialization and democracy are inherently opposed. But they are in actual practice opposed unless the gap between them is bridged by liberal education for all. That mechanization which tends to reduce a man to a robot also supplies the economic base and the leisure that will enable him to get a liberal education and to become truly a man (p. 23).

And the Divide Remains

Although Hutchins ameliorated his anti-vocationalism stance in the last quotation above by recognizing the complementarity of liberal and vocational education, his posture generally was staunchly pro-liberal. And there remains to this day varying amounts of skepticism by each group, campus by campus, as it questions the worthiness of the other. This skepticism can broaden into positive antagonism elsewhere, such as at Oxford University in 1996 where a thirty-five-million-dollar donation to establish a new business school was met with a flurry of strong opposition from the traditional educational establishment, causing Oxford's parliament to have serious second thoughts about its plans for business edu-

cation. One don called management studies "a phony academic subject, a shallow contemporary shibboleth promoting a noxious cant" (Micklethwait and Woodridge, p. A14).

Fortunately, some more kindly philosophers have been big enough to offer synthetic analyses of this split and John Dewey's position. One of these was Alfred North Whitehead, an acknowledged philosophic leader of the twentieth century. In the following commentary he offers suggestions that comprehend the whole and at the same time contribute to the current and future dialogue between the East and the West. According to Whitehead (p. 477):

> John Dewey is to be classed among those men who have made philosophic thought relevant to the needs of their own day. In the performance of this function he is to be classed with the ancient stoics, with Augustine, with Aquinas, with Francis Bacon, with Descartes, with Locke, with Auguste Comte....As a result of their activities the social systems of their times received an impulse of enlightenment, enabling them more fully to achieve such high purposes as were possible.
>
> He has disclosed great ideas relevant to the functioning of the social system. The magnitude of this achievement is to be estimated by reference to the future. For many generations the North American continent will be the living centre of human civilization. Thought and action will derive from it, and refer to it.

Whitehead was prescient. While it is still too early to judge the magnitude of the achievement still in process, observe how many foreign students have already and still continue to come to colleges and universities in the United States, many from cultures with strong Eastern orientations. Some significant percentage of these have already become leaders in their native countries and have displayed a friendlier or at least more knowledgeable orientation toward the United States, thus making the potentials of harmonious dialogue more possible.

Regarding the latent but occasionally visible hostility between the academic groups favoring dominant vocational education, Whitehead wrote the following:

> Nothing is more curious than the self-satisfied dogmatism with which mankind at each period of its history cherishes the delusion of the finality of its existing modes of knowledge. At this moment scientists and skeptics are the leading dogmatists. Advance in detail is admitted: fundamental novelty is barred. This dogmatic common sense is the death of philosophic adventure. The Universe is vast (p. 478).

The Symbiotic Relationship between General and Special Education\

A few thinkers have made perceptive connections between the two diverse but not opposed emphases in education. John Stuart Mill saw them as complementary (p. 527):

> Men are men before they are lawyers, or physicians, or merchants, or manufacturers, and if you make them capable and sensible men, they will make themselves capable and sensible lawyers or physicians. What professional men should carry away with them from an University, is not professional knowledge, but that which should direct the use of their professional knowledge, and bring the light of general culture to illuminate the technicalities of a special pursuit. Men may be competent lawyers without general education to make them philosophic lawyers—who demand, and are capable of apprehending principles, instead of merely cramming their memories with details.

Needed Now: Education to Bridge the Gap

We can now reach a tentative conclusion that liberal education and vocational education are not so much opposed as that each pursues different ends and that the academic time frame is inadequate to do justice to both. Does this mean that the college or university years should be devoted to career preparation only and that the liberal education should come later, as proposed by advocates of *The Great Conversation?*

Not at all. It is the thesis of this book that ways can be found to conceptualize our society that will enable students to enhance their appreciation of both liberal and vocational education. It will not immediately or directly enable us to ameliorate our cultural differences with the East but it will provide us with a better understanding of our Western society that will enable us to engage in a more knowledgeable and constructive dialogue whenever Eastern leadership is ready. And the overview it provides can improve one's perspective for vocational education. Unfortunately, it will take a whole book to deliver this concept in an orderly way. We begin by looking at the existing situation for general education at selected colleges in the United States.

Searching for Possible Answers

To review the content of courses taught in various colleges and universities throughout the United States, many recent college catalogs were examined to see how the master formats concept to be presented later might fit into a general-education curriculum. The college most renowned for its staunch adherence to a liberal-arts curriculum is prob-

ably St. John's in Annapolis, Maryland. Founded in 1696, St. John's is one of the few colleges in the United States that restricts its offerings to a four-year liberal-arts program based on reading and small seminar discussions of the seminal works of Western civilization. As written in the St. John's College brochure (p. 5), the rationale for liberal education lies in rediscovering

> ...what our ancestors knew: that behind the practical ties theory, that true utility depends on distinguishing means from ends, that economic goods are the means to life but not its sufficient end. In pursuing the useful arts, we have been led back to the liberal arts: the arts of apprehending, understanding, and knowing. It was to teach these higher, and exclusively human, arts that our ancestors founded and endowed the "college of liberal arts".... It is only by discipline in these arts that spiritual, moral, and civil liberties can be achieved and preserved.

Limiting its enrollment to a maximum of four hundred students on both its Annapolis and Santa Fe, New Mexico, campuses, it carries the torch high for liberal education.

While no doubt admiring the courage of St. John's, most other colleges and universities have compromised to include both liberal arts in the first two years and some kinds of preparation for vocational careers in the last two years of their four-year degree programs. *The Swarthmore College Bulletin for 1995-1996* suggests two principles for a liberal education. One is the *principle of depth:* "To make the most of a liberal education, each student must go far enough to grasp systemic connections within a field, to see how fundamental principles combine to make intelligible a range of subordinate principles or phenomena." The *principle of diversity* is needed, the *Bulletin* continues, "to make the most of a liberal education, each student must compare and contrast different methods of inquiry...and so that he can have the experience of making the bright spark of connection leap across wide gaps" (p. 60).

Elaborating further, the *Swarthmore Bulletin* continues: "What we are proposing is a curriculum that leans rather sharply toward specialized diversity and away from uniform generality.... Our emphasis is on serious encounters with special topics and problems at a comparatively high level of competence, and on student programs that reflect individual constellations of diversified interests."

Extensive Education before Intensive

Most college and university catalogs that were reviewed agreed generally on the broad or "extensive" emphasis and requirements in the first two years and the narrower or "intensive" requirements in the junior and senior years. Little was discovered about the desirability of a fourth-year

synthesizing course attempting to recap or integrate the major concepts covered in the preceding three years. The idea is discussed here and there but since we don't have any ready-made integrating tools, the reigning philosophy is to let the students synthesize for themselves if they care to. Analysis has long served as the cutting edge of progress and early became the obsession of academicians. And after all, they rationalized, experience is the best teacher for showing how anything is put together.

Nowhere was found an introductory course attempting to model or holistically present society as it is or was or could be. No single course was focused on the notion of attempting to integrate or conceptualize into a coherent whole the necessary components of either a simple or a complex society. The more ambitious attempts to provide basic depth and breadth in the early collegiate years combined several courses into a sequential series. The 1995-1996 Colgate University Catalog (p. 35) requires four courses in sequence to satisfy its general-education requirements. GNED 101, Roots of Western Civilization, and GNED 102, Modern Experience in the West, comprise the required courses in tier I. In Tier II, students may select a course from a list of approved courses focusing on a single non-Western country or area culture. The third-tier required course may be taken in the third or fourth year after completing the preceding three courses. Students may select one team-taught course from an approved list to explore some problems of contemporary society from a perspective not limited to methods of a single discipline. Thus, it appears that a broad historical sweep provides the context to appraise contemporary social problems.

And out in the West...

The 1993-1994 Pitzer College Catalog requires a minimum four-course introductory exploration of social issues and cultures, individually designed: "each program will bring together the perspectives of at least two disciplines and will explore both another culture and a particular social issue" (p. 10). This plan attempts to combine interdisciplinary perspectives and intercultural understandings while focusing on social and ethical issues.

The 1995-1997 General Catalog for the University of California at Los Angeles identifies 111 indifferent bachelor of arts and bachelor of science degrees plus nineteen other special programs that can be taken jointly with an approved major. Its general education requirements included one course in math or statistics or an introductory course in computers, two courses from different departments in the physical or biological sciences, three courses from the social sciences, and three courses from humanities with a wide selection from the arts, culture and civilization, literature, and philosophy and religion.

Stanford University had been well regarded for its introductory courses in Western civilization until they came under heavy criticism in the 1980s. After much discussion and compromise, the new program outlined in the 1995-1996 Bulletin contains no mention of Western civilization as such. The concept of distribution requirements for students entering after 1991 consists of "...eleven courses certified for this purpose in nine areas with three sequential courses in the Program in Cultures, Ideas and Values and one course in each of eight other subject areas that together embrace all areas of the Undergraduate Curriculum. One of those must also be certified as concentrating on Gender Studies." These requirements "...are also intended to introduce students to the major social, historical, cultural, and intellectual forces that shape the contemporary world" (p. 29).

If indeed we are interested in all those forces shaping the contemporary world, might it not be advisable to start with a model or format of that contemporary world that was so shaped?

Simplifying the Model of Talcott Parsons

Of course, the idea of holistic models to portray the essential functionality of interacting social systems within a society has occurred to earlier cultural anthropologists, sociologists, and other synthesizing social scientists. Foremost and latest among these was Talcott Parsons. In the 1940s he developed a structural-functional concept to simplify the modeling of the organizational complexities of a society. Trained in economics and sociology, he came to believe that both economic and sociological theory should be conceived as standing within some kind of theoretical matrix.

Parsons's approach was based on a four-function paradigm positing that every social system must confront and solve the following four sets of organizational requirements: adaptation, goal attainment, integration and latent pattern maintenance. Three main levels were distinguished in each functional sector: primary-technical or direct interactional, managerial or formal organizational, and institutional or super managerial.

Society itself was viewed as the system at the highest level, which served to link the various institutions together. The result was a three-dimensional model of developed societies where differentiation must be seen in both horizontal and vertical relationships. Complicating easy comprehension of this model is the dynamic that social systems tend to become more complexly organized and specialized over time in such variegated ways that the four-functions system can only partly portray. In addition, Parsons's model does not emphasize enough the role of goal setting and achievement in providing direction for the structure-function interaction.

Desperately needed, but still unrecognized, at the beginning of one's college education, is the explication of a more simplistic model, comprehensive enough, and yet far more easily understood than Parsons's more abstract, comprehensive, and inclusive model.

If You Don't Know Where You're Going...

It is probably not surprising to find little or no use of modeling to convey basic thought structures since communication has traditionally relied on sequential thoughts expressed in words, sentences and paragraphs, chapters and books. Even the language of music uses sequential symbolism. Perhaps the conductor's score of a musical composition showing all of the parts for various instruments or voices comes closest to a conceptual model for a leadership role.

That one picture is worth a thousand words seems to apply more to cartoons and comics than to visualizing aggregated complexities. Graphs, engineering blueprints, maps, and diagrams all have their acknowledged usefulness. Students have constructed United Nations models ever since that organization was founded in San Francisco in 1946. Many varieties of celestial globes depict the heavenly bodies in various ways to enable easier comprehension. No doubt there are other applications of visual models being used to show relationships of interdependent parts in both static and dynamic modes.

