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Growth and Development of Industrial Training

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What I would like to do, in terms of focus, is to consider the growth and development of industrial training, not in the narrow sense of "what has been done within industry to prepare workers," but in the broader sense of what has and has *not* been done by *all* organizations—vocational education, other public and private institutions or agencies, and industry—which are charged with the responsibility for training these workers.

I also would like to focus on the demands for the *future* growth and development of industrial training and the *new* mechanisms and techniques which might facilitate this growth and development, but I must caution you to remember that when I speak of these future possibilities, I am speaking as an individual and *not* as a representative of any official segment of the Massachusetts State Government.

The history of industrial training helps us to assess the present situation, so I will begin by spending a few minutes on these early foundations.

For untold ages, the human race has been accumulating experience. Man has gradually learned how to live within limiting physical conditions. Through the years he has learned something of the control of natural forces for the good of most of his fellows. In this struggle to conquer his environment, manual skills and job knowledge have been developed and have, in one way or another, been transmitted from man to man, and from generation to generation.

Some might say that *all* the phenomena of vocational education and training in our modern society have their roots in the past, that we are not dealing with anything which is basically new, but only with the expansion and development of what has already existed. I tend to disagree. What is happening in vocational education, manpower development, and training, today, does not fit very well into this view.

It would serve no purpose here to rediscover the wheel, the lever, the pulley, gunpowder, the fusing of metals, the printing press, the steam engine, the airplane, the missile and the space satellite—but all came into existence because man was dissatisfied with his condition and decided to develop the skills and tools to overcome his problems.

In the early stages of this process, there was little beyond "work," and the tasks were "work jobs." Learning and skill acquisition came through observation, imitation, and incidental participation. This kind of "pick-up training," on the job, has always been inefficient, even where it exists in the world today.

The development of vocational education and training for industry seems to be synonymous with the development of our western civilization, especially with the relatively recent growth of commerce and business. Just before the so-called Middle Ages, the Arabs had taken over much of the culture of the Greeks and they lived on approximately the same level as their Byzantine neighbors who, like them, were industrious and skillful artisans. The knowledge, conveniences and luxuries of these people were not to be found in impoverished and backward Europe.

The Crusades changed these conditions and the international trade that resulted from the Crusades caused many and varied changes. For us, in our field, the most important single consequence of this ever increasing exchange of goods was the powerful stimulus given to the develpoment of industrial training and worker competency.

The Merchants Association, or guilds as they were called, which conducted much of this international trade, were soon agumented by the craft guilds of the woolen and linen weavers, the armorers, the furriers, the metalsmiths, and others. A natural consequence of this was the need to train and educate a *limited* number of new craftsmen. This distinctive system was called Apprenticeship and, through this system, the skills of the various trades were developed and spread throughout Europe.

Many centuries have elapsed since the days of the guilds, but we see in them, at best, training that was achieved by what I have described as Observation, Imitation, and Participation. Since then, we have come through the Agrarian Revolution, the Industrial Revolution, the Technical Revolution, the Nuclear Energy Revolution, and finally the Information Revolution, often tagged with that forbidding and much misunderstood word, "Automation."

Apprenticeship

The apprenticeship system has stayed with us through these several revolutions, and it was particularly prominent in the training of skilled craftsmen during the Industrial Revolution. However, as effective as it has been in the past, and as well as it functions in some places today, as in our Navy Yards, in some large industries, and in certain craft unions, it has not been able to meet the needs of modern industry as a whole, which requires more rapid and extensive training of both large numbers and many different kinds of skilled workers. The long-term apprenticeship has not been as attractive to the young man of today. The higher wages to be obtained, with narrower skills, in the glamorous technical fields—where, for better or worse, shorter periods of preparation are allowed—have taken their toll.

The progress of science and invention has only increased demand for the technicians of known types, but it has also created many new jobs and has deeply modified the processes of many existing ones. In responding to these changes, many of which involve giving the worker more intellectual skills and more problem-solving abilities, we have learned that education and training must be organized and deliberate rather than unorganized and incidental. This was the basic principles up-

on which both vocational education and this society, the ASTD, were established. In the application of this principle, the schools were to provide the basics, together with academic subjects, and industry was primarily to provide for the student's continuing competency development and specialization, as needed in specific situations.

During the formative years, the early 1920's, of vocational education in this country, and through our dealings with industry, we learned that workers need supervision and constant upgrading. Vocational education and industry cooperated to develop the means to do this. About the same time, all industrialized countries recognized the same need and they, too, began to attack the problem.

Supervisory Training

I shall cite three examples of the development of supervisory training. The first is from Scandinavia. Somewhere around 1920, Gosta Ekelof, later to become the pioneer of supervisory training in Northern Europe, graduated his first class of vocational trainees from a new factory school for mechanics and electricians. A clear need soon appeared for teaching supervisors and managers how to handle younger workers and staff-members, because Ekelof's graduates were refused the chance to show their abilities, were placed in menial jobs beneath their skills, and, in general, were subjected to the traditional abuses by older workers. After systematic observation of foremen on the job, Ekelof developed a combination of three elements which formed the groundwork of his approach to training these foremen and other supervisors. What is now known as the "Scandinavian Method" can best be described as a blend of: (1) work-oriented, additional general education, including economics, labor law, and industrial psychology; (2) instruction in supervisory techniques, including scientific management and organization of work, job safety measures, and leadership; and (3) lectures of the moral obligations and desirable behavior of supervisors.

At about the same time, Alfred Carrard, in Switzerland, saw the same task mainly as a problem of producing attitudinal changes. He concentrated on the ethical issues, attempting by various means to make participants in his courses see themselves and their behavior as others could see them, so as to force them out of their own little worlds and to form new attitudes more in line with their status and responsibilities as leaders of men. The title of his book on the subject puts his objectives very simply, "Education for Leadership." A similar approach was developed a little later in Bethel, Maine, and became known as "Sensitivity Training" or "T-Training."

TWI

In the United States, Channing R. Dooley, and other training specialists working for the United States Manpower Commission during World War I, became convinced that one of the keys to efficient use of manpower was to insure that supervisors gave the right kind of training to their workers, beyond providing them with leadership. Gradually, these ideas were formulated and tested in private industry. During World War II and the years immediately following, they were applied all over the world as standard Training Within Industry (TWI) "J" programs, namely, "JI" or Job Instruction, "JR" or Job Relations, and "JM" or Job Methods, which are now included in the supervisory training "package."

TWI presents a standardized, "how-to-do-it," approach—a pragmatic and

much simplified method as contrasted with the older European ones.

The State Division of Vocational Education became partners with industry in the TWI program, at least in Massachusetts. This happened because Federal funds for this training came to this Division. In cooperation with industry, we have helped to train hundreds of supervisors. With industry's help, we have incorporated many other techniques into the original TWI supervisory training format, each as the need arose. These include Job Analysis, Lesson Planning, and Teaching Demonstration—all three are now basic topics in our present supervisory programs.

Other related activities were also introduced, such as How to Deal with the New Worker, Discipline, Handling Grievances, Time Scheduling, Absenteeism, and so forth. From these, we have continued into newer topics such as Conference Leadership, Work Simplification or Job Methods Improvements, Job Evaluation, Flow Charting, Time Study, Motion Study, and Quality Control. All topics are treated pragmatically and geared to various levels of supervision, including middle management. We, in Vocational Education, have been able to go into banks, hotels, and hospitals to give such training; and we have simultaneously embarked on a $100 million regional vocational-technical school program.

New Resources

So far in my story of the growth and development of industrial training, there is nothing too confusing, and we have seen a picture of public vocational education and industry cooperating well, in fairly well-defined ways, and, together, doing what *was* an acceptable job.

However, under the spur of our expanding economy and the competition for technical innovation and excellence in production, many other organiza-

ASTD Executive Vice President Richard B. Johnson, Consolidated Natural Gas Service Co., Pittsburgh, Pa., addresses the 23rd National Conference.

tions have newly entered the training "arena", primarly attracted by enlarged Federal support.

Higher education has entered and brings new theories and new specialists—the sociologist, the economist, the psychologist, the anthropologist, and the behavioral scientist—thereby adding new dimensions for consideration. The community and junior colleges are hopefully expanding their occupational offerings, and, as a matter of fact, have a national association which is now planning for increased participation in training. Quasi-public social agencies as Action for Boston Community Development (ABCD) are trying to develop programs for the disadvantaged under grants from the Office of Economic Opportunity. Many new private trade schools are being formed, especially in electronic data processing. Large, private firms such as General Electric, Xerox, Raytheon, Ford Motor and 3-M now have educational divisions and are offering curricular and other services to the vocational educator and the industrial training administrator.

New Federal Acts, supposedly not mainly intended to support training—like the Elementary and Secondary Education Act of 1965—are being used by newcomers to training, to develop different kinds of vocational education. Even the Acts specifically for training have been changing. Area Redevelopment Act (ARA) training programs have been absorbed into the Manpower Development and Training Act (MDTA). The latter has been amended to include under-employed wage-earners, at higher subsistence rates. And our own Vocational Education Act of 1963 has broadened the scope of vocational education's objectives, compared to earlier Acts such as Smith-Hughes and George-Barden, to place emphasis on the socio-economically disadvantaged and those with "special needs," the kind of student and worker which we have tended to avoid in the past—somewhat with good reason. They create problems which still perplex us.

Lack of Structure

We, vocational educators, raised in simpler times and in the pragmatic approach, are finding it difficult to perceive any coherent structure to these efforts of industrial training, as it is now proliferating on all levels, from high management down to the single-operation assembler.

Instead, we see many, poorly articulated, sub-structures, ill-fitting pieces of a jigsaw puzzle, some of whose parts may be redundant, some perhaps missing. For example, we, and you also, I believe, still think of publicly-sponsored training and private, in-plant training as two separate structures, each with traditionally defined functions and limits. Even though we worked well together during World War II, and now have joint advisory committees, used primarily to up-date the instruction content in vocational schools, we act together too infrequently for joint planning of joint (or "coupled") programs, or for overall training strategies. We do not mix our money, and, unfortunately, we do not often mix our research and development efforts for training, nor do we often share facilities and equipment.

Different Attitudes

Our attitudes toward each other reflect this traditional separation of structures and programs. You see us as being limited by our legitimate commitment to the overall welfare of the student, in terms of his total education, and by the many laws and regulations, local, state and Federal. You see us as perhaps using obsolete shop facilities in some schools, and you sometimes see us as being sluggish in

responding to rapidly changing technology and occupational demand.

In turn, we often see you (sometimes erroneously) as being limited by the "profit motive" and, therefore, prone to view the worker too much in terms of being an input to production, an item on a cost sheet. Although we understand the constraints under which you operate, we have, in the past, felt that industry could not, indeed, should not, be expected to produce anything more than company-oriented specialists, certainly *not* complete craftsmen or, even more far-fetched, complete human beings and citizens.

I am increasingly convinced that these roles and their accompanying attitudes no longer fit the economic and social situation which now faces each state and the Nation; and they will become increasingly inappropriate in the near future. In fact, what I have just described has already changed: We, as vocational educators, are conducting MDTA-type, short-unit, programs of the kind that formerly were more common to industry; and some of your larger firms now have contractual responsibility for the total re-education of disadvantaged students in Job Corps Centers.

In a sense, we have been "trying on each other's shoes," reversing our traditional roles. But this novelty is probably not the long-range answer either because we have *not* been effectively *combining* our traditional roles, in any realistic or *creative* way.

I have mentioned the so-called "Information Revolution" and its hard-to-understand (and apparently hard-to-control) offspring, "Automation." These are but two of the new pressures which all of us have been feeling. To these I will add the terms "Management Science" and "Educational Planning" and complete my list of clichés with the more global phrases, "the knowledge explosion" and "accelerating technological change." These, of course, are current catch-words and mean many things to different people, but, taken together, they clearly imply that a great change is occurring in both the methods of production, and the parallel methods for planning that production, as well as for planning and operating the various supporting elements which contribute to it. One of these supporting elements is an effective, highly-responsive training and re-training system.

Work-Social Environment

On the other side of the coin, we find the industrial work environment viewed, more and more, as a social environment; as a means for satisfying individual, group, and even societal, needs. Recently, it was stated that the Boston Police Department could not get recruits, because of the social stigma attached to the work. Phrases, such as "social accounting" and "human resource development," are gradually supplanting older ones such as "the work ethic" in our vocabulary. In some little-understood way, the responsibility for worker "satisfaction" and "fulfillment" seems to be shifting from the individual's shoulders to those of government and industry together. In a very real sense, what began at Western Electric and was pioneered by Fritz Roethlisberger has culminated in the Swedish model where the worker is nurtured from cradle to grave, where he is paid as much as eighty percent of his normal wage to undergo retraining, and where factories are encouraged to move from areas of tight labor supply to those of labor surplus. This is a far cry from the "Mohawk Valley Formula" and the tactics used in Ilion, New York, several decades ago.

You may say, without pausing to reflect, that, "It can't happen here!"

However, I might remind you that, although Secretary McNamara has asserted that the Department of Defense, with its vaunted "value engineering" approach, would "never be used as a WPA for industry," there was considerable speculation that letting DOD contracts to firms in Appalachia was not a cold, dispassionate decision, but influenced by the Government's program to revive that region's industry under the Applachian Regional Development Act of 1965. Other bills now before Congress propose that special financial subsidies be granted to workers who are willing to relocate when unemployed. Something akin to this has already been happening in the DOD's efforts to reemploy, in other sections of the country, workers displaced from the Watertown Arsenal here in Massachusetts. Also, recently, the U. S. Department of Labor instituted, through State Divisions of Employment Security, a much more comprehensive information and referral system, for a much broader spectrum of workers including professionals.

Active Manpower Policy

These signs all point to what the Organization for Economic Cooperation and Development (OECD) terms a more "active manpower policy," replete with projections and targets, perpetual retraining, mobility subsidies, systematic support of industrial expansion, and assorted programs for worker security. The same OECD Council report to which I refer also emphasizes the importance *of in-plant manpower training programs,* of both *the single-firm* and *industry-wide varieties,* to this type of policy and to the promotion of economic growth. The Council report further reminds us that, "Such programs, which will vary widely in both form and nature among industries and countries, can frequently be stimulated through appropriate labor-management-government consultation and cooperation." Finally, the Council advises that, "A central policy body, or adequate coordination between different existing agencies is essential to formulate overall policy, to determine general directions, to identify strategic activities in the light of changing needs, and to initiate and develop new programs and services."

This sort of approach is, perhaps, alien to our own thinking, but I submit that we have already accepted it as commonplace in other areas of both government and industry. The rapid development of rational planning, as evidenced by the use of systems analysis and the mathematical techniques of operations research, is not only a fact—it is now, often, a necessity.

While it is obvious that we cannot reason directly from the other OECD countries, especially the less developed ones, to our situation (but, remember that the United States is a member nation), some of the imperatives are similar. All of these countries, ourselves included, are experiencing a severe shortage of skilled labor, if at different levels and for different reasons. Therefore, it takes no remarkable insight to see the following general sequence: The shortage of skilled labor leads to a more active manpower policy, which then leads to greater reliance on more rational planning techniques. This will dictate more efficient use of the talent for training in both industry and public bodies and this implies, to me, future training programs which are either "coupled" public-to-private or are closely coordinated.

Managed Manpower Era

A "managed manpower era" is upon us, whether we like it or not. The only questions that remain are: What shape

will this overall program assume in the United States? And, who will do the planning, and under what conditions?

Before examining several possible answers to these questions—mainly alternatives which have been employed elsewhere in the world—the circumstances or climate in which this new "era" will initially develop in the United States should be assessed first.

First, because of our private enterprise traditions (some call it "entrepreneurship") and our history of political pluralism (our "checks and balances"), we are somewhat behind our European (and, to be frank, some of our Asian, or near-Asian) counterparts in manpower planning techniques. Only recently has this become a clearly-defined field of study in our universities, and much of what they are now doing is based on the French, Dutch, and Swedish experience.

Second, because of the fact that our Constitution allocates primary responsibility for education to the states (and we insist that "training" is a part of it), and often the states delegate it to the municipalities, the Federal programs were deliberately *not* set up under any one central agency or in any centrally-planned fashion. The latter course is considered reasonable in most countries, but our Congress has instead parceled training program support to several Federal agencies, over two dozen, in fact, to soften the Federal image in education. The states, cities and towns together (but more often separately under recent legislation) can choose their educational *and* their training "hors d'oeuvres" from what, in effect, is a three-cornered tray: The U. S. Office of Education, the U. S. Department of Labor, and the Office of Economic Opportunity.

Although there have been, and still are, some efforts to coordinate these various vocational education and training programs (which are really not programs as we know the term, but sources of categorical aid), I do think that the delicate power balances within Washington, and between Washington and the fifty states, will not permit much additional centralization of planning to occur at the Federal level. What we have seen during the past year—programs marginally shifted from one agency to the other as political influence waxes and wanes—will probably continue indefinitely.

Logically, then, each state should act to pull together all manpower training under one "umbrella" for more efficient planning and administration, and as an aid for in-state industry. There are obvious reasons for this: Only recently have the states, as a group, felt a severe manpower pinch and realized that you cannot go on forever with one labor market area pirating from another, or one company from another, or even one state from another—not when everyone is experiencing shortages. Also, because of the relative newness of the problem, the states seemingly have even less experience and expertise in manpower planning than the Federal government.