Consider, for example, how useful the ordinary terrestrial globe is. By depicting the whole surface of the earth in ordered latitudes and longitudes, we can easily find any particular location and at the same time retain the perspective of the whole in relation to the particular. Note, for example, the attention paid to getting from place to place by traveling the shortest distances in miles or by spending the least time. Road maps provide both distances in miles and average travel times between major locations, thus making transportation more efficient for all who use the information. It is this way of seeing the specific in relation to its whole that is important. Without a comprehensive view of the whole, individual decisions and operations made in partial or total isolation from the entire contextual configuration can and frequently are incomplete, inaccurate, inefficient, ineffective, or in some way counterproductive to the intent desired.

The Blind Leading the Blind

When this occurs, it becomes easier to get lost in social space as contrasted with finding one's way in physical space. Without holistic models to help provide guidance, the unintended consequences of most legislation either destroy or variously limit their beneficial intents. Not only must architects, engineers, and builders use detailed blueprint plans and

specifications for every building construction undertaken, we now enforce environmental impact studies to assure that proposed new construction blends harmoniously or least annoyingly into its local setting. No such tools exist to aid planning in legislating social improvements. We must rely on the "wisdom" or experience of our elected officials, few of whom have any idea of a holistic model to guide them.

The advent of spreadsheets in computer usage gave rise to another kind of simulated model in which many variations of "what if" scenarios can be played out incorporating many different assumptions. They can become excessively complicated, however, as computer capacity to handle data has become practically inexhaustible. Of course, it is easier to depict and comprehend space and spatial dimensions in a model than it is to arrange words in a visual order other than sequential. Indeed, the word models to be described shortly are very clumsy aggregations of classifications juxtapositioned sequentially. But they do represent a start, a beginning. Perhaps the advent of interactive television and virtual reality programming will be able to develop holographic three-dimensional models far superior to my earlier classroom experiment that are easier to comprehend and manipulate.

Throughout this examination of introductory courses for general education, the word "perspective" has been used frequently. Since this is what formats and modeling are trying to provide, let's next examine its derivation and meanings.

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CHAPTER 2

What Is Perspective?

Two of the major purposes of general education are to provide that historical overview of history that will enable us not only to extend the "civilizing process" generally but also help us both individually and collectively avoid or at least anticipate and thereby lessen the destructive impact of natural and behavioral catastrophes that occurred in the past. Because this panoramic view is so highly regarded in providing a general context within which specialized functions are organized and activated, it is important to examine the term "perspective" carefully. Not that we seem to have benefited so much from past experience or reflection but the potential for doing so is still there when we are ready.

Consultation with several dictionaries suggests that it is

1. ...a method of representing solid objects on a plane surface, as they would appear to an observer's eye when viewed from a given point *(Van Nostrand's Scientific Encyclopedia,* p. 1734).
2. Any of various techniques for representing three-dimensional objects and depth relationships on a two dimensional surface *(American Heritage Illustrated Encyclopedic Dictionary,* p. 1126).
3. The relation or proportion in which the parts of a subject are viewed by the mind: the aspect of a matter or object of thought, as perceived from a particular mental "point of view," and "in epistemology, the perspective predicament, the limited though real viewpoint of the individual; the plight of being confined to the experience of only part of actuality" *(Oxford English Dictionary,* pp. 606-607).
4. The relationship of aspects of a subject to each other and to a whole: *a perspective of history: a need to view the problem in the proper perspective (American Heritage Dictionary of the English Language,* p. 1352).

From the Latin *perspicere,* perspective meant literally to see through or into. The term was used extensively by such as Aristotle, Chaucer, Bacon, Shakespeare, and many others. Creation of the first celestial globe has been credited to astronomers of ancient Mesopotamia, Egypt, and Greece. The first terrestrial globe was invented by a Greek astronomer in the second century B.C. The first modern globe was constructed in 1492 by a German, Martin Benhaim. Large wall maps have long served usefully to help us conceptualize the spatial relationships of the oceans, continents, and countries thereon.

While the concept of perspective has long been available and was frequently used by thinkers and writers of all descriptions, its direct and most useful applications remained in scientific fields. Perceptive writers understood the meaning of the term perspective but were limited to sequential words, phrases, sentences, and paragraphs to provide it through contrast, comparison, and other syllogistic techniques.

Contemporary Adaptations of Perspective

Artists in the recent past have capitalized on the "particular point of view" dimension in which a picture or figure is constructed so as to produce some fantastic effect such as appearing distorted or convoluted except from one particular point of view. Picasso, Salvador Dali, Alexander Calder, and others started new schools of painting with this technique. The concept of perspective has been applied to sound as well with an apparent spatial distribution in perceived sound now greatly modified by electronic enhancement. Seemingly endless combinations and special emphases of melody, harmony, rhythm, and timbre continue to capture the imaginations of youth and others seeking refreshing musical sound. Many future adaptations of perspective await us with the further development of its various dimensions in aerial, isometric, linear, parallel, oblique, and conical modifications.

Perspective in Daily Life

A kind of perspective is sought almost automatically in many ways in the daily living cycle as a sort of reflex or balancing action such as stretching after a long period of confinement or being cooped up in one position. Dogs and cats do it after hours of sleeping. It provides healthy reactions to the continuous activities of daily life that without such relief often lead to either excessive boredom on the job or stressful tension produced by excessive strain. It provides a balancing readiness for the next challenge, whether it be in the decision-making arena that comes from thought, or a round of activity on the sporting front, or simply organizing oneself for efficiency on a simple shopping tour. Being ready for the next event is a primary organizing device for effectiveness in the dance of life.

Without analyzing why, we instinctively seek out the activity, place, or company that is the near opposite of our previous focus. If we live in the busy city, we enjoy picnics in the more peaceful country. If we're country folk, we enjoy occasional romps into the faster-paced city. If we live in mountainous country, we enjoy going to the oceanside and vice versa. If we're cooped up in an office all day, we may use humor to counter the deadly seriousness during working hours and before seeking balancing perspective through that relaxing early-evening cocktail, by exercising strenuously at the local gym, by taking a college-extension evening course, or simply by engaging in a drag-out poker game with the old gang. When we get tired of eating pasta dishes, we switch to meat or fish or fowl or become vegetarians for a time. Certain sporting activities provide sharp contrast to normal living such as golfing, swimming, skiing, scuba diving, fishing, and many others, all of which become proportionally more attractive as the work or other daily routine becomes more boring or otherwise overextended.

Perhaps a distinction should be made about the character or quality of diverting contrast sought in our nearly unconscious efforts to lead the good life. These changes of pace or venue may range from positively constructive venting or ameliorating patterns to negatively damaging and destructive practices. All mentioned above when indulged in moderately are perceived to be on the constructive side. Excessive reaction to on-the-job stress may induce some more emotionally unstable people into seeking balancing relief through such activities as excessive consumption of alcoholic beverages, reckless driving, excessive gambling, promiscuous sex, illegal drug consumption or trafficking, even fraud and assorted other crimes.

Most such changes of pace and activity occur on the physical plane and in the present. Television, the theater, or the reading of history books or fiction can transport us to another time and place and thereby put some beneficial space and time between then and now. Music can take us into other worlds where contemporary problems may be temporarily forgotten. And finally, there is sleep, beautiful blissful sleep, where we can dismiss today and be bugged only by our ever-present unconscious in the form of dreams.

Thinking and Living "Inside the Box"

It is with the relationship of perspective to the individual mindset, however, that we are most concerned in this volume. Each of us is born into a particular subset of cultural traditions and definitions and we develop our early frames of reference from the concepts and ideas presented to us and in many cases "trained into us" from our immediate families, the family-selected or family-inherited church and the neighborhood schools we attend. Each of these institutions works to the extent of its current ca-

pabilities to bestow and/or imprint its value systems on the youth under its care. Most would agree that "current capabilities" are not what they were several generations ago and that today's youth has a far different and broader collection of mindsets. The former disciplined, training-oriented and generally more highly structured environment has been replaced by variously modified programs designed to cope with the emerging realities of advancing technology, population growth, and faster change in new directions than these institutions can comfortably manage.

At first, we conform more or less willingly to whatever course in "introduction to life" we receive because of the love extended and/or the sanctions imposed, and then gradually over the years we learn to understand more about behaving within this framework and also within the legal prescriptions that society has ordained for us. Thus, imperceptibly, our little "box" of reality grows larger with the added years. Most of us are content to think and live by the central norms and conventions that we inherited and learned with perhaps minor adjustments later to accommodate marriage and career. It is with this set of "normal" expectations that we pass judgment on the passing parade of events in our lives.

But wait! What we perceived as normal or conforming to our expectations continues to change, albeit more slowly as we advance into the upper levels of the life cycle. For the great majority, the views or perspectives we held as firmly sacrosanct when teenagers gradually evolve into more accommodating views in middle age and into broader postures still as senior citizens. Various combinations of peer pressure, experiential history, and adaptive flexibility unite to alter our original endowments. The process, however, is highly variable among individuals and imperceptible overall to most of us. Thus, we may appear to project firmly held views on this or that even though our perceptions of the matter have changed and we no longer believe in our former positions so strongly. In order to be perceived by others as reasonably consistent, however, we become adept at changing our positions so gradually or so cleverly that in many cases we even fool ourselves. And so, for a lifetime, we try to maintain a face-saving consistency by judging life's events from perspectives originally obtained from living "within the box," our original mindset positions. Our actual positions do change variously over time, however, and often more than others perceive in our reactions or behavior.

To show this attitudinal change in perspective, compare the posture held by most youth in regard to gardening or to cultivating plants and flowers to that held by many if not most older people. The process is far too tedious and the rewards far too slow in developing to intrigue youth. Over the years, however, some combination of processes works on some of us to increase interest in what we originally disdained and to decrease interest in that to which we were initially attracted. Reflect on the at-

traction that the thrilling rides and daring-do amusement parks have for youth while most older people smile indulgently and prefer just to watch.

Thinking and Living "Outside the Box"

Not all thought and behavior take place inside the box of traditionally received reality with which each of us is initially primed. Indeed, in a country so enriched by continued immigration and the resultant wealth of differing views of reality, much if not most of our thinking and behavior after we leave the family home must take place "outside the box" we inherited and developed in early life. Since we must increasingly interact with others possessing widely varying sets of perceived reality based on their ethnic roots, religious beliefs, and traditional customs and mores, we must learn to adapt by searching for common ground and by finding behavioral patterns that respect the rights of others while also serving mutual ends sought. Thus, we have become variously agile "jack-in-the-box" or perhaps "jack-out-of-the-box" athletes and many may have jumped so far as to never return to their original boxes.

This can be done passively such as when tourists visit foreign countries and observe their differing ways of meeting life's challenges with the resources available to them. So great is our curiosity to do this that commercial tourism has become one of the largest industries in most receptive countries. Or consider the treat attraction of science fiction, space-age stories, the theater and movies that regularly provide us with adventure and excitement beyond our everyday experience. Somewhat more active proselytizing may take us outside our original boxes when we join groups such as political parties or evangelizing religions or missionary sales teams that adopt expansionist activities to gain new members or to increase their sales. In these cases we may attempt to persuade others to adopt our causes or join our crusades.

This attempt to get others to think and act like us or like those in our box, to get others to drop comfortable "inside their box" mindsets and join our causes can get quite uncomfortable for those being pursued, depending on the vigor of the persuasion used. An example of this is when rabid supporters of a political cause or candidate use your friendship excessively as leverage to gain your support. Or if the minister of your church uses his pulpit to argue for an unpopular cause. Or when a gay son in a straight family insists on bringing his partner home for social events against the preferences of some members of his family.