"Real" Education vs. Training

However, there are two less obvious reasons for the states' reticence in overall manpower planning and training. First, public training programs almost inevitably find themselves assigned to state departments of education or their subsidiaries, and often get bogged down in interminable discussions of how they can be converted into "real" education. The conviction of many influential academic educators that "training" is some cheap imitation of "education", and not a means to a quite different end, makes it probable that vocational education sections of state departments of education will

continue to have difficulty in planning and administering comprehensive manpower training programs without hesitancy, misgivings, and much soul-searching even if honest soul-searching. Another facet of this problem is that general education, being much more sensitive than training, is bound and hedged by countless laws and regulations accumulated over the years. Therefore, when training is made part-and-parcel of education, under a common administration, it falls heir to the same rules—many inappropriate—and it cannot make the adjustments indicated by changing demands and changing techniques. Education has to answer to this vague entity called "the people." Training has to answer to a very specific *group* of people—those who have to work.

"Vacuum" at State Level

The second reason why a manpower planning vacuum is found at the state level is that so many agencies already exist which conceivably could do at least part of the job. Although their main responsibilities lie elsewhere—promotion of industry and commerce, or total education of the student, or maintenance of employment security, all have some stake in this new process; stakes which, though different, are roughly of equal magnitude. In this State, executive reorganization of the State government may be in the offing, but it would take a Governor with the wisdom of Solomon to assign overall responsibility for training to any one existing agency.

So, at the state level, we have this planning "vacuum" but we also have a bewildering profusion of training efforts and ideas, good, bad, and indifferent. *No* organization seems to think it is *not* competent to design and run vocational training; often, one hardly knows the other exists (and cares less!); and the result is a "Tower of Babel" for manpower planning and training. This is a source of confusion

ASTD President Patrick C. Farbro, receives life-membership plaque from John F. Walsh, Immediate Past President.

and, at times, despair for all of us who work in the field but it may also represent a golden opportunity to move in with something new in format, something which will *complement* education and not be confusedly identified *as education, itself*—or, worse yet, as a short-cut substitute!

New Training Media

This "something" to which I refer may be described in terms of both "form" and "content." Taking the latter term first, I should explain that I am going to avoid the usual meaning of the word, namely, what is going to be taught—and focus, instead, on the various techniques or media for teaching it. I touched earlier on some of the more traditional methods, but now wish to speak briefly of the newer developments.

All of us have heard about, and some of us actually use, such techniques as programmed instruction, team teaching, the case-study method, and T-group theory. A few of us may have experimented with computer-based self-instruction. However, these methods or devices (with the exception of team teaching) grew out of the limited interests of small groups of pioneers; not training pioneers, but mainly those in the social sciences such as behavioral psychology. For an additional example, computerized simulation of real-life problems, sometimes on a real-time basis, probably saw its strongest beginnings in military science and gained its early, non-military, "training" applications in some of the more sophisticated university business schools or schools of industrial management. Most newer methods were created to solve special problems and developed somewhat in isolation from each other. In turn, their relation to the more traditional (but still useful) training techniques has not been adequately established through multi-phased research and development efforts.

No one, to my knowledge, can tell us, in terms of a normally complicated training situation, the optimum "mix" of these various training techniques (both new and old) or the proper sequence in which they should be scheduled for the most productive results. We in vocational education have been a bit wary of new developments, because of statements by their own inventors and spokesmen to the effect that "hardware" has outstripped "software" and the "hardware," in most cases, is too expensive for anything other than demonstration projects.

However, in terms of my topic, the refinement and evaluation of these methods and devices—within a coherent, systems design approach, and on a demonstration basis—forms an important element for the future of manpower training. Recently, I received a proposal from a large and well-respected local firm, which has recently diversified into the educational technology field, proposing to set up a media and curriculum development laboratory for vocational education, to do exactly what I have just described. Whatever form is finally chosen to administer the coming manpower training, it must include one or more of these laboratories, perhaps as non-profit corporations, wherein state agency specialists, university scholars and, most important, industry experts can jointly experiment in an industrial training context and concurrently on all levels.

"Form"

But this brings us to the question of "form," itself. If you grant that we must work more closely together, *can* this be accomplished merely by expanding present administrative arrangements, or by pouring more funds only into the same kinds of training

we have had before? What I have suggested earlier is that the several powerful imperatives under which we all now operate indicate not only a change in quantity, but also a change in kind.

For the moment, let us leave the American version of the brave new educational world—by which I mean the ungraded school, with its vision of completely individualized, self-paced instruction, all of which always has been the philosophy of vocational education, and its all-inclusive objectives —and look at some of the models which may be adapted from foreign experience, specifically with reference to teaching both conceptual and manual skills.

One of the first things we notice is that a surprising number of the more developed nations have been trying to do something about this bug-a-boo of "increasing specialization." We tend to accept this trend as an unavoidable fact of corporate and industrial life. Companies are often frustrated by engineers who do not have a technician's competencies in fabricating what they design, and by technicians who are quite vague about the more homely arts practiced by the tradesman. Each group has difficulty in understanding and working with the other.

One answer to this problem, although more protracted and expensive, may be seen in certain aspects of either the Russian or the English systems, among others. The USSR has extended its secondary vocational system by one year in some cases, or two years in others, so that its skilled tradesmen-*in*-training can leave the school and enter industry for considerable periods at appropriate points in their courses. The English have a similar system, called "sandwich courses," by which they train advanced technicians and engineers. The student alternately spends periods of three or six months in a university or technical college and in industry where he follows a program specially designed for his training.

Finally, it has been compulsory in Germany for some time, first to spend enough time in industrial practice to obtain an apprenticeship certificate before being admitted to an engineering school. This "looping" kind of training—alternating from the educational institution to industry, each time gaining a higher degree of competence —has recently been transplanted from Germany to Venezuela for the Guayana district.

I will not further belabor this point concerning the many alternate paths by which vocational, technical, and engineering students may be trained except to say that these nations I have mentioned obviously do not believe in telling industry, "Here, we have taken them this far. Now the rest is up to you!" Instead, they have developed mechanisms and programs through which, and in which, public vocational education and industry are full partners in active and uninterrupted collaboration. We might do well to learn from their example. We might also do well to realize that our present arrangements are not necessarily the best, and, if we find better ones, we can have them *providing* we are willing to work for them, and work *together*.

Administrative Mechanisms

Next, I would like to touch on the great variety of administrative mechanisms used throughout the world to organize vocational-technical education and manpower training. A few examples will suffice before I describe one interesting scheme which has been exported from France to Latin America.

Generally, these endeavors are under the ministries of education. However, there are many exceptions:

France used to have vocational education under the Ministries of Labor and Industry. The USSR has strictly trade-training schools under a separate manpower agency attached to its Council of Ministers. All German technical education, in schools and elsewhere, is under the Minister for Economic Affairs. In the United States, some states have a Department of Vocational, Technical and Adult Education entirely separate from the Department of Education and with a separate governing board.

I mention these examples to support the contention that vocational education—and, although I have not cited cases for it, manpower training to an even greater extent—are considered to be something different in objective from so-called general education, in that there is a direct connection with the economic health of the nation meaning, in this context, the productivity of its industries achieved through the efficient preparation of its workforce. Therefore, the alliance of industry with vocational education in providing trained manpower, is a natural one but, I hasten to add, not necessarily an automatic one.

I have laid the groundwork for a hypothetical model for industry and state collaboration which I believe has some interesting, possibly unique, components, but is intended primarily as a vehicle for exchange of views, and as an aid toward better mutual understanding of needs and goals. First, I would like to describe briefly a possible sub-system which might hold promise for bridging the gap between public and private responsibility for actual training programs—for what I have termed "coupled" programs for manpower training.

French Program

At the request of various African and Latin American countries, the French government and its State Electricity Trust (similar to our TVA) have been developing a cooperative training program for electro-mechanical trades. The curriculum and teaching materials are designed in a central location in France and are distributed to similar curriculum and documentation centers, one of the latter for each participating country. The actual training in this flexible arrangement is done either at the training centers in the field or in industry. In-service teacher training occurs at both centers.

The interesting part of this system is that each country's own program is based on a contract which joins private industry and public agencies, and occasionally universities, which want their fledgling engineers to get some technical training. Teaching teams from the member country help to prepare the teaching materials and devices, in France, and then are assisted for a suitable period in their homeland by representatives from the central headquarters in France.

A Proposed System

I ask you to try to translate this model to the United States. A central manpower training agency, first, would have several Training Development Laboratories, perhaps set up in conjunction with large corporations now in the educational technology field. Next, when and if several companies were interested in instituting joint training (or perhaps one large company might make such a request), an "Institute" for this particular program could be formed with representatives from the companies, from labor, and from the central manpower training agency. This also could be a non-profit corporation, semi-autonomous, and jointly financed by state, Federal, local, and company funds, the latter on a *pro rata* basis, according to number of employees or prospective employees

being trained.

This Institute, in turn, could subcontract with a local vocational school, a university, a community college, a private trade school, or another private firm, or any combination of these. It could draw its curriculum and other materials from the Training Development Laboratories. And, as with any efficient system, it could disband (in other words, terminate contracts and sub-contracts) when it had finished its job. Meanwhile, the materials and procedures developed could initially be sent to training sub-centers and, later, would be stored in the Training Development Laboratories and at the central manpower training agency, for use in future programs of a similar type.

Now, my final point is that this sort of highly flexible, "mixed" type of program or system could not be handled by any existing state agency for reasons which are partly legal, partly regulatory, and partly psychological.

This brings me to the overall model which I hope you will use as a take-off for your thinking. Some features may be impractical, or may run counter to your interests; but, at least, we will have a conceptualized "third body" to pick apart and probe which is far preferable to performing the same operations on each other.

Hypothetical State Agency

Therefore, in outline form, these are the features of my hypothetical model for a manpower training agency, in a hypothetical state.

This agency would: Be administered separately as a semi-autonomous "authority" for vocational-technical education and manpower training attached directly to the governor's office and based in the overall structure of education with strong connections with the Departments of Commerce, Labor and the Division of Employment Security; be responsible for devising an overall state plan for publicly-financed manpower training; approve and supervise all occupational training programs and occupational training segments of other programs, financed by State funds or by Federal funds disbursed by the State; enter into contracts with any single public or private organization, or with mixed groupings; hire consultants and exchange planning, research and trade content specialists from its own compact staff with those of other state agencies, or with private organizations; establish and operate its own urban training and retraining centers for the disadvantaged and the technologically disemployed; establish and support (as non-profit corporations) training development laboratories; supervise regular public and private vocational schools; and mesh technical institute programs with broad pre-vocational programs of the Department of Education, from which it would draw students on a flexible basis; take advantage of all services offered by existing state agencies, but not duplicate them or unnecessarily supplant them; act as the state clearinghouse for manpower training data, and as primary advisor to the governor and other state officials on such matters; perform the major liaison with industry, and all other public and private groups, in respect to manpower training and vocational education, especially in the development of "coupled" programs with industry; and, be advised and quasi-governed in all of these functions by a separately constituted Manpower Training Council, composed of private citizens appointed by the governor, all of whom would be knowledgeable in the industrial manpower field.

I could go on, but this partial listing will give us more than enough on which to start. I should add that in-

to design and build a prototype machine. In this way, we fully utilize the technical skills of the professionals.

When we build the computer, however, we reduce the job requirements to fit the limited skills of housewives, drop-outs, and others by requiring them to follow simple directions and perform only a limited number of operations. In some instances, the training required has been three days in the classroom followed by a 30-day on-the-job period conducted by the leadman or lead-lady.

Another case is that of building our large civilian and military aircraft. Here again, most of the production work is performed by persons who perform in a very limited way—driving rivets, operating machines tools, etc., in repetitious processes.

We can project this type of work performance into every phase of our American business scene.

Los Angeles Experience

In Los Angeles, we find that employers are willing and eager to work with our Los Angeles ASTD Chapter, Community Affairs Program in all respects. Last year, ASTD was funded in the amount of $150,000 by the Ford Foundation to help the underprivileged. These segments were, under separate contracts, joined in a common purpose: The Opportunities Industrialization Center (OIC), a Negro Minority Community Action Program, the Los Angeles Chapter of ASTD and the Management Council, an Organization headed by Mr. Chad McClellan of the Los Angeles Chamber of Commerce. This last group, Management Council, is a powerful influence with the employers in the Southern California Industrial Scene. Chad McClellan has been successful in bringing top level executives to a newer understanding and appreciation of the total problem. His recent appointment to the staff of the Governor of California will extend his effectiveness in this important work.

The OIC has a staff of about 50 persons. At present they operate two activities: A feeder center where minority members undergo pre-employment training, and a skill center where those who have completed the pre-employment training are given the skill training that is required by Industry for placement in threshhold or entry jobs.

Social

Now let us look at the social aspect of our problem. We have many minority groups in our United States. To discuss each in detail, even if we believed we knew all about it, or if we had the time, would be out of the question. We should discuss some of the more important aspects. Who are we talking about? Let's consider two: The American Negro, The Mexican-American.

As reported by James P. Comer, in the April 1967 issue of *Scientific American*, "*Black Power*" may be absolutely essential to meet the needs of the poorest and most alienated Negroes. I feel, and have heard from fairly good sources that this summer in Los Angeles there will be (1) Negro boycotts where for three or four days all Negroes will stay home, (2) riots, and (3) protest marches on City Hall. The results of violence have brought public attention to the Negro problem. Millions of us watched the "Watts Riots" on television and can be prepared for future incidents.

What were the conditions that made the climate right for the riots? First of all, the family in Watts is different from that of other social groups. Generally, the *man* is the head of the household, going forth daily, providing money and discipline to the home. In many homes, neither the father nor the grandfather has ever worked. This

means that the power position has been exercised by the *mother,* who can get jobs in factories, in homes that need maids and cleaning women, in restaurants, etc. Men become "studs" in the community, and in many instances, relief or public welfare money provides too little grocery, rent, and household money to maintain anything more than a subsistence level.

Public education in California has failed to provide these people with the essential knowledge and skills for obtaining jobs. As the numbers grew, the psychology of the community developed into one of hopelessness. The Negro cannot hide. He is easily identified in a group. Even with education, many persons would (will) not give him the chance to try. While the Negro community in Los Angeles would have developed as it has, additional people from the southern states hoping for a new life, came to "Watts" and were trapped into the same hopelessness they left.

California laws and practice have permitted integrated schools for over 50 years. There never have been Jim Crow laws. People, being people, nevertheless have displayed their prejudice. Prejudice stems from not knowing, and therefore, not being comfortable with the unknown. Questioning middle class Caucasians about Negroes revealed that they had only infrequent contact with a Negro—the janitor, the parking lot attendant, etc. They did not know his problems, his goals or his attitudes. The Negro, with the same infrequent meeting, did not know the Caucasian, but did recognize the affluent society that he had established. The Negro within this environment became a frustrated citizen.

Lacking a common "foreign" language, kinship groups or a common religion, the Negro has had no cohesive forces to bind him to a unified minority group. To be sure, discrimination and exploitation, together with the frustrations generated economically were major causes of the riots.

"Young Warriors"

The picture is not complete, however, without mentioning the "Young Warriors" who tried to exercise leadership within the "Watts" area.

Young men, in their teens, in the matriarchal society, were aware of the hopelessness of their plight. Discrimination taught them that it was nearly impossible to "beat the system."

Gathering during and after school in groups led to the development of neighborhood gangs. These gangs were formed because of boredom and the lack of meaningful goals. The food in jail might be better than at home. Stealing becomes an expression against the "enemy" which is organized society. Any gain from any source is satisfactory; try anything; penalties are meaningless. One thing leads to another—gang leaders hold the power of life and death over the gang members.

With the massing of a half-million Negroes in a 20-square-mile area on a hot summer day of hopelessness and frustration, the stage is set for a riot that can be triggered by a very small incident.

What does the Negro want? He wants everyone to respect him as an individual, not as a "Step'n Fetchit." He wants people to shake his hand with meaning, feeling and warmth. He wants a chance to feel adequate. He wants a chance to earn his way and he wants to be judged by the usual standards that apply to the rest of us.

Educational

Turning our attention to the educational phase, we find some real problems. First of all, the social problem has given us a person who is overly

dustry's participation would be purely voluntary; also, that the proposed new agency would have no authority except in manpower training matters, for example, in regard to non-training programs in higher education institutions.

Advantages

The main advantages I see are these: One agency, if correctly established and operated, could insure that state funds would not be spread too thin, or on a political basis, among competing groups which often ask for more than they can effectively handle. One agency would have responsibility for devising the optimum investment mix for state and Federal vocational education and manpower training funds, instead of allowing this to "happen" on a haphazard basis. Finally, one agency would have the responsibility for satisfying the vocational-technical education needs of the people of the commonwealth, the training needs of industry and for drawing industry into manpower training in ways which would be mutually beneficial to the state and to the companies concerned.

Summary

To summarize and conclude, what I have tried to do with this topic, "The Growth and Development of Industrial Training" was to stand at a distance to see this development from its earliest days until the present, and on into the future, in a single, sweeping glance. On this scale, it is possible to see the major junctures, the major departures from prior conditions.