This imposition of one set of values on others occurs among organizations also, even up to situations in which our federal government insists that continuing good trade relations with other countries depends on their adoption of certain human rights, ethical standards, or nuclear proliferation guidelines. The United States has coupled its trade position with a number of these desirable but questionable initiatives in dealing

with other countries. But when these countries balk at such restrictions as a challenge to their sovereignty, we have little choice but to back down. And in a bit of clever one-upmanship, they have correctly pointed out that families in their cultures are far more cohesive and protective of their children than we in the United States. Some Muslim countries in southeast Asia, especially Iran and Iraq, have felt so pressured to adopt Western living patterns that religious and other fiercely nationalist leaders succeeded in gaining political control that they use to maintain their cultures with a minimum of Western influence or interference.

This Shrinking World

Given the tensions and frictions caused by increasingly interdependent nations in a technologically dominated age, it is imperative we find ways to bridge the barriers between East and West. It will be necessary to find ways to improve the quality of communication along with the advances in its technology.

Since all thinkers and writers to the present have relied on narrative discourse to communicate their ideas, educators in charge of general education have had no choice but to use the materials available. Perhaps their frequent use of the very term "perspective" suggests an increasing need or desire to present more compactly the hills and valleys of contrasting ideologies and methodologies. If so, it is hoped that the present volume, clumsy and awkward though it is, will constitute a jump-start in the direction of word modeling or concept formatting to make that "bright spark of connection cross wide gaps."

Why Perspective Is Needed Now

Better perspective has always been sought but has become more important than ever and not just for better integration among the nation states alluded to above. A growing number of disaffected countries now have nuclear capability and what some perceive as unstable leadership. This may be identified as the major problem "outside the box." But the challenges "inside the box" may be even more insidious and dangerous although not so obvious. Several trends have gained considerable momentum over the preceding centuries and decades and now require better perspective to see them in contexts clearly enough to combat the dangers they present. Among them the following are dominant:

1. The compounding of knowledge in the last five hundred years or so.
2. The accelerating rates of technological and social change that produce increasing confusion in individual and group value systems.
3. The rising but hidden costs of education.

Let us look at each.

The Compounding of Knowledge

Knowledge is generally considered to be justified or justifiable true beliefs. While a considerable part of one's personal knowledge may be intuitively accepted faith or beliefs, the vast growth in knowledge in the recent past has been derived from science and technology where facts may be verified by reproducible experiments. Until the advent of the modern scientific revolution, the mental inventory of most people must have been composed mainly of nonverifiable and intuitively accepted ideas as suggested mainly by the persuasive and/or authoritative leaders representing the activities of religion, government, and commerce.

Factual knowledge had grown so abundant by the 1700s that Diderot in France and then leaders in the Scottish Enlightenment period deemed it necessary to compile the first encyclopedias. The first edition of the three-volume *Encyclopaedia Britannica* was not fully assembled and published until 1771.

The proliferation of special-interest encyclopedias has grown since then to cover so many specific fields that in 1986 Libraries Unlimited published a 570-page *Guide to Subject Encyclopedias and Dictionaries.* In the introduction its editor, Bohdan S. Wynar, wrote:

> This book offers a representative selection of subject dictionaries that will be useful in the reference and information process of libraries of all types Most of the material was carefully selected from *American Reference Books Annual (ARBA)* which in the past seventeen years has reviewed over 28,000 titles, including about 3,500 subject dictionaries and encyclopedias.

More than four hundred professors, librarians and educational administrators contributed reviews of each listing to the volume, which includes such titles as:

Encyclopedia of American Agricultural History (467 pages)
Encyclopedia of Electric Circuits (760 pages)
Harvard Encyclopedia of American Ethnic Groups (1076 pages)
Kirk-Othmer Encyclopedia of Chemical Technology (25 volumes)
Encyclopedia of Electrochemistry of the Elements (15 volumes)
The Modern Encyclopedia of Russian and Soviet History (50 volumes)
New Encyclopedia of Sports (543 pages)
The Illustrated Encyclopedia of Aviation (20 volumes)
The International Wildlife Encyclopedia (20 volumes)

Clearly, factual knowledge has compounded at some astronomical rate and in doing so has correspondingly limited our perspectives of the whole domain and the interrelationships of each component therein. Many technologies have expanded and continue to break off into subset branches requiring encyclopedic treatment to cover just the subset area. As research in all its forms continues, we can be assured that the growth

of verifiable knowledge will continue to accelerate. And, if current trends continue, most of us will be compelled to become ever-narrower specialists vocationally and probably avocationally as well.

Hero to the Rescue: The Mighty Textbook

Educators, confronted with the tradition-bound time frame and degree structure for a college education, have packaged and repackaged the increasing flood of published data. Ever more sophisticated textbooks in every field have become the handles by which students carry their preparations into the future.

Granting that the textbook approach to synthesizing knowledge has more or less attuned tens of millions for successful careers and that it has served brilliantly in doing so, we must still inquire as to whether it will continue to do so. The growth in material for textbook coverage continues to accelerate, forcing ever more frequent textbook revisions. Where revised editions formerly replaced their predecessors only every generation or so, they now succeed each other every three to four years. Over time, therefore, we provide ever more coverage in depth and less in breadth, thus giving credence to the observation that today's expert is one who knows more and more (depth) about less and less (breadth).

As the specialized technical composition of most college textbook titles has continued to narrow just to cover their newer but essential components, the more descriptive and historical background covering the evolution of that specialty has shrunk. Such specialists are losing the former educational "breadth" of their specialty. As a consequence of this continuing focus, we have lost touch not only with the historical general education breadth but also now the former breadth of our specialties. At some point in this continuing process, useful perspective may totally disappear.

While many retired professors are prone to criticize some of these textbooks for their perceived overemphasis here and neglect there, they represent admirable compilations and syntheses of vast collections of data, ideas, experiences, and anecdotes. Indeed, without them, students would have been forced back into reading great works in their original or abridged form and the task of career preparation would have been assumed by pre- and post-graduate technical schools or perhaps taken over by the various organizational entities themselves.

Fortunately, computer networking in interactive modes will help here and feverishly competitive activity is now under way to provide an alternative to the textbook. Experiments at all levels of education are now searching for ways to integrate the computer and its Internet capabilities to the benefit of education. Most students at all levels enthusiastically embrace the computer and its potentials. After all, the computer involves action and the use of more senses than only listening, which has always

been the "donnybrook" of most classroom teachers in the lower grades. Since most youth were introduced to the computer via games and other heroic simulations, they embrace its action-orientation in a positive fashion.

Within the next generation, this alternative will enable any student at any time to call up whatever information is needed for learning purposes. However, we still need not only better classroom integrating formats and models than sequential courses in interdisciplinary studies, we also need better knowledge-filtering mechanisms so that the old computer concept of GIGO (garbage in/garbage out) doesn't drown us. At the present time there is a huge and growing amount of distracting and diversionary material designed to entice youth in wayward directions.

The Acceleration of Social and Technological Change

The market system has succeeded in raining down on its beneficiaries an astonishing standard of living. The interplay of the vastly increased knowledge base, plentiful capital, venturesome entrepreneurs, willing labor, and abundant natural resources all harnessed by an abiding work ethic and sense of progress combined to produce an explosion of goods and services to "improve" our scale of living. The majority of us in the United States and industrialized world have ridden this vehicle skillfully and benefited correspondingly. Now it has grown into a mammoth steamroller that is threatening to flatten the institutional base on which our abundance was built. As the cult of materialism has taken over, more and more of us aspire to ever greater affluence and willingly do whatever we think it takes to achieve it. Other values have suffered in their execution if not in avowed rhetoric.

In the post-World War II era in the United States more working mothers have contributed to growth of the suburban home and two-car garage. But in too many cases the family's children were left without sufficient care and guidance to maintain their parents' momentum in capturing more of the "goods" life. As youthful alienation and resistance mounted, discipline in the schools eroded. Not only did the quality of education decline markedly but a whole raft of wayward trends descended on an unsuspecting public. Child neglect and abuse have contributed substantially to growing social problems involving alcohol and drug abuse, homelessness, irresponsible parenting, AIDS, random violence, growing theft, rape, and other assorted antisocial acts.

Most of our basic institutions are operating under severe stress and failing to maintain healthy national profiles in the services they provide. With notable exceptions, these include the institutionalized units of government, education, religion, and especially the nuclear family as we have idealized it. The confluence of ongoing social and technological changes has disrupted the unity, harmony, and bases of economic support for the

family. To the extent that the nuclear and extended family provide these supporting elements, social problems might at least be contained. But home-life conditions are worsening. A recent U.S. Census Bureau report shows that the percentage of married couples with children living in single households declined from 40.3 percent in 1970 to 25.5 percent in 1995 (McLeod, p. A15). This can only result in further decline in the nurturing conditions for youth.

Schools have become massified and depersonalized to such an extent that too many individual children have lost the incentive to take their studies seriously. There are simply no other good substitute objectives for young children. They must take their studies seriously or they will seek to escape in wayward activities that too often lead to deteriorating values and poor performances later in marriage, family life, and career.

A Time for "Tough Love"

A return to stronger discipline and training emphasis in elementary schools is needed but may not be enough. Youth needs better rationale or incentives for continuing to focus on studies that frequently appear irrelevant or purposeless. Worse, the word "boring" seems to summarize a majority of students' attitudes toward their studies. Why are they bored? Is it because they fail to appreciate the meaning and significance connecting their studies to real-life situations? Isn't it the challenge of educators to bridge this gap with connections that students can understand? Attention to models and formats should be combined with smaller classes, computer technology, tightened discipline, fun projects, and especially more dedicated teaching to help maintain student attention and interest in subject matter. Many combinations of these elements are possible for flexible and innovative applications but the prevailing mentality produced by bureaucratic malaise and teacher burnout stifles their implementation.

To be fair, both groups of administrators and teachers have been stretched to the breaking point by the vastly increased demands of orderly housekeeping, record-keeping maintenance, and especially disciplinary procedures for its increasingly neglected and therefore belligerent, rebellious, and confrontational youth. And as a consequence of deteriorating educational results, society sees no compelling reason to increase teachers' salaries above minimal levels.

It is clear that the school's ability to accept or absorb the increasing overflow problems from broken family arrangements and uncontrollable immigration has been overextended under the current educational setups. It is possible, however, that under radically revised educational programming, a substantial improvement could be made to reduce existing and future social problems.

The Dangers Inherent in Just Coasting Along

In a competitive and predatory world the maintenance of a healthy balance among basic values is the soundest long-run strategy for progressive survival with improving conditions. Technological leadership capable of diversion into weapons development may be a strong deterrent against potential aggressors from outside. The growth of individualism and materialism spilling over into hedonism, however, may eat away at the other core values sufficiently to bring about enough moral decay to cause internal collapse before external challenge.

A number of recent books by concerned authors and analysts warn us of the dire possibilities. The titles alone suggest their alarming content:

- *The United States of Incompetence,* by Art Carey, 1991.
- *America at Century's End,* by Alan Wolfe (editor), 1991.
- *The New Individualists: The Generation After the Organization Man,* by Paul Leinberger and Bruce Tucker, 1991.
- *Money, Murder and the American Dream: Wilding from Wall St. to Main St.,* by Charles Derber, 1992.
- *The De-valuing of America: the Fight for American Culture and Our Children,* by William J. Bennett, 1992.
- *Dumbing Down: Essays on the Strip-Mining of American Culture,* by Katherine Washburn and John Thornton, 1996.
- *Slouching Towards Gomorrah,* by Robert Bork, 1996.
- *Life Without Father,* by David Popenoe, 1996.