I believe that we reached such a departure sometime during and shortly after World War II. Many of the training lessons we learned between 1920 and 1945 still are effective—and I recommend them for your consideration, in lieu of too early or too complete reliance on some of the newer, more glamorous techniques. But still, the pace of change picked up sharply at this point and, from then on, many of the old institutions, the old administrative arrangements, the old programs, and the old attitudes, could begin to count their remaining days.

New types of organization, collaboration are needed as responses to entirely new and more massive demands; new modes of effective industrial participation must be devised; new educational and training processes, techniques and media must be developed, refined and evaluated; and, in summation, new roles for the public and the private spheres must evolve.

These changes *can* be forced upon us by events. On the other hand, with talent such as contained in this group before me, these changes can be anticipated, alternatives weighed, risks and returns calculated, and program structures rationally planned.

The last plea I leave with you is that such activities be *joint* design efforts. A dialogue must begin immediately between us—frank, with no holds barred and no *ideas* barred. Our thinking must not be confined by what we have here and now. My model, incomplete and impractical as it may be in some of its parts, is merely a device to instigate this dialogue—a "straw man," if you will. However the underlying problems will not be attacked as easily. And I assure you that, as an individual with forty years experience in the field, and knowing vocational education in the states and in the Federal Office, I can tell you, we stand ready to meet with you, anywhere and at any time, to pursue this joint task.

Concurrent Session - Monday, May 8

Development of the Underprivileged

E. Lloyd Considine

President
Calcardine Company

When a community of 7,000,000 persons spends 400,000,000 dollars a year in welfare payments, something must change!

As Americans, we so often turn our backs on self-evident truths. Let's quit kidding ourselves that we can go on paying an enormous and increasing cost of keeping large segments of our Negro population out of sight and away from *our* usual haunts. ,

The problems of developing the underprivileged fall into several categories:

1. Economic
2. Social
3. Educational . . .

and these problems vary with geographical location.

March, 1967

United States	– 3.6
California	– 5.0
Los Angeles	– 4.5

Rural areas, agricultural workers

San Bernardino	– 6.2
Fresno	– 7.1
Stockton	– 6.9

Economics

Let us take up these points one at a time—First, Economics—

Never in our history has there been a better time to assist the underprivileged. The unemployment rates in the various states are lower now than ever before.

Because of the war in Vietnam, particularly in Southern California, but true generally, employers are scraping the bottom of the barrel to find the necessary people to produce their products.

Large companies are committed to hire thousands of persons—in Los Angeles, Lockheed and Douglas are but two of the leaders—and this calls for some dynamic changes!

We cannot afford to tell our employment managers: "Hire the *best* man for the job."

We must instruct him to *"Hire the man who is ONLY just qualified!"*

Now to examine this in more detail from my position as a consultant to many large companies. I believe that we can produce more profits by training our underprivileged workers to perform a limited job fast and well, rather than have skilled, highly trained personnel perform a total job. Let me illustrate: In the production of a computer, for instance, we use our highly-skilled mathematicians and engineers

sensitive to others. Our first concern is that his attitude be proper. He must have the reasons for any poor attitude explained. He must be helped to respond to a new and more friendly situation. This help can be most effectively given by other Negroes. In our Los Angeles program, this is done in the Feeder Center of OIC. Clothes, personal hygiene and manners are the first order of instruction. Following this, reading and mathematics are brought up to the 5th grade level.

At the Skill Center, emphasis is placed on the skills that are necessary to get a job. Visualize if you will, a group of Negroes in class, realizing for the first time through the instructor that arithmetic and blue-print reading translate imagined parts from paper to actual parts that are made on milling machines and drill presses.

We have used the video-tape recorder to bring the shop into the classroom. In some instances, merely the vocabulary and indentification of tools, machines, and processes mean the difference between hand-to-mouth existence and a good-paying job.

Practical experience with shop equipment is being made easier as OIC is putting such equipment into regular training.

The skills taught for men are: welding, sheetmetal work, machine operation. Meanwhile, women are being taught the secretarial sciences, power sewing machine operation, and circuit board fabrication.

In the last year, 1,800 Negroes entered the OIC Feeder Center. Most of them found jobs after this initial pretraining.

Over 200 were placed after the skill training. These persons should maintain their employability.

The projected capacity for the next nine months is 2,000. There are 109 currently enrolled in the Feeder Center, with another 144 enrolled in the Skill Center. Considering that no payments are made to these trainees for living allowances, these results are very good.

Because the Negro community has, in spite of Martin Luther King and others, little real leadership, the project was delayed nearly six months.

The original OIC group started in Philadelphia. Many of you may be aware that they used power tactics, threat of boycott, etc., to coerce employers to hire Negroes. This has caused some fear among employers.

With the organization of OIC Los Angeles, members of the Philadelphia group were sent to Los Angeles to maintain the standards and performance already achieved in Philadelphia. A struggle for leadership resulted, with a shifting of board members, directors and others.

ASTD Resources

The ASTD Director, Carl Kludt, who was to provide OIC staff training and to establish a job bank from among employers, found instead that he and his staff had a significant but difficult role in assisting the OIC Board and Staff to adjust to each other; and do a real job of training the underprivileged. Using group methods, he was able to help them overcome many of their problems, but it took time. His staff of four has worked through the ASTD membership in the Los Angeles Chapter to get information training materials, and finally to place the people who have been trained.

Carl's job has been more difficult because the Chapter is on record in the contract with Ford Foundation that they will *not* place people who are *not* qualified for the jobs in industry. So far, this has been the rule. Carl also has had Hughes Videosonics produce some novel programs well suited to the type of training needed.

Meanwhile, the Los Angeles Chapter of the National Society for Programmed Instruction has voluntarily accepted the task of writing programs for OIC. We hope the results these efforts bring will be useful in other community action programs.

We are convinced that the developments in Los Angeles can affect the national scene. While ASTD alone cannot solve such a serious national problem, it has had six years of experience that is unique. We believe we have proved that our system of training the underprivileged is effective. It works! Only ASTD has had this background of experience.

Other Areas

It would be both costly and highly inadvisable for any other city to launch a similar community affairs program without being fully aware of the many problems that prevented early progress in Los Angeles. We feel that any community should feel free to call on the Director of our Community Affairs Program for guidance, and that he, through his staff, can save the community tens of thousands of dollars.

Already in the State of California, the Los Angeles Chapter CAP is working with community leaders in Orange County, Venice, Pasadena, and San Francisco.

Both the problems and the minority groups differ in each area. In Orange County, for example, the problems are with the Mexican-Americans. Their mores are different; their motivations are different. The Mexican-American has a different work orientation than others. He works to supply his basic needs, but places a high value on his social pleasures. For example: George ..... worked for a company in East Los Angeles. One day he was absent from his job. When he returned to work, his foreman learned that he spent the day in his home enjoying the visit of his uncle from San Bernardino, some forty-five miles away. To him, the visit was an important reason for not going to his job, and being able to enjoy such a visit was a prime reason for his working.

In our recent study of San Francisco, we found a strikingly different problem with the Negro minority. The people have more civic pride, are faced with a difficult situation with organized labor. There, new approaches must be taken to provide completely new businesses attuned to those skills and other characteristics of the disadvantaged groups. The lower average income in San Francisco, Negroes, Chinese, and whites has produced a very large underprivileged area.

If you were to compare the homes in the Watts area, and even in San Francisco, you would be surprised at how much better they are than many of those you would see from a bus in Pittsburgh, Cleveland, or Boston in areas that are not recognized as "ghettos."

Summary

In summary, there are signs of a "Long Hot Summer"—we can expect riots, boycotts, and marches.

The solutions to these problems lie first in *our* attitudes, secondly in *their* attitudes. We find out where the jobs are. We train the personnel in cooperation with the ASTD member's company and generally with his personal assistance. We place the person on the job.

The ASTD member follows up and reports back. Any of those who fail are encouraged to start again.

The public school systems, by and large, have failed to provide the vocational needs for the hard-core minorities. We hope to demonstrate successful techniques to the schools so that

some day they will assume the role of preparing these people for life.

In California, the Department of Employment is making a valiant effort in the retraining field. Our ASTD survey shows, however, that as of last year, they do not have the confidence of the minority segments of society; they have been very ineffective. I personally believe that they lack the skilled trainers and seasoned counselors to do the job. Many feel that they are attempting a job that has already been delegated to the public school system.

We must, as ASTD members, be aware of our problem, and our capacity to help the minorities as well as the companies we represent. If you in your Chapter are considering programs, it would be to your advantage to contact Mr. Carl Kludt, CAP Director, Los Angeles Chapter, 404 S. Bixel Street, Los Angeles, California 90054.

There are many who disagree with some of the above ideas, and the image projected of the Negro and Mexican-American. However the remarks are made honestly in an attempt to bring about understanding.