The Rising Costs of Education-Assisted Social Problems

Unfortunately as a nation, we will probably be able to continue supporting the present education budget into the foreseeable future at the same expenditure levels plus costs of yearly inflation as we have in the past. This will continue to hide the scandalous true costs of our national educational catastrophe, which should include actual federal, state, and local government costs for education at all levels plus the very large public and private costs in policing, monitoring, and financially supporting the whole range of social problems caused by the maladjusted who were permitted to drop out of our poorly designed nurturing and educational lifeline networks for children.

It could be argued that the basic or core problem is breakup of the traditional family unit and its nurturing capabilities for youth. But the family unit has been breaking up all through the latter half of this century and no clear pattern for social stability or community has emerged. How and with whom people choose to live is probably not a government-controllable item in a democracy as free and affluent as that of the United States. Given the state of new-combination families, single-parent families, abandoned children, and other sorry aspects of the modern

American family, it is unrealistic to expect any dramatic short-run improvement in the nurturing capabilities of families so stressed out. One emerging remedy is the growth of well-managed daycare centers into which the more affluent and caring parents can deposit their offspring. But the curative emphasis should be on prevention rather than remedy.

It is the thesis of this work that the better perspective provided by a formats model will help to clarify contemporary problems. To whatever extent this proves true, problems such as educational reform, among others, may be better perceived and acted on. It is hoped deeper insight provided by modeling the whole society will show us more clearly just where major imbalances and deficiencies exist and where remedial corrections and preventive restructurings might better be made. The growing specialization on all occupational fronts combined with a "live now before it's too late" materialistic bent coupled with increasingly hedonistic indulgences make it harder than ever to see the big-picture forest because of all the local and alluring trees surrounding us.

The Failure of Short-Term Educational "Fixes"

From educational "statesmen" to "educationist tinkerers," many influential change engineers have been allowed to experiment with educational curricula but with varying and generally ineffective results. None has succeeded in a major way in reversing our educational deterioration. Although increased financing would help, it alone would be inadequate. Needed are basic ideas comprehending the entire social, technological, and moral structures in ways designed to facilitate integration and synthesis. Well-intentioned "fixings" here and there are insufficient.

One such approach supporting the hypothesis of this volume is that proposed by the wide-ranging and brilliant biologist Edward O. Wilson. In his recent book *Consilience: The Unity of Knowledge,* Wilson writes (p. 8):

> Consilience is the key to unification. I prefer this word over "coherence" because its rarity has preserved its precision, whereas coherence has several possible meanings, only one of which is consilience. William Whewell, in his 1840 synthesis *The Philosophy of the Inductive Sciences,* was the first to speak of consilience, literally a "jumping together" of knowledge by the linkage of facts and fact-based theory across the disciplines to create a common groundwork of explanation. He said, "The Consilience of Inductions takes place when an Induction, obtained from one class of facts, coincides with an Induction, obtained from another different class. This Consilience is a test of the truth of the Theory in which it occurs.

Wilson makes the following major points in his evaluation of higher education and its future prospects:

1. **The greatest enterprise of the mind has always been and always will be the attempted linkage of the sciences and humanities. The ongoing fragmentation of knowledge and resulting chaos in philosophy are not reflections of the real world but artifacts of scholarship (p.8).**
2. **Disciplinary boundaries within the natural sciences are disappearing, to be replaced by shifting hybrid domains in which consilience is implicit. These domains reach across many levels of complexity, from chemical physics and physical chemistry to molecular genetics, chemical ecology, and ecological genetics. None of the new specialties is considered more than a focus of research. Each is an industry of fresh ideas and advancing technology.**

   Given that human action comprises events of physical causation, why should the social sciences and humanities be impervious to consilience with the natural sciences (pp. 10-11)?
3. **The unification agenda does not sit well with a few professional philosophers. The subject I address they consider their own, to be expressed in their language, their framework of formal thought. They will draw this indictment: *conflation, simplism, ontological reductionism, scientism,* and other sins made official by the hissing suffix (p. 11).**
4. **In his 1941 classic Man *on His Nature,* the British neurobiologist Charles Sherrington spoke of the brain as an enchanted loom, perpetually weaving a picture of the external world, tearing down and reweaving, inventing other worlds, creating a miniature universe. The communal mind of literate societies—world culture—is an immensely larger loom. Through science it has gained the power to map external reality far beyond the reach of a single mind, and through the arts the means to construct narratives, images, and rhythms immeasurably more diverse than the products of any solitary genius. The loom is the same for both enterprises—for science and for the arts, and there is a general explanation of its origin and nature and thence of the human condition, proceeding from the deep history of genetic evolution to modern culture. Consilience of causal explanation is the means by which the single mind can travel most swiftly and surely from one part of the communal mind to the other (p. 12).**
5. **In education the search for consilience is the way to renew the crumbling structure of the liberal arts. During the past thirty years the ideal of the unity of learning which the Renaissance and Enlightenment bequeathed us has been largely abandoned. With rare exceptions American universities and colleges have dissolved their**

curriculum into a slurry of minor disciplines and specialized courses. While the average number of undergraduate courses per institution doubled, the percentage of mandated courses in general education dropped by more than half.... The trend cannot be reversed by force-feeding students with some-of-this and some-of-that across the branches of learning. Win or lose, true reform will aim at the consilience of science with the social sciences and humanities in scholarship and teaching. Every college student should be able to answer the following question: What is the relation between science and the humanities, and how is it important for human welfare (pp. 12–13)?

6. There was another, humbler reason for the lack of interest in the big picture. Scientists simply didn't have the requisite intellectual energy. The vast majority of scientists have never been more than journeymen prospectors. This is even more the case today. They are professionally focused; their education does not orient them to the wide contours of the world. They acquire the training they need to travel to the frontier and make discoveries of their own, and as fast as possible, because life at the growing edge is expensive and chancy. The most productive scientists, installed in million-dollar laboratories, have no time to think about the big picture and see little profit in it (pp. 38–39).
7. Professional scholars in general have little choice but to dice up research expertise and research agendas among themselves. To be a successful scholar means spending a career on membrane biophysics, the Romantic poets, early American history, or some other such constricted area of formal study (p. 39).
8. Fragmentation of expertise was further mirrored in the twentieth century by modernism in the arts, including architecture. The work of the masters—Braque, Picasso, Stravinsky, Eliot, Joyce, Martha Graham, Gropius, Frank Lloyd Wright, and their peers—was so novel and discursive as to thwart generic classification, except for this: The modernists tried to achieve the new and provocative at any cost. They identified the constraining bonds of tradition and self-consciously broke them. Many rejected realism in expression in order to explore the unconscious. Freud, as much a literary stylist as a scientist, inspired them and can be justifiably included in their ranks (pp. 39-40).
9. *Culture is created by the communal mind, and each mind in turn is the product of the genetically structured human brain. Genes and culture are therefore inseverably linked. But the linkage is flexible, to a degree still mostly unmeasured. The linkage is also tortuous: Genes prescribe epigenetic rules, which are the neural pathways and regularities in cognitive development by which the individual mind assembles itself. The mind grows from birth to death in absorbing parts of the existing culture avail-*

able to it, with selections guided through epigenetic rules inherited by the individual brain (p. 127).

10. The brain constantly searches for meaning, for connections between objects and qualities that cross-cut the senses and provide information about external existence. We penetrate that world through the constraining portals of the epigenetic rules.... In order to grasp the human condition, both the genes and culture must be understood, not separately in the traditional manner of science and the humanities, but together, in recognition of the realities of human evolution (p. 163).
11. There is also progress in the social sciences, but it is much slower, and not at all animated by the same information flow and optimistic spirit (as in medical science). Cooperation is sluggish at best, even genuine discoveries are often obscured by bitter ideological disputes. For the most part, anthropologists, economists, sociologists, and political scientists fail to understand and encourage one another (p. 182).
12. Everyone knows that the social sciences are hyper complex. They are inherently far more difficult than physics and chemistry, and as a result they, not physics and chemistry, should be called the hard sciences. They just seem easier, because we can talk with other human beings but not with photons, gluons, and sulfide radicals. Consequently, too many social-science textbooks are a scandal of banality (p. 183).

But Slow Down, Mister!

Despite the many insightful statements (taken out of context) both above and throughout his work, Wilson's ideas received a vote of no confidence from a respectable source. Well titled as "Biosocial Speculations: The Gene Is Jumping," the review recognizes Wilson's outstanding career achievements and the concept of the book as being "remarkable for its scope and ambition" (p. 15) but adds "Mr. Wilson hopes beyond hope that the next century will see a much broader consilience, one that will knit the social sciences, and perhaps even the humanities, firmly into the natural sciences..." (p. 16). After identifying a few stumbling blocks to achieving this potential, the reviewer concludes that "this book is a mishmash," "less than the sum of its parts" and "not an auspicious beginning for the programme of consilience" (p. 16).

Of course it is a book reviewer's job to analyze and judge the strengths, weaknesses, and potentials of books assigned for review. Unfortunately, the reviewer assumed that Wilson's book on consilience was "...his blueprint for how such a great unification of human endeavor might come about" (p. 16). One might just as easily assume that Wilson had no thoughts about detailing a blueprint but rather was merely trying

to generate a spark of interest in the consilience idea, to encourage others of like interests to reach out and cross borders to help break the academic gridlock.

This volume also is not a "blueprint" but mainly a foray into uniting some major disparate elements in the social sciences and humanities into a more comprehensible whole. Wilson's vision is far more sweeping by thinking to merge the physical sciences with the social sciences, humanities, and liberal arts in general. That such an all-inclusive concept should be promoted by a physical scientist is remarkable in that most contributions to knowledge from science stem from the reductionist focus, which consists mainly of the breaking apart of nature into its constituent elements through the use of layers and layers of analysis on even more analysis. Synthesis or consilience works in the opposite direction and in the academic world has grown conspicuously short in supply. An interesting exception might be in the practical world of technological product adaptation where the enticing presence of profit incentives creates a strong motivation to adapt new knowledge to create and assemble new products. Perhaps the incentives to encouraging consilience in the social sciences and humanities need corrective attention.

The Dawn of a New Academic Era?

In addition to the stir created by E. O. Wilson's illuminating discourse on consilience, there is some evidence that we are on the right track as other social scientists are struggling with the same need for better perspective. *The Chronicle of Higher Education* reported in its April 5, 1996, issue (p. A8) that a Portuguese foundation under the leadership of a sociology professor from the State University of New York at Binghamton has sponsored a three-year study "...to consider ways in which the traditional social-study disciplines, especially the boundaries between them, might be reconceptualized." An interim report published by the Stanford University Press in 1996 suggested more interdisciplinary interaction with professors holding joint appointments in two departments. The coming stage two calls for "more deliberation."

And still another hopeful venture into interdisciplinary potentials has been initiated at Duke University through a twenty-million-dollar grant given by alumna and trustee Melinda French Gates (wife of Bill) to encourage up to eighty carefully selected young students "to pursue their intellectual curiosity across disciplinary boundaries." According to William Chafe, dean of Trinity College at Duke, "a lot of universities function like silos, each silo with its separate disciplines. We want to build bridges between those silos" (Arenson, Karen W., p. A27). The program, which began in the fall of 1999, will try to meld or synthesize diverse student interests into more unified wholes. This is something Melinda Gates found lacking at Duke where she double-majored in economics

and computer science while also taking a heavy dose of art and literature courses—and all before earning her MBA degree in a fifth year.