General Session - Wednesday, May 10

Training and Development Today

Harold F. Smiddy

Executive Consultant and Director
Electric Bond and Share

The daring scope of the Conference theme, "Training and Development—Yesterday, Today and Tomorrow," recalls the story of the modern woman, enroute to dining with some friends, who stopped at a toy store to buy a gift for her host's child. Studying one the clerk recommended, she asked: "Isn't this too complicated for a three-year-old child?"

"Not at all," the clerk replied, "It's an educational toy designed to help a child to adjust to living in the world today. Any way he puts it together is wrong."

With training and development well under way at the age of three—they do squat for hours in front of the TV set—it also pervades adult years to a degree new in history. To cite a grass roots editorial, consider these words from the Herkimer (N Y.) *Evening Telegram*, February 13, 1967:

> "Continuing education in the current state of the nation and the world is not merely desirable, it is necessary. It is also more generally available than ever before.
>
> The increasing mechanization of the

whole economic and industrial scene has increased the demands upon the individual worker, with the result not only that jobs are fewer, but that they are more complicated and demand higher degrees of skill.

At the same time the demand for competent people in other areas is also increasing, making it important for everyone to keep abreast of requirements.

This immediate area is demonstrating a full awareness of this with the wide range of educational facilities now available, or due to become available in the near future . . . In general (offerings) are divided into three groups: vocational, academic and skill-oriented.

Most of those taking the courses, in other words, are seeking to upgrade their qualifications for their present or new jobs; or to improve their general educational background . . . ; or to improve or develop skills of value in the home or other avocational activities.

It would be an excellent idea for everyone to find out more about what can be learned through this system . . . the information and skills acquired can be very valuable indeed, both for the present and for the indefinite future."

The pertinence of the editorial to training and development directors arises from the basic fact that "training and development" are *educational* activities by their very nature; for as the dictionary says:

> "Education is the training of the mental and moral powers, either by a system of study, or by the experience of life."

Training Is Painful

Like the little boy's toy, "training" has its difficult and frustrating side. Heinz Goldmann, a leading sales trainer in Europe today, told the New York Sales Executives Club recently that training involves "breaking a habit" and so, if poorly done, disorients the man being trained. He added,

> "Training, while it is an upsetting process, is a process where the emotional impact is far more important than anything else. People cannot be pressured into learning, however good the training or the intentions of the trainer.
>
> Learning is a painful process, especially for the older man, and many of them resent training."

Two points stand out. First, training involves the breaking of habits but the other side of it is that it also means the forming of new habits. Second, people cannot be pressured into learning but the pressures on people which require new learning are enormous. A few words on both points are in order.

In 1899, William James said, on man's "Need For Habits,"

> "Education is for behavior; and habits are the stuff of which behavior consists . . . the great thing in all education is to make our nervous system our ally instead of our enemy. It is to fund and capitalize our acquisitions, and live at ease upon the interest of the fund. For this we must make automatic and habitual, as early as possible, as many useful actions as we can and as carefully guard against the growing into ways that are likely to be disadvantageous.
>
> The more of the details of our daily life we can hand over to the effortless custody of automatism, the more our higher powers of mind will be set free for their own proper work."

The need for such training is far from new. Some 400 years ago, Sir Francis Bacon put it this way,

> "In studies, whatsoever a man commandeth upon himself, let him set hours for it; but whatsoever is agree-

able to his nature, let him take no care for any set times; for his thoughts will fly to it of themselves; so as the spaces of other business or studies will suffice.

Since custom is the principal magistrate of man's life, let men by all means endeavor to get good customs. Certainly custom is most perfect when it beginneth in young years; this we call education; which is in effect an early custom . . . it is true, that late learners cannot so well take the ply; except it be in some minds, that have not suffered themselves to fix, but have kept themselves open, and prepared to receive continual amendment, which is exceeding rare . . ."

So, it's old stuff that continuing education is hard for late learners and calls for specific hours to be set aside for it; yet the need multiplies in this age of accelerating change. And whether or not pressure can be used to develop learning, the pressures today which require such learning are enormous and mounting. The following words from a System Development Corporation report on computer–assisted instruction describe today's reality,

"As we enter the last third of the twentieth century, we see all around us the pressures building on those responsible for furthering the learning process. There are more students to educate and trainees to train. There is less time available to educate and train them. Students and trainees arrive for instruction with different, often insufficient, levels of preparation. There are fewer instructors available for classroom, laboratory and shop. And everywhere there are rising costs."

Men Are Critical

The SDC report stresses that galloping technology produces new generations of products at a staggering rate and often calls for application systems of literally global scope; and then goes on,

"Men are critical elements in these systems, for to the human faculties are allotted the reasoning and decision-making functions. Training men to perform in the system environment and subsequently maintaining their proficiency are tasks often as difficult as the work of creating the system itself."

If your wife asks why you don't have more spare time, try that on her for size! For individual companies and for business collectively, "Training-Today" is a king-size educational operation. Jacob Mincer was quoted in a Chase Manhattan Bank article on "Education By Business," in 1962, now some five years back, as saying,

"The phrase 'education by business' covers a number of diverse activities. Included are formal programs and informal training which may take place during business hours or after work, in plants, offices, in-company or out-of-company classrooms with instruction given by supervisors, training staff specialists or outside experts and teachers.

According to the best estimate available some $17 billion of resources will be donated to these activities this year. That's an additional $1 for every $3 which goes for education in the school system, including public and private, elementary and secondary schools and colleges."

Profit Motive

So in speculating about productivity in American enterprises–and productivity is still the source of competitive sales and profits–please do observe how "education," in its broadest sense beyond just "training"–that is, in its aim to develop the creative mind as well as the manual or mental skill–

is today a built-in job in organizations of all kinds. Before leaving this idea, it is appropriate to re-emphasize that "profit" is a healthy concept for all concerned. As Henry Alexander of Morgan Guaranty Trust Company stated,

> "A company without profit is a poor provider for its employees, a non-contributor to the public treasury, a cold prospect for the fund-raiser, a doubtful supplier for its customers, and a very sick cat for its owners."

Plant-Campus Gap

While in the general area of profits and of education today, no current appraisal of modern training needs or results can miss the serious, clearly-present (though over-estimated and over-reported) "gap" between the industrial plant and the college campus at both student and faculty levels. From both cause and effects aspects that gap is of particular importance for forward-looking training and development leaders.

That gap arises largely from inadequate and ineffective communication between the industrial and educational communities to the detriment of both in today's technological economy and society. The effects are mutually bad; so "Training" in the highest and most imaginative sense is called for to define the causes; and to initiate effective programs to overcome them.

The effects of that gap are obvious as a handicap to recruiting needed college minds for business careers. New and imaginative training leadership is demanded today to re-think the whole recruitment process whose high costs and inadequate results currently clog the whole basic training process. If the right men aren't recruited into the organization in the right numbers, much of the rest of the "training concept falls on its face for lack of those to train.

The present cock-eyed scramble of recruiters making ever-more silly presentations and offers to prospective college graduates is beyond sensible economic limits and not far from collapse of its own weight.

Instead of feeling some disturbed need to bribe young talent into industry, it's high time to re-state the great merits of a business career, its challenges and rewards for the finest college minds, and to make it available as a prize worth the effort, creativity and compensations it brings for those with the dedication, self-discipline and life-time application which it demands for career success in either professional specialist or managerial career paths. It's high time the training and development leaders took this one in hand with the imagination and courage it deserves.

A tremendous by-product in the public interest could well be to awaken equivalent re-thinking among those on the college end of the recruitment process. The present shambles is as bad for faculty and students as for the recruiters. It is a mis-use of scarce human and material resources which is doubly inept in a world fundamentally short both of capital and of trained minds to exploit the potentials which science, technology and business are constantly expanding. The deep requirement for productivity is a totally mutual obligation under such circumstances, binding on college administrators and on business, and governmental, managers alike.

College today is a far cry from the old concept of "a log with student on one and Mark Hopkins on the other." It is a vast organized institution employing large amounts of capital-consuming facilities and vast numbers of scarce high-calibre minds. In my judgment, it is a public tragedy to use such resources less productively in today's demanding world than al-

ready-available educational and managerial skills can accomplish.

Students Held Too Long?

I believe personally that colleges today are taking too much money and using it at too poor a load factor, are employing too many faculty and others, and are keeping "students" too many years for the good of the overall community. The campus needs sorely to stop decrying business management and to copy more of its achievements; the sooner the better for all concerned. Last Fall in London, the head of a large successful enterprise put it to me in these words,

> "In holding a young man in college for 'business education' until he is 26 or 27, is he not losing vital years learning to risk, to decide, to handle men in the real-life world of business?"

A fellow-Britisher expressed similar concern this way,

> "The young men, after their years in college, go into business; and do not do too well, as they have been trained to look at two sides of a question too long."

There is a fundamental point here. Professional education and training is producing too many analysts, and too few synthesizers and integrators.