"And a Little Child Shall Lead Them"

A sobering insight recently surfaced in the author's mind when an innocent incident with a very cute granddaughter took place. It occurred around a Christmas tree at a preholiday gathering when this seven-year-old spontaneously arranged spur-of-the-moment gifts before each of the adults present. As we "oooh'd" and "ahhh'd" appreciatively and thanked her for her generosity, her grandmother launched into a lecture on how it was better to give than receive gifts. Her little face frowned over the language and thoughts and she asked, "Why ?" but then responded brightly after placing her hand over her heart: "Maybe I *know* what you mean, Grandma, because I *feel* so warm inside."

This play of events and language triggered the thought that perhaps we've again placed the cart before the horse by attending so much to formal education in terms of knowledge and the manipulation of words and numbers while at the same time neglecting that other wellspring of insight, feelings and the senses. Surely to continue generating the needed higher levels of brotherly love, international harmony, and world peace, we will need to encourage all facets of understanding and compassion. There is ample evidence that simply knowing what should be done is frequently insufficient as means to accomplishing complex ends sought. The knowing must be accompanied by the right balance of motivation, concern, and generosity of spirit. To meet this challenge, all institutions have major roles to play and must become reorganized and reinvigorated to contribute better. As one of those major institutions, education must work to find a better balance between general or liberal education and its current focus, vocational education or training. While admittedly "light" on the role of the senses and feelings in contributing to restoration of the balances needed, it is hoped that the formats concept presented in this book, combining more liberal thought with vocational applications, may be a step in the right direction.

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CHAPTER 3

From Boxes to Formats

In the previous chapter reference was made to how we learn to think and behave when guided by precepts bestowed on us in early life, mainly by our parents, church, and school. These "inside the box" reality benchmarks established the early basic foundation on which our continued growth after leaving home added still more concepts while modifying some of the earlier precepts to develop our ongoing individualized "outside the box" way of looking at the world. It is with this combination of "inside the box" and "outside the box" perceptions of reality that we respond to the challenges and opportunities of daily life. However, more analysis is needed to understand just how we come to grips with the specific problems and/or opportunities we face. The concept suggested for this experience is formats.

"Formats" in this book is an acronym for *frames of reference for minding action and thought systems.* Many alternative terms could be substituted for that most inclusive verb form "minding," depending on one's specific focus or general orientation. Managing, mastering, monitoring, mixing, matching, merging, meshing, mediating, mounting, and moving are a few options that have positive connotations. Maneuvering and manipulating are terms suggesting duplicitous thinking in the use of frames of reference. The term "minding" was selected because it suggests becoming more "mindful" or attentive in applying usefully the wide range of available thought through the application of frames of reference to different situations, a skill we hope to advance in this work. The mind, of course, refers to the totality of conscious and unconscious thought, perception, feeling, will, memory, and imagination available to human kind.

It takes only a little thought to appreciate the importance of such frames. Take, for instance, the necessity of knowing the rules of baseball or bridge to understanding and playing those games. Of knowing the tax codes to understanding and calculating our taxes or of having learned the social conventions for understanding and relating acceptably in society. Where would we be without such frames to provide orientation for our thoughts and behavior?

One can turn enjoyably to the confused world of *Alice's Adventures in Wonderland* and *Through the Looking Glass* (p. 172) for delightful scenarios of a topsy-turvy world without customarily useful frames of reference:

> "I don't understand you," said Alice. "It's dreadfully confusing!"
> "That's the effect of living backwards," the Queen said kindly: "It always makes one a little giddy at first—"
> "Living backwards!" Alice repeated in great astonishment. "I never heard of such a thing!"
> "—but there's one great advantage in it, that one's memory works both ways."
> "I'm sure mine only works one way," Alice remarked. "I can't remember things before they happen."

What kind of world is this Wonderland where Alice had to adjust herself to a life without predictable conventions or laws of nature? Or at least to adjust to totally different laws? How confusing in Looking-Glass Land to be governed by laws to which she was unaccustomed. To learn, for example, to walk away from a place to reach it or to run fast to remain in place. In addition to being young and adaptable, Alice must have been quite intelligent to have accepted so many paradoxical and/or quixotic directions and rebuffs.

What Are Frames of Reference?

Although used unconsciously no doubt by many philosophers, historians, and other literati before the time of Sir Isaac Newton (1643–1727), the great English physicist and mathematician, it was his insights that most directly originated the objective frame of reference. His laws of gravitation and motion (with earlier help from Galileo and others) led to the visualization of systems of graduated lines symbolically connected within larger structures and functioning to describe various position points relative to the larger body.

On a large scale, consider the solar system or the global latitude and longitude coordinates to delineate points on earth. On a personal scale, observe the second and minute hands of your wrist watch circling around and overtaking the hour hand. Both large- and small-scale frames of reference contain a series of graduated lines or points symbolically con-

nected to the larger body or frame. With rudimentary understanding of these frames of reference, we can visualize where Capetown or Chicago are relative to our city or quietly gauge the time remaining in a boring lecture. Putting the two frames together (space and time), we can estimate the time needed to fly from our city to Capetown or Chicago.

Frames of reference provide the boundaries within which we learn what behavior is normal, expected, punished, or rewarded. They may have quantifiable capabilities such as a set of coordinate axes in terms of which static positions or dynamic movement may be specified, such as in physics, mathematics, economics, or geography. Or the frame of reference may be more qualitative or descriptive in nature, such as a set of ideas with ordered values in terms of which other ideas are interpreted or compared and assigned meaning as in music or philosophy.

Perhaps the verb or noun use of the word "frame" is suggestive. As a verb it means to construct an object by putting together its various parts. As a noun it stands for anything composed of parts fitted and joined together such as the frame of a house. The word "reference" denotes that matrix of interlocking ideas or set of relationships that altogether provides relational significance for any particular fact or value within its context.

Thus the geographic frame of reference for the state of California would be a western state of the United States of America on the North American continent bordered on the north by the state of Oregon, on the east by the state of Nevada, on the south by the state of Arizona and country of Mexico, and on the west by the Pacific Ocean. It lies between 32 degrees and 42 degrees north latitudes and 115 degrees and 125 degrees west longitudes.

The Computer Format

The term "formats" has achieved considerable visibility in recent decades with the fantastic explosion of computer technology. The "old" typewriters provided relatively few hardware variables and the major challenge was to learn the keyboard arrangement and develop finger dexterity. The format or typing setup was rather simplistic and mechanically achieved with margin releases, spacing levers, and a few other "tabs." Today all is powered by electricity and one must spend weeks or months to learn just the basics of word and number processing for general documents, databases, and spreadsheets. The term "formatting" has come to embrace all tasks that affect the appearance of a document. Our use of the term "formats" has a much broader application in that it refers to those multiple frames of reference used to provide contexts for understanding situations before initiating subsequent behavior patterns.

Personal Frames of Reference

Individuals have innumerable small personal frames with which to make sense out of daily events and to guide their specific behaviors. They have family, friendship, occupational, avocational, recreational, leisure, educational, ideological, religious, political, investment, retirement, and consumer frames with multiple subframes within each, all of which help them organize alternatives within relatively narrow limits. They have frames of reference that guide their clothing selections, tooth-brushing habits, friend selection, exercise patterns, and eating habits. They shift from one frame to another with ease and within each can be quite comfortable. Self-interest is the guiding principle in choosing among alternatives within each frame of reference. It is based on the intensity of felt needs at any particular time in any particular situation. Influencing these frames in countless ways are the precepts and concepts, usually with value connotations, that we have accepted in earlier life.

For instance, consider the orientation exercise most of us would go through on arriving late to a baseball game. Almost automatically and intuitively we seek to establish a meaningful frame of reference so that we can share the rhythms of victory or defeat for our favorite team. In order, we want to learn what inning it is, what the score is, and who's pitching. For more insight we need to know the standings of all teams in the league, the number of remaining games on the schedule, individual players' batting averages and pitching records and, indeed, the whole mountain of baseball trivia on which we seem to thrive.

Or consider the sequential questions used by an investor analyzing yesterday's changes in stock prices: How did my stocks do? How did the averages do? How have the averages done in this year-to-date as compared to my stocks? How well might I have done in alternative investments? What should I do to improve my position? Should I buy that new investment service? Should I change brokers?

Another example is the taken-for-granted but complicated matching process when dining out in a restaurant and the waiter places a menu on the table. The diners then must match their preferences with what is listed on the menu. The restaurant's offerings are traceable (among other diverse factors) to the manager's choices based on his or her frame of food preferences and interpretation of local competitive dynamics. That is, what can most easily be offered at attractive prices that will best differentiate this restaurant from others in the area and perhaps best induce repeat patronage. The diners must appraise the selections, reflect back on recent dining experiences from their "eating out" frames of reference, identify those two or three most tempting dishes based on the allure of the language used to compare the entree against its price, decide which of the several dishes will most satisfy whatever felt hunger needs are most demanding in his or her current state of physical being, and all before

nonchalantly telling the waiter "the poached salmon, please." This simple matching process neglects to consider many of the human imponderables such as the psychological needs the diner might be tempted to satisfy such as the need for a new gustatory adventure, the safety need to watch fat or calorie intake, or the need to impress a special companion.

The game's results, the investor's financial decisions, and the chosen dinner can be important to the individual. The game's strategy, the goals of the investor, and the satisfaction of the diner are important too. But the context or relevant frame of reference is crucial for basic comprehension and understanding. All baseball team managers, investment managers, restaurant operators, and frequent restaurant diners are full of knowledge about the specifics and the history of their domains. But a few specialists somehow put it all together better. Is it luck? Or might those few have better or more complete or better integrated frames of reference, which enable them to achieve better-than-average to superior results? Financial analysts, sportswriters, restaurant critics, and gourmet analysts probe endlessly to learn the secrets of their success. Do they simply know more details of their callings or do they have a better way to look at those details? Usually the quest ends in blind admiration: They're just some kind of "genius!"

Sharing Common Frames of Reference

When self-interest must be blended with the interests and goals of others we often find that our individual frames do not exactly match. We may be misunderstood. Or we may misinterpret the meaning or actions of others. Then we must reflect, reconsider, question the possible frames of those who confuse us. "Where is this person coming from?" is a common reaction. "Can he be trusted?" "Maybe I'll have to get to know her better before we agree on a deal." At other times the confusion may be in our own minds between two or more conflicting frames of reference and we beg off on taking a position with such lame comments as, "Give me some time; I'll have to sleep on it."

Individuals relate to others in families and small groups. Families and small groups relate to other families and small groups. Small groups relate to larger groups and so on. When self-interest must be integrated into family groups and larger groups, we often find that individual frames of reference become less useful, occasionally ambiguous, sometimes confusing. And we have little training and few guidelines in how to conceptualize group and larger social frames of reference. Even at the parenting level, we are mostly amateurs in training our children to learn how to accommodate others.

In the Beginning…

Imagine the challenge a child has in adapting to its ever-enlarging social world. Born with the desires only to satisfy the basic necessities by winning the attention of its mother, the child must successively learn to enlarge that small, original format to include the father and other family members, playmates, schoolmates, teachers, teammates, and working colleagues, as well as for many a married spouse and one's own children and grandchildren. It is during this progressive interaction with new personal relationships that the full range of human behavioral expression gradually evolves.

Those early childhood behaviors that elicited favorable responses tend to be retained and repetitively used in similar situations; those behaviors that were received neutrally or with outright rejection tend to be discarded. The warm and friendly smile, the pouting look, the wide-eyed look, the sullen look, the serious look, the questioning look, the wink, the frown, the affirmative or negative tilt of the head, the arched eyebrow, the contrived smile, the dimpled smile—all of these and indeed selections from the full range of body language get built into our personalities along the highway of life as we more or less unconsciously program ourselves in response to the perceived feedback from relationships along the way. How very important, then, to receive in those early formative years the genuine love and affection that can initiate a positive receptivity and response to others. Most mothers understand this intuitively and give their offspring a loving sendoff. Increasing stress in many contemporary forms, however, distracts some mothers (and fathers) from bestowing their full endowment of love on their children.

Most of this relating is on the face-to-face behavioral level and can't be ignored except at one's personal expense. One relates to others more or less according to patterns established in one's early training and subsequently developed ability and interest in accommodating the wide swings in emphasis coming from people with very different backgrounds, including those with both much larger and much smaller frames than one's own. Some mysterious combination of intelligence, intuition, and disposition guides our willingness to refocus our own frames of reference to those of others.

Beyond this interactive strictly behavioral world, one can enter the realm of the imagination and mind and expand one's frames of reference in countless directions forward or backward in time and with varying degrees of accuracy to total fantasy. From recalling the smallest personal incident to contemplating international political dynamics requires daily flexing of one's many formats. Integrating all of one's frames of reference into a comprehensive whole with a minimum of inconsistency becomes a life-long challenge. The relationships and combinations are nearly endless.

Organizational Frames of Reference

The same is true of most larger complex organizations such as business corporations, educational and religious institutions. or government units. People relate to other people, to their jobs, to organizational objectives, to the work rules that guide them in daily activities. But they don't always do so in consistent or in timely patterns. Quite often their minds and attention wander to elsewhere and their behavior appears errant to organizational ends desired.

Each organization seeks to optimize its objectives within its operating jurisdiction and does so with varying results. If successful, the organization benefits and its employees and all others associated also benefit. If something goes wrong in any particular business, receivership and bankruptcy procedures are well established and frequently followed. Government units in trouble can rely on such well-known practices as cutting expenses, raising taxes, and/or borrowing money. Religious and charitable organizations in trouble can shrink selected components of their missions, hire expert fund-raising specialists, invent phantom heresies, or intensify their pleadings for special causes. Specific organizational frames of reference thus serve specific purposes well. It is between individual organizational behavior and performance and the collective social behavior and performance that linking-pin connections are inadequate.

Too Many Ideas to Associate

In both cases—that of the individual relating to surrounding spheres of interest and the organization relating to individuals as employees, customers, clients, or competitors on the one hand, and to the whole spectrum of other organizations on the other—there are simply too many associations to make for easy communication and understanding. Since the middle of the eighteenth century, "…the concept of the association of ideas has increasingly been seen as the most basic, the most fecund, and the most pervasive explanatory principle in the human, and to a lesser extent, the biological sciences." (Young, p. 111).

The principle of association relies on two basic notions: 1) Complex mental images are compiled from simple elements derived ultimately from personal sensations, and 2) similarity, contrast, and repeated behaviors in time and space provide the raw material from which the complex associations, thoughts, and constructs are compounded.

The rapid growth of technology in recent decades has vastly increased the amount of knowledge available, the range of impressions possible, the number of theories and speculations generated, the character and quality of feelings experienced. Given this exponential expansion in the potential units of association or in the possibilities of commingling in different combinations the growing supply of facts, theories, feelings,

prejudices, assumptions, and other mental images, it was inevitable that confusion, ambiguity, and misunderstanding would also grow.

Needed Now: Better Organization of Thought

This defect or limitation in the associationist tradition of explaining human behavior has been acknowledged. It provided no basis for the classification of larger elements, of aggregates or composites analogous to the physicist's table of fundamental particles or the chemist's table of elements. In short, it offered no classification systems or suitable frames of reference within which to organize the growing flood of observations, data, and experiences obtainable both directly and indirectly from an increasingly dynamic and expanding worldwide communications network.

The result is that impression and interpretation feedback from one objective context may supply a thousand different subjective interpretations when many people selectively assemble what they choose into their own personal formats. Needed is a range of standardized frames of reference telescoping variously into larger ones such that excessive distortions and especially major errors in perception are minimized. This is the major focus for formats, or *frames of reference for minding action and thought systems*. The hope is that by improving the frames of reference for individuals-at-large and for managers at all levels of all organizations, strategic planning and directional efforts will be able to produce better results that we all can share.

Frames of reference that do exist are generally limited to one field such as baseball, investing, engineering, medicine, law, economics, or cooking and plumbing. Cross-field or general-purpose frames of reference between any two or more fields are not yet developed. These cross-field frames don't exist for at least two reasons. In the first place, working schedules and complexities in most operations are so demanding that little time is available for the necessary thought. And second, the conceptualization of useful social formats is poorly developed and not widely shared. Education treats the idea of frames of reference only indirectly. The consequences are many but several are especially significant.

The "Robotizing" of Workers in Large Organizations

In one major industry after another, the drive to achieve economies of scale and to become the biggest and the best resulted in huge organizations of manpower, capital equipment, and specialized jobs and work arrangements. Necessarily this meant that the work area and responsibilities of each worker were lessened as specialization increased. The reduction or simplification of larger. more complex contexts to simpler ones ostensibly to increase operating efficiency may do so in the shorter run but ultimately leads to worker alienation and the reduction of vol-

unteerism and teamwork—all of which promote individualism and opportunistic self-interest. Workers who are not fully engaged in the complexities at hand must use their idle capacities otherwise, first in benign ways but ultimately to punish their organizations for not challenging them or for not sharing with them the significance of their work. This is mainly an illustration of the counteraction between the principle of division of labor and the principle of integration where specialized function requires increasing coordinated relationships, which in turn requires the positive cooperation of the workers.

According to one prescient observer (Thomas, pp. 170—171), this ongoing process has resulted in near chaos:

> We are ignorant about how we work, about where we fit in, and most of all about the enormous, imponderable system of life in which we are embedded as working parts....We are *dumb.* This is, in a certain sense, a health problem after all. For as long as we are bewildered by the mystery of ourselves, and confused by the strangeness of our uncomfortable connection to all the rest of life, and dumbfounded by the inscrutability of our own minds, we cannot be said to be healthy animals in today's world. We need to know more....We need science, more and better science, not for its technology, not for leisure, not even for health or longevity, but for the hope of wisdom which our kind of culture must acquire for its survival.

Limited managerial appreciation of the need for worker fulfillment on the job has led to various expressions of job enlargement or enrichment. Much more needs to be done. The step suggested here is an intellectual one. It leads to progressively more holistic or encompassing frames of reference whereby workers are challenged to see more clearly where their jobs and their products fit into the larger scheme of things.

The "Robotizing" of Students in Education

Textbook writers on all topics have provided us with their organizations of the contents in each field. Quite often it has a historical orientation and nearly always it is largely descriptive of what has been, is, and might be. The need for better organizing or conceptualizing models has often been expressed, but few concerted efforts have been made to inspire interest in this direction. Thus, we continue to drown in an ocean of increasing facts, hypotheses, conjectures, opinions, and the rest while doing little to impose new or better organization and conceptual frames on the whole. Indeed, a whole new genre of unconnected facts was created in the 1980s with the intriguing name of "trivia." Presumably connectedness to a frame of reference would elevate a fact to more than trivial significance.

One of the more salutary improvements may have been initiated by college students who rebelled at having to master basic textbook content beyond eight to nine hundred pages. Some publishers required textbook writers to shrink their works to five- to seven-hundred pages, thus squeezing out less relevant ideas and perhaps encouraging a few writers to become more conceptual, more holistic, more model-oriented.

Like workers who rebel when they lose sight of the purpose or significance of their jobs and their products, students lose interest in memorizing facts and ideas when the grand organizing design is not clear and compelling. Since specialization is here to stay, better integration of ideas becomes an important means to restore purpose to workers and students. This does not necessarily mean a return to greater educational emphasis on the liberal arts as is so often proclaimed as the answer to man's myopia. Rather, it is a call for the reconceptualization of all thought into modules and designs that average people can assimilate and personalize, and thereby gain meaning in their lives.

From the Simple to the Complex in Formatting

It is always possible that the study of formats or frames of reference may be too abstract at advanced levels for students at all levels to comprehend, assimilate, or use effectively. Indeed, most of us get lost at some point along the complexity-of-abstract-thought trail. For example, on the concrete level, most of us have progressed from riding a tricycle or bicycle to driving an automobile without too much difficulty. At the automobile stage we are assisted by more technology feedback in the form of dashboard instruments that tell us our current speed, miles traveled, and engine revolutions per minute. In addition, we have such aids as headlights, turn-signal lights, rear-view mirrors, and a horn to assist us. The more complicated the operation, the more help we need.

Driving a truck or qualifying as an engineer in charge of a train requires more preparation, training, and technical assistance. To fly an airplane or captain a large ocean-going vessel requires more training still and experience in using the facilitating technical instrumentation. Astronauts are selected for space probes on both physical and mental superiority. In addition to handling the provided hardware effectively, they require more abstract knowledge in understanding and manipulating the various software programming that guides the hardware. Gradually as the physical task becomes more complicated we must qualify also by being able to comprehend and shift intellectual gears or frames of reference appropriately. Both physical-space instrumentation and intellectual-concept manipulation must be satisfactorily integrated.

The leaders of large organizations substitute movements in economic, social, and intellectual space for movements in physical space. Their instrumentation is format manipulation, accounting and financial ratio

feedback, quotas established and achieved, efficiency or effectiveness in operation. They move organizational effort through political, economic, social, and intellectual space with the emphasis more on synchronizing abstract frames of reference than on synchronizing physical movement through monitoring feedback gauges. To lead us, the great and growing power of interactive and multidimensional communications technology will no doubt become more important in blipping us into the future.

The mastery of mathematics requires both intuitive and analytic reasoning and for this reason proves too difficult for many at the calculus and higher levels. But even if such is true, the study of formats, like the study of higher math, should be made available to those who can handle it and benefit from it.

Converting Dilemmas to Manageable Problems

The dehumanizing of workers in most occupations and students in education was not the only consequence of our growing scale of operations and interdependence. The problems inherent in these changes have become more elusive, more difficult, or in the current vernacular, "problematic." When a problem clearly resides within a well-defined frame of reference, the good problem-solver can quickly remedy the situation. For instance, the manager of a baseball team can replace any player not performing up to expectations. But as our problems have become more interwoven or interdependent among overlapping jurisdictions, the solutions are not so clear-cut. The baseball commissioner charged with managing the twelve teams in a league, for instance, faces a more difficult challenge than the team manager in identifying the appropriate frame of reference in which to see the league's problem. How much more difficult to solve problems when the frame of reference is nebulous or ambiguous or missing altogether! Unless the parameters of the frame of reference are known, it is not even possible to locate the problem accurately in its setting.

It has become a cliché to state that a problem well defined is half solved. This suggests that the problem should be clearly located in its proper context such that surrounding coordinates can indicate in what directions and with what magnitudes corrections can be applied. Without the proper frame or format, any problem becomes a dilemma. Dilemmas can't be solved except by accident. The growing worldly interdependence in social, political, and economic liaisons has created more dilemmas, which will require better frames of reference to convert them to manageable problems. Most of our persistent larger "problems" are dilemmas for which analytic frames are too narrow: war, nuclear armament, nuclear-waste disposal, affirmative action, sexual harassment, crime, inflation, poverty, distribution of wealth, unemployment.