In spite of a growing academic literature which assumes that business and business management is just so-called "problem-solving" for rational professional technologists to enjoy and exploit for their personal satisfaction, real-life business is a continuing human process.

Its managing calls for anticipating and avoiding or minimizing "problems" through able and effective leadership of highly-motivated fellow workers, professionals and others both, so that the contributions of all cumulate into output for which customer-value exceeds costs to produce. If that cycle stops, the economy and the whole society in which it operates is in trouble.

There is no need for the United States to experiment here. The "planned Societies" have gone around that race-track for fifty years now and their cumulative troubles speak for themselves.

One of the most challenging training and education opportunities, accordingly, is to wade into the cloudy issues which are dividing business and education. "Building bridges" here can be highly useful.

Educators Need Participation

It is time many well-meaning educators, and business reporters, got a better feel—and it's a training and educational chore inside the business organizations to marshall appropriate evidence—of what it really means to participate (instead of only to stand off and analyze the participation of others) in the real-life work of business which develops the products, the jobs and the taxes without which even useful and constructive critics would have slim pickings.

Just what sense does it make, for example, for business to be itself supporting and encouraging academicians who put out, for the business press to broadcast, such comment as this, reported in a recent issue of *Business Week* as stated by one professor whose name many of you would know?

> "(The hierarchical structure inherent in business) is an obstacle to the learning process (because) a man advances in the hierarchy by pleasing his superior . . . (and) there is a resultant bias in favor of telling your boss what you think he wants to know . . . Since the very purpose of the hierarchy is to prevent information

from reaching the higher layers, (it) operates as an information filter and there are little wastebaskets all along the way . . ."

For his informaiton, the executive who rises and lasts gets told plenty that his associates are sure he might not like to hear; and he has his ways of finding the facts that any artificial filters are trying to keep from him. It isn't business which is "for the birds," as much as this kind of intellectual waste which is muddying the communication stream between business and the campus.

Top Management "Look"

To take another tack here, a prominent university teacher on government, doubling as a commentator on "business," was recently cited in a New York newspaper as believing that presidents of large firms, who, he says, are holders of "pervasive power" greater than that of governors of states, get such jobs through a process of promotion, whereby

> "Career success now-a-days is based more on talent than on birth and background, and what is especially rewarded is an ability and a willingness to devote those talents to goals decided upon by others . . . (and) what is required now (for the 35 to 45 year old junior executive) is the top-management look. This is usually achieved by emulating the appearance and outlook of one's immediate and remote superiors. It is generally an air of taciturn tough-mindedness, an impression of deliberate decisiveness. Those who best manage such a transition do so not self-consciously, but as a responsive adaptation to unwritten codes and customs. However, the change should not take place too suddenly; the trick is to show all the sound sense of middle age without sacrificing one's boyish vitality."

After that observation, the learned professor made a few cracks that "the theoretical underpinnings of American business have actually not changed much since the days of Adam Smith" and that "other, more spiritual philosophers have been pondering for centuries in an attempt to discover just what it is that turns our globe upon its axis. The on-the-rise executive will display no such perplexity." Yet he says that at top executive levels.

> ". . . everyone in the final heat (for choice of a president) has pretty much the same qualities and abilities: energy and ambition, the right look and outlook, judgment and decisiveness and dedication."

Then after impliedly deploring that business fails to contribute what he calls "an aristocratic echelon" to American life, he concludes that,

> " . . . all things considered, the American corporation has become a self-selecting, self-contained civil service . . . (and) the difficulty when all is said and done, is that corporation presidents are not very interesting people. And not the least reason for their blandness is the sort of individuals they have to become in order to get where they do."

Despite which, in comparing three new corporation presidents with three new governors, he notes that they employ five times as many people as the governors; *sell* goods and services to the annual tune of $20 billion, whereas together the three states *collect* only $4 billion in taxes each year; and that sooner or later we will have to face up to the fact that a Frederic Donner of General Motors is a more potent figure than a John Lindsay, that a David Rockefller at Chase Manhattan Plaza has a greater collective impact on our lives than does his

brother in Albany. Maybe if "blandness" gets such results a little more of it might be useful in the high political posts which he seems to assess so fondly?

Trainers Mired in Minutia

But the point is, if you "training and development" experts don't begin soon to take on that kind of problem, and to spend less time mired in methods and minutiae and in the internal administration of your own organization components, and don't climb imaginatively off the plateau on which functional personnel activities broadly seem to be perched and resting as indicated in Dalton MacFarland's recent survey for the American Management Association, you might about as well go home tonight and not stay around for Dr. Asimov to tell you about "The Future We Must Prepare For."

It is time to jolt present day training and development approaches out of established methodological ruts; and to take a look into the great blue sky. The cloud formations to study are already well above the horizon, and a few can be listed here shortly as encouraging examples. For balance, however, attention needs first to be focused on the fact that while training likely may properly be said to be "on a plateau" in too many cases, at least it is a high-elevation plateau from which to rise anew.

The outstanding achievement is in past development and current understanding of training methods which have helped build the skills that allow the American economy to operate at the all-time world-record levels of the last six years. As the System Development Corporation report, earlier cited, indicated, in training methods for both industrial and military operations, the "three R's" now mean "Revolution Reduced to Routine."

Furthermore, modern training has freely embraced new equipment and experimented with it as early as available. Videotape, roleplaying, programmed instruction and now computer-assisted instruction, "blackboard by wire," the "science of listening" are already used, just to mention some approaches which Harry White of the New York Sales Executives Club noted recently.

Training trainers, learning theory, communication, management development and professional development are typical topics for specific current sessions of this Conference. Training progress has been enormous for both business and other kinds of organizations. Great credit to training and development executives is deeply due, and widely tendered. It's just fine, but not as a landing ground; only as a launching pad, looking forward to the further opportunities already plain to the naked eye.

Reflection on Training

Yet, the six-year economic boom has run out of steam; has run into lower profit margins before its peak of sales. Limits of profitable physical production and distribution capacity did intervene. But limits of competent, dedicated people for new jobs from the starting laborer, mechanic or clerk to high technical and managerial levels are what finally put the lid on the rise. It's as plain as that; and it's a pertinent reflection on training and development foresight and output.

At the same time it's the greatest challenge to training and development men since their function first achieved recognition in its present wide scope—amply itemized in printed ASTD Objectives, to provide leadership in this field and thereby to insure continuity of effective organization leadership, research, dissemination of knowledge, cooperation with educational institu-

tions; and above all, "assisting management to motivate career-minded personnel to achieve industrial growth goals."

The new dimension needed, and yours for the taking, is to do all this in the more-complex, diversified, technological production and marketing enterprises of tomorrow; to do it by climbing above the preparation and application of training methods so as to help managerial and professional associates from the level of their own visions and aims, by tendering them your skills for their purposes before they—not knowing your potentials for education as you do—can articulate their new needs clearly to you.

Quite an order? Yes; but entirely do-able with the experience and talents you have and can build, if the will to do so is applied as you can exercise it.

Educational Pioneering

Make no mistake, however. Breaking the old, and some new, habits of your adult associates is going to be as rough on you as on them. It is going to call for educational pioneering in continuing education and in lifetime learning that will largely have to come through "training of the mental and moral powers . . . by the experiences of life" much more than from campus-based educational approaches still unduly rooted in obsolete "systems of study," and in obsolete pedagogy historically developed in academic settings for students with minds in the formative years of life, not the adult years of established and generally successful maturity.

Such a task will demand, in the educational work of training and development, qualities and competence built-on, but far beyond, those already demonstrated. Managerial imagination, initiative and competence of new scope is essential within the training function itself; on a par with such requirements in all of the other functional, and in the overall, areas of the organized enterprise.

Past dependence on a specialty knowledge, still needed, won't be enough. In a curiously informative, yet uncomfortable, book called "The Young Executives," Walter Guzzardi, Jr. of *Fortune* magazine, calls these men "the first higher-educated, large organization generation;" and he observes that one of their clear competences is to "perceive relationships" among "many specialties." Ponder that well!

Training in the future, for managers and professionals and others alike, will have to grow just such competence; will have to show both specialists and non-specialists, both managers and non-managers, how to do their respective jobs, yet simultaneously to have the self-discipline to fit their work together in intricate patterns to attain common goals. The "trainees"—at every echelon of the organization and especially at the top—will, at the same time, be of higher educational levels than those for which older training and development approaches were ever before designed.

The supply of manpower as such is more than adequate; but the new recruits at younger ages will simply have to include the "drop-outs" and the "minorities" beyond former sources. The educational system has not yet learned to cope with the needs or to open up the full possibilities of these fellow citizens; and so to build their self-respect so they can contribute as peers to future community progress.

It is highly significant that where industrial trainers have tackled some of these new kinds of educational tasks, imaginative initiatives and significant results have already been achieved.