A Preliminary Sweep of the Social Science Horizon

In order to gain some perspective on the models of society that were in vogue in earlier days when problems were more directly and more quickly solved, the author conducted an informal search through a wide range of basic anthropology, sociology, human ecology, political economy, and economic literature mainly from the twentieth century to find how society was viewed and how it operated. It was hoped that such a model or models might be helpful in providing more comprehensive frames for putting some of society's contemporary dilemmas into better focus and thus reducing them to manageable problems. It was a long and generally disappointing search but a few such models (or near-models) will be presented for background purposes.

More recently, another sociologist has complained about the lack of scholarly attention devoted to the organization of thought comprehending larger realities (MacCannell, p. 3):

> Now, it seems to me that sociology will not progress much beyond its current glut of unrelated findings and ideas until we begin to develop methods of approaching the total design of society and models that link the findings of the subfields together in a single framework.

Theoretically, this linking of findings in subfields together could begin at either end of the spectrum. That is, two adjacent fields could be linked into one composite model. Or a more comprehensive model could attempt to link all of society together into one grand design and specialists in specific fields could then work backward from this common frame. It is the purpose of this book to present a general and comprehensive model of contemporary society that could be useful to all. But first, let's see what some of the earlier organizing schemes looked like.

Some Early Organizing Concepts

1. There are two things in which all well-being consists: one of them is the choice of a right end and aim of action, and the other the discovery of the actions which are means towards it; for the means and the end may agree or disagree (Aristotle, p. 536).

This is probably the most profound statement of organizational design found. It is the keystone of all that follows in this book.

2. Through the channels of its standards, codes, and policies; of its ideals, tastes, and faiths; of its creeds, "isms," and investigations, the mental life of society flows in an ever-changing distribution. One generation is absorbed in political concerns, another in business affairs. At one time society is religious, at another time creative and artistic, at yet another time scientific. Always, however, a tendency

towards the establishment of a normal equilibrium may be observed (Giddings, p. 147).

Early sociologists like Giddings occasionally rhapsodized about the grand sweep of events around a balancing equilibrium.

3. Once all things were phases of a single destiny: the church, the state, the family, the school were means to the same end; the rights and duties of the individual in society, the rules of morality, the themes of art, and the techniques of science were all of them ways of revealing the adumbrating, of applying the laws laid down in the divine constitution of the universe. In the modern world, institutions are more or less independent, each serving its own proximate purpose, and our culture is really a collection of separate interests sovereign within its own realm (Lippman, p. 112).

Walter Lippman was a noted American author and journalist who was disturbed by the apparent deflections of institutional behavior from a perceived unified direction.

4. It is impossible to get a comprehension of any complex societal structure without taking it to pieces, somewhat as one takes down an automobile. The mind cannot understand either the whole or the interrelation of the parts without the employment of that expedient. Yet it is not always realized that when analysis is done, results are dead, unreal, and misleading unless the investigator or student frees himself from his categories and, enlightened but not hampered or bound by what analysis has taught him, reassembles the parts and rises to a view of the intricately interlocking action of all the factors. Neat piles of springs, bolts, wheels, and other parts, lying about on the floor, are not an automobile. Similarly with a society; it is not composed of sets of institutions that have been analyzed out and separately examined; it is the whole of them acting together. If we take society and societal life down into its components, we must put them together again, and try to see them in their involved interactions; thus only shall we form a real conception of them....There is no way to portray at once the whole intricacy of society and societal life. But if the mind remains alert to the shortcomings of all analysis and classification, the conceptions of society as a living whole, ought to break over it as the various sets of its institutions are passed in review (Sumner and Keller, p. 87).

Mores gather, then, about interests, and develop where the interests are salient, into institutions. Aligned with the social forces, and of course resulting from their action, are what we might call the hunger-interest, the love-interest, the gratification-interest, and the fear-interest: the interests involving the self-maintenance, self-perpetuation, and self-gratification of society, and its relations with the supernatural. About these

basic, permanent, and engrossing interests the mores have formed in their characteristic way and on them the taboo has exercised its distinctive function. The result has been the development of massive institutions or blocks of institutions, corresponding to three of the four interests, and of a numerous but far less integrated galaxy of minor institutions in the case of one of them—the gratification-interest. These are:

I. The institutions of societal self-maintenance, including the industrial organization, property, war for plunder, and the regulative organization—all corresponding to the hunger-or-preservation interest;
II. Those of societal self-perpetuation, including marriage and the family—corresponding to the love-interest;
III. Those of societal self-gratification, including more or less unrelated societal forms, such as practices of ostentation in dress, ornament, social etiquette, war for glory, and other particulars and forms of pleasure-seeking, such as games, gambling, the use of stimulants and narcotics, dancing, play-acting, and the fine arts—corresponding to the gratification interest;
IV. Those of religion in the broadest sense, including animism, daimonis, and their derivatives—corresponding to the fear-interest.

All of these institutions interpenetrate, as do the interests that summoned them into being. Property, for instance, goes back in no small degree to vanity; marriage is not by any means to be connected solely with sex and love; gambling does not find its sole motive in pleasure-seeking; dancing is often religious in nature; and religious practices are not unresponsive altogether to the hunger-interest or to that of sex. Each of these interests produces consequences on the domain of the others which are often, indeed, foreign to its own satisfaction. These cross-relations will reveal themselves as we go on... In no case of evolution is there a possibility of drawing hard and fast distinctions. Categories run into one another across zones of transition, and no such zones are clean-cut but all are blurred (Sumner and Keller, pp. 88—90).

Sociology as a social science attempting to describe the general structure of society and to identify the basic influences affecting that structure gradually emerged as a recognizable discipline somewhere after the middle of the nineteenth century. Only after decades of assembling enough component parts were attempts made to integrate them into more cohesive wholes. The work of Sumner and Keller was a milestone in this direction.

5. Nevertheless, even today it is not generally recognized how numerous and diverse are the elements common to all known cultures. The following is a partial list of items, arranged in alphabetical order to emphasize their variety, which occur, so far as the author's knowledge goes, in every culture known to history or ethnography: age-grading,

athletic sports, bodily adornment, calendar, cleanliness training, community organization, cooking, cooperative labor, cosmology, courtship, dancing, decorative art, divination, division of labor, dream interpretation, education, eschatology, etiquette, faith healing, family, feasting, fire making, folklore, food taboos, funeral rites, games, gestures, gift giving, government, greetings, hair styles, hospitality, housing, hygiene, incest taboos, inheritance rules, joking, kin-groups, kinship nomenclature, language, law, luck superstitions, magic, marriage, mealtimes, medicine, modesty concerning natural functions, mourning, music, mythology, numerals, obstetrics, penal sanctions, personal names, population policy, post-natal care, pregnancy usages, puberty customs, religious ritual, residence rules, sexual restrictions, soul concepts, status differentiation, surgery, tool making, trade, visiting, weaning, and weather control (Murdock, p. 124).

The true universals of culture, then, are not identities in habit, in definable behavior. They are similarities in classification, not in content. They represent categories of historically and behaviorally diverse elements which nevertheless have so much in common that competent observers feel compelled to classify them together (Murdock, p. 125).

Many cultural habits, however, instead of gratifying basic drives directly, serve only to facilitate their eventual satisfaction. Cultures contain an immense number of so-called "instrumental responses" which of themselves reduce no basic drives but merely pave the way for other acts which have rewarding results. Instrumental acts acquire in time, of course, the support of learned or derived drives, but they are seldom innately rewarding in themselves. Making a spear or a pot, for instance, gratifies no basic impulse, although at some future time the result may serve to lessen the interval or the expended effort between the onset of the hunger drive and its reduction (Murdock, p. 132).

Anthropologist Murdock's listing of cultural common denominators shows how diverse human behavior has become and therefore, how difficult it is to develop satisfactory classification schemes.

6. Human ecology attempts to describe the factors that influence the location, size, and physical organization of the community. It distinguishes community from society, and accepts an organic interpretation of the dynamics of community (an aggregate of individuals, groups, or institutions) as a series of interdependent, natural areas one within the other, each area controlled by a center of dominance, and varying in its characteristics (physical and the correlated social) according to the distance from the center of dominance. Competition is the driving force, both for determining relative positions, and for changes in spatial relations over time, when equilibrium or balance is disturbed. Changes take place through the locomotive powers of

man (mobility being the means of survival and readjustment), through *invasion* and *succession*. This change is evidenced in *concentration, segregation,* and *centralization* (Llewellyn and Hawthorn, pp. 470—471).

From plant ecology were taken certain concepts which have remained central to the human ecological approach.

1. *Community* as an aggregate of individuals spatially located.
2. *Competition* as one of the fundamental conditions of their need to obtain sustenance, and cooperation as one of the means of mutually adjusting to this common need. This *competitive-cooperation* for the basic physical resources has been summed up by ecologists in the word *symbiosis.*
3. All of the subsocial or basic physical adjustments made by individuals to each other on a non-thoughtful level are called *biotic.*
4. The series of relations and mutual adjustments of individuals to each other in the acquisition and distribution of sustenance is the "web-of-life."
5. The role played by each individual in the acquisition and distribution of sustenance determines his *niche* in the *division of labor* or function.
6. This community of individuals achieves an *equilibrium* with the environment, wherein needs are adjusted to natural resources.
7. When this equilibrium between community and environment is upset, and when new factors enter in to disturb the status quo, then a state of disequilibrium, or unbalance, involves new processes of adjustment and reassertion (Llewellyn and Hawthorn, pp. 471—472).

The recognition of human ecology as a branch of general ecology emerged as a separate academic subject even later than sociology. It too, however, has made useful contributions to the generalizations about the human social structure as the above quotations attest.

7. A society is a group of human beings sharing a self-sufficient system of action which is capable of existing longer than the life-span of an individual, the group being recruited at least in part by the sexual reproduction of the members. The functional prerequisites for a society:
   a. Provision for adequate relationship to the environment and for sexual recruitment.
   b. Role differentiation and role assignment.
   c. Communication.
   d. Shared cognitive orientations.
   e. A shared, articulated set of goals.
   f. The normative regulation of means.

g. The regulation of affective expression.
h. Socialization.
i. The effective control of disruptive forms of behavior (Aberle et al, pp. 100-110).

This is another listing of the social prerequisites that an on-going society must recognize. Some of the terms are different but most of the functions were included in previous listings.

8. In the dynamic substratum we cannot separate economic forces and political forces and cultural forces as though they operated in detachment, nor can we speak of technological forces and geographical forces and biological forces and all the rest. There are emergent means that we call technological and there are emergent forms that we distinguish as economic or political. But these are, as such, undynamic; impotent outside the conjuncture. The dynamic conjuncture is the complex of means, conditions, and values. They meet and focus in what I have termed the "dynamic assessment," that is, the judgment that carries a decision to act. Such a judgment is the prime mover in social change, it is a fusion of emotion and desire and opinion and imagination that discharges itself in action as it masters means and accommodates itself to conditions (MacIver, p. 139).

This is a favorite quotation and one which lends itself to graphic portrayal. Create a graphic model using MacIver's key concepts.

9. The crisis of our times is not a crisis simply in economics, politics, or thought, nor is it merely a crisis in all three conjointly. It is a crisis in which economic, political, and ideological problems, each compounded by the other two, must be resolved by nations opposed in their political doctrines. Not only can no one set of problems be discussed independently of the other, but also no positive program of action can be limited and self-contained enough to escape suspicion as a possible device to advance interests, or to seize power, or to solidify preconceptions (McKeon, pp. 233-260).

This quotation illustrates well how a problem between large complex entities becomes extremely difficult to work out.

10. Man has the same basic problems to face on this earth, no matter in what age or in what region he lives. First of all, there has always been the pressing problem of sustenance and shelter, necessitating *economic* patterns. The fundamental fact of bisexuality and the helplessness of the human infant have forever demanded some form of the *family.* The great and ominous confusion of the universe must he studied, and, if possible, controlled, notably through the development of the culture pattern known as *religion.* Despite the fact that men are social beings, ever found in groups, they need some organized system of rules under a *government.* Basic to the creation and development of

culture is some form of *language* for the interchange of ideas. Man is a busy descendent from the anthropoids, and like all animals of that stock must busy himself at nonpurposeful pursuits. Here we find the basis for *recreation* and the *arts.* Finally, there must be dependable knowledge and the concretion of this knowledge in tools and techniques to manage the physical, organic, and cultural environment (Merrill and Eldredge, p. 84).

By the mid-twentieth century general summaries such as the one above appeared more frequently in basic sociology and cultural anthropology textbooks.

11. Man is unique: he is the only living species that has a culture. By *culture,* we mean an extrasomatic, temporal continuum of things and events dependent on symboling. Specifically and concretely, culture consists of tools, implements, utensils, clothing, ornaments, customs, institutions, beliefs, rituals, games, works of art, language, etc. All people in all times and places have possessed culture; no other species has or has had culture…(White, p. 3).

    …We may divide the components of culture into four categories: ideological, sociological, sentimental or attitudinal, and technological (White, p. 6).

    We see, then, that everything comprising *culture* has been made possible by and is dependent on the symbolic faculty: the knowledge, lore, and beliefs of man: his social systems; his institutions, political and economic; his rituals, paraphernalia, and forms of art: his traditional attitudes and sentiments: his codes of ethics and etiquette; and finally his technology (White, p.8).

    Man needs food and materials of many kinds for clothing, utensils, ornaments, etc.: these must be obtained, of course, from the external world. But man has inner psychic, social, and "spiritual" needs that can be fed and nourished without drawing on the external world at all. Man needs courage, comfort, consolation, confidence, companionship, a feeling of consequence in the scheme of things that life is worthwhile; and some assurance of success. It is the business of culture to serve these needs of the "spirit" as well as the needs of the body (White, p. 9).

    It is fairly obvious that the social organization of a people is not only dependent on their technology but is determined to a great extent, if not wholly, by it, both in form and content. As a matter of fact, a social system might well be defined as the way in which a society makes use of its particular technology in the various life-sustaining processes: subsistence, protection from the elements, defense from enemies, combating disease, etc. The activities of hunting, fishing, gathering, farming, tending herds and flocks, mining, and all the processes by means of which raw materials are transferred and

made ready for human consumption are not merely technological processes; they are social processes as well. And as social processes they are functions of their respective technological processes; as the latter change, so will the former. The processes of combating disease, "controlling" the weather, providing protection against the elements and defense against enemies are likewise social processes. Social systems have, therefore, like technological systems, subsistence, health, protection, and defense coordinates. Of these, the subsistence function is the most important because all others are dependent on it. Thus, hunting, herding, gathering, fishing, farming, mining, manufacturing, and transportation will influence, each in its own way, and in proportion to its magnitude, the form and content of a social system (White, pp. 19–20).

Thus we may say, in summary of our discussion of the interrelationship of technological, social, philosophic, and sentimental sectors of culture, that technology is the basis on which the cultural system as a whole rests. Secondly, it is the technology of a culture that determines in a general way the form and content of social systems, philosophies, and sentiments. In the system that is culture, technology is the independent variable, the other sectors the dependent variables…(White, pp. 26–27).

These concepts by Leslie White were the most comprehensive description of culture found. Most of the foregoing quotations were variously successful attempts to identify the different sectors making up our societal composition. But even if all the sectors are identified, the parts do not comprise the whole. Missing is an integrating dynamic to differentiate among the parts and then to coordinate and unify the operational togetherness of the composite "going or doing or being system." To contribute to that elusive integrating dynamic is the mission of this work.

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CHAPTER 4

Early Formats in History

Before attempting to set forth the general system model or format, which is the centerpiece of this work, it was felt worth while to spend some time combing through recorded history to gain some sense of how early thinking developed elementary formats and how they were adapted to serve man's need for understanding.

From Points of Reference to Frames of Reference

It is in the nature of man's greatest asset—his restless and inquiring mind—to seek explanations for the unknown. When relatively little was known for certain, he simply embraced the most plausible or powerful theory or explanation from a credible source, tested its credibility for as long as patience lasted, and then enshrined those that seemed to have enduring positive value. It became a valuable point of reference to be called on again and again when our earlier ancestors wanted an explanation. When many theories, mythical or not, existed to explain life's contingencies, many points of reference all together formed a matrix or frame of reference.

Because relatively little was generally known and especially verifiable until the so-called "scientific method" became central to intellectual endeavors, the range of acceptable answers to life's persistent questions was enormous. Because so much was based on the subjective imaginations of gifted leaders in early communities, the variety and richness of explanations far exceeded that of most fields dependent on provable cause-and-effect relationships. Thus, elaborate matrices linking many explanatory points of reference together could have been developed by those gifted leaders. That many explanations were patently contradictory placed bur-

dens on both deliverers and receivers of the messages. The deliverers had to enshroud their messages with persuasive packaging for credibility and the recipients had to differentiate among the widely varying alternative explanations. This persuasive packaging ranged wildly from zany dances and body torture to self-hypnotism and gobbledygook communication with the gods. It was a form of disguised early entertainment coupled with advice that most took seriously.

From Cave Pictographs to Early Language

From the Natufian culture of cave dwellers in the valley of the Wadi en Natuf in Israel in 10,500 to 8,500 B.C. and thereafter, we have only sketchy information. Before these times and back some two hundred thousand years to when man is alleged to have become a distinct species, we must rely on scientific analyses of uncovered burial remains.

Excepting cave pictographs perhaps, man's recording of major events began about 3500 B.C, according to the latest significant findings. The earliest cemetery found at Ur in what is now Iraq released artifacts that provided some sketchy information historians and archaeologists have used to trace the Sumerian culture back to about 3100 B.C. An additional four hundred years was added to account for earlier graves found in that cemetery.

Early Egyptian culture has been traced back to about 3300 B.C. Indeed, we may in the future be able to deduce fragments of history back another two hundred thousand years or so based on the Kings Lists, which were recorded around 2000 B.C. when Suzerain scribes felt the need to sort through and organize what must have been a confusing mess of historical data (Woolley, p. 27). These Kings Lists identify kings prior to the reign of Hammurabi, who assumed his kingship about 1940 B.C. at the end of the First Dynasty of Babylon. Unfortunately, their historical data were destroyed and we must await further deductions from possible future discoveries.

From Cuneiform to the Alphabet

Apparently the Suzerains had early invented their cuneiform script after developing "...an agglutinative language somewhat resembling ancient Turkish (Turanian) in its formation though not in its etymology" (Woolley, p. 6). Cuneiform was the oldest form of analytic script and as such was a transitional stage between ideograph and pure phonetic writing based on an alphabet. With the ability to speak and communicate in writing, the explanations for natural phenomena occurring in their environments must have expanded rapidly.

Archaeologist Leonard Woolley's analysis of early Sumerian artifacts led him to conclude: "So far as we know, the fourth millennium before

Christ saw Sumerian art at its zenith. By the First Dynasty of Ur if there is any change it is in the nature of a decadence, and from later ages we have nothing to parallel the treasures of the prehistoric tombs" (Woolley, p. 44). This impression of a relatively highly developed art was based on embellishments and refinements found in their architecture, jewelry, weaponry, and metallurgy. To have reached this impressive stage of development by 3500 B.C. suggests that many centuries of evolutionary progress must have preceded it, perhaps back another six or seven thousand years or more when it is estimated that settled agriculture began to replace nomadic gathering, hunting, and fishing.

During this prehistoric period scholars have speculated about early communication by horns, trumpets, reed flutes, and the tom-tom drum since many such have been found among buried artifacts. But their sounds were not recorded and therefore no record exists to piece together earlier man's thought processes.

Once the concept of a script was developed and found to be useful, however, its applications grew and many adaptations were overlaid on the original to suit the needs and whimsies of neighboring tribes in their attempts to customize the great ideas that they had recently stolen or borrowed. According to one source *(The New Encyclopaedia Britannica,* p. 64), the northern Semites living in Egypt in the seventeenth century B.C. adapted hieroglyphic characters to develop the earliest purely consonant alphabet and added two letters to designate vowels "...used with the glottal catch."

The Use of Vowels to Make Speech Smoother

Several centuries later, about 1000 B.C., the direct ancestor of all modern European alphabets was developed in Greece. By adding several new letters, modifying or dropping several others, and converting the Semitic consonants alef, lie, yod, ayin, and waw to the Greek letters alpha, epsilon, iota, omicron, and upsilon (the English vowels of a, e, i, o and u, respectively), the Greek alphabet was made more accurate and understandable for both written and verbal communication *(The New Encyclopaedia Britannica,* p. 456). The few vowel and symbol sounds of a, e, i, o, and u (and occasionally y and w) connecting the much more common consonant symbols and sounds produced smoother sound without occluding, diverting, or obstructing the flow of air from the lungs.

Before the fifth century B.C. the Greek alphabet could be divided into two principal and similar branches, the Ionic (Eastern) and the Chaldean (Western). The Chaldean alphabet probably gave rise to the Etruscan alphabet of Italy around the eighth century B.C. and hence indirectly to the other Italic alphabets, including the Latin alphabet. In 403 B.C. Athens officially adopted the Ionic alphabet and its use spread rapidly

thereafter as the classic Greek alphabet with twenty-four letters, seven of which were vowels, Its symbols consisted of capital letters, most suitable for monuments and inscriptions. A cursive and minuscule running script was developed thereafter for easier writing *(The New Encyclopaedia Britannica,* p. 456). Until 500 B.C. the Greek language was always written from right to left like its Semitic forebears but changed thereafter from left to right.

Original Uses of the New Languages

Most of the literary forms of the modern Western world were invented or at least formalized by the ancient Greeks. The epic meant a long verse narrative using a wide array of characters and events. Other forms included elegiac and lyric poetry, drama, the pastoral, history chronologies, oratory, and philosophy.

As epic poems, the *Iliad* and *Odyssey* usually attributed to Homer dominated the Greek mind. These oldest known literary sources were written in the ninth or eighth centuries B.C. and described the siege of Troy and the Greeks in the Trojan War and the wanderings of Odysseus during the ten years after the fall of Troy. They were originally sung by wandering minstrels rather than read and were the outcome of centuries of oral tradition.

The epics of Hesiod (possibly eighth or seventh century B.C.), have been called didactic or pedantic as they were intended to instruct. His *Theogeny* was a genealogy of the gods and his *Works and Days* was a combination of homily, agricultural treatise, and almanac.

Elegiac poetry developed from the end of the eighth century B.C. The name had nothing to do with the laments or praises for the dead but rather with the Greek word for flute. Flute songs are what they were, composed for different occasions: amatory, martial, family events. Unlike epics, they allowed scope for the individual viewpoint and feelings. Usually composed in stanza form as odes, sonnets, or hymns, they were better adapted to vocal communication by song. Since written messages were dependent on the learned scribes and organized postal delivery systems were nonexistent, the minstrel form of communication dominated for centuries.

From Language to Myth and Magic

Speculation about the evolution of human development must include the assumption that the growth of myths expanded rapidly with the early advent of spoken and much later written communication. Myth is generally considered to be traditional stories of unknown authorship to explain some phenomenon of nature. They usually involved the exploits of gods and heroes in preliterate societies. Magic is generally considered to