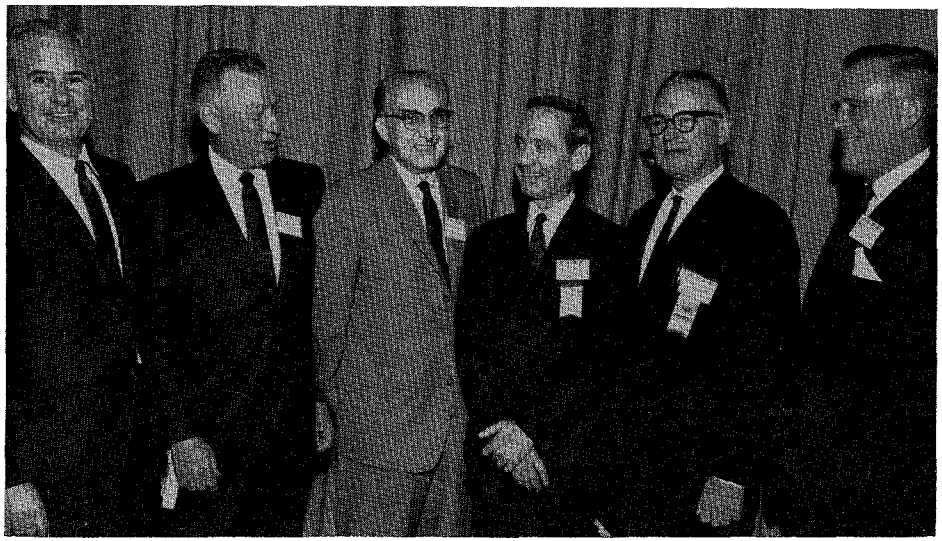
Two Lessons

There are two lessons here. First, the training services are being sold for pay, and profit, in the open market place, and are functioning. What a fine yardstick for application to *all* of the activities of the training and development function. If you take a look at what you are doing, and can see ways to do it so others at arms-length would pay your costs plus a value increment for profit for its application to their needs, you are indeed applying the right tests to your own efforts.

Second, it's no harsh criticism of those in the educational system that they are no more ready than you for many of these new challenges. There has been no widely-seen past need for either you or they to take such steps under earlier conditions. The new times write their own new ticket.

In a talk in New York recently, the well-known Boston educator, Dr. Daniel P. Moynihan was frank enough to say, "We really don't know much about human learning." That is, about the training and educational opportunity ahead, not mere autopsy on the dead past.

Dr. Moynihan's remark was prompted by the 1966 Coleman survey, for Congress, of educational opportunities. One of its interesting findings was that, "family background is more important than schools" as a determinant of differences in student achievement. U.S. Education Commissioner Harold Howe said that his office was surprised at that finding, called it "unexpected and interesting," and noted they were still trying to evaluate its meaning. Anyhow, it does show that education in all its aspects is still an unfinished symphony. The contributions of industrial training and development leaders can clearly be as useful as those of academic educa-



ASTD Past Presidents, left to right: John F. Walsh, Lockheed-California Co., Burbank, Cal.; Robert A. Graham, United Air Lines, Inc., Chicago, Ill.; Cloyd S. Steinmetz, Reynolds Metals Co., Richmond, Va.; Current president Patrick C. Farbro, Radio Corp. of America, Camden, N. J.; Ralph M. Hartmann, The Quaker Oats Co., Chicago, Ill.; Andrew A. Daly, IBM, Port Washington, N. Y.

tors in the unfolding area of continuing education for mature men and women.

Union Influence

Other equally stimulating and inviting fields for adding new dimensions to "Training and Development—Today" also stand out. For example, collective bargaining has recently spread to many new areas—to white-collar workers, even highly professional operators like airline pilots, to government employes in basic government services, and so on.

A University of Michigan survey was lately quoted in the *Wall Street Journal* as finding that "a growing proportion of the white-collar workers identify themselves with the 'working class' rather than management."

Similarly, an article in the *New York Times* of April 2, 1967 on the growth of unions, and the use of strikes, among government employes, quotes a Michigan State source that, "The rise of these unions is the most significant development in the industrial relations field in the last 30 years."

One cause of such rise was quoted as "lagging personnel management" in the public institutions and agencies. Other observations were that "arbitrary bosses" and failure of public managers to "adjust honest worker grievances" contributed; and that "public managers are inexperienced and they're going to allow work rules that are so wild and woolly they will cause trouble for everyone down the road;" and that "elected public officials, anxious to prevent damaging strikes, will shell out big settlements to militant unions" and let such unions "win concessions that will spread to private unions."

It is no idle comment. *U. S. News and World Report* for April 17, 1967 ran an article "Government Pay: On The Way Up Again." The proposal, by the President, would increase wages for nearly 5.5 million workers. The President "noted that government pay scales have increased by more than 23 percent in recent years, but still fall short of comparable pay scales in private industry, particularly in the higher brackets." However, attached tabulations in the article indicated that pay levels in ranges from office boy to personnel director, from $3865 to $11,958 per year, are *already* higher than in private industry and the differential would go up some 4.5 percent under the proposed plan.

As one editorial quoted a University of California economist, "unions by the end of World War II had grown so large and powerful that neither the organizations nor their members could seriously be called economic underdogs!" The same editor's own comment was that, "In recent years even casual observers have detected a growing public dissatisfaction with the seeming irresponsibility of organized labor. Up to now, however, there is little indication that the unions themselves have been paying much attention!"

Organizational Self Discipline

The very essence of orderly progress and teamwork in any organization is self-discipline on the part of all in the institution, so that leadership may be by inspiration to work for purposes comonly sought, and not by command or dictation. This is what has, in fact, built great entrprises, never before matched in history. If that is "blandness," it beats tyranny in both social results and human relations.

If union members threaten such progress, the basic training obligation to help them, as individual employees, to see the unhealthy potential consequences and to elect union officials with greater care for the public, and

not just union, interests, is itself a challenging field for the best brains in the training calling today.

Speaking in Rotterdam last November, the head of a famous Dutch enterprise said it is time to note that when union officials participate in government activities, they face the same "conflict of interest" principles as business executives; and the same obligation, if acting in a government capacity, to put aside their own organizational interests and to act for the people as a whole. Educational imagination to sense trends of this sort, and to think through clearly to such new standards of conduct, are another plain opportunity for today's training and development leaders.

Another "new dimension" for training today is to sense the time-cycle required to train workers at all levels to be able to up-grade them to higher echelon jobs as needs and openings develop there; and to schedule and carry through such new types of training economically and in such an orderly way that workers will *not* be "disoriented," even if older men have to lose both old and relatively new habits and learn still newer ones. This is truly "education" in its most modern sense—well worth the time of the finest minds and hearts in the training and development field today.

Training Opportunities

The list of new training opportunities could be extended readily. At lunch with a manager development expert of one large company a few weeks back, he rattled off such fields for better training activities as these:

1. Have an analysis and evaluation of organization structure and personnel of each component up-to-date all the time. When unexpected swings come, this is the best base from which to work.
2. Keep salary structure competitive, yet do innovative things. If have a temporary excess of demand for men in a particular category, expand their present top salary level only and later let the overall structure catch up, instead of getting a man temporarily into a grade above the normal worth of his work and having to move him down later under worst phychological conditions.
3. In times of rapid innovation apply a "trade-off" approach; test the new program against which one it might well displace, instead of just continually adding on new costs.
4. Watch the use of tests, beyond preliminary wide-gauge screening. They tend to be impersonal and mechanical; to be designed from the background of the tester rather than the man tested; and to raise issues of privacy in the organizational setting that can become destructive and explosive more easily than many foresee.
5. Be dubious of abstract ideas of specialists which, it is said by them, can't yet be expressed in simple, normal language; and watch the evasive substitute for thinking-through which is couched as, "You have to experience this to appreciate it." Some make a career of defining "problems" by selection out of context from normal work situations and then, by jargon and repetition, build a generally unnecessary over-riding activity which is like a barnacle on the hull of a ship—distorts the normal flow, requires excess energy and costs, and tends if left alone, to accelerate its own growth and distortion. Reserve "faith" approaches for faith areas, like religion.
6. Watch limits for fads, especially if of a contrived or artificial na-

ture, which may let a specialist focus get out of balance. For example, take a good objective look at "sensitivity training."

7. Watch operations and try to focus efforts where they really "add value" especially where beyond the break-even point so the yield is high.
8. Watch for ways to shorten the cycle to point of sale to cut off continuing fixed costs per unit sold.
9. Try the systematic "Individual Reading and Study" concept for developing individuals at their optimum rate; instead of trying to force development work unduly into canned patterns and activities. In the long run the individual has to "make time" for needed continuing education; and it may be both easier and more effective to ride here with the tide of his current work pressures than to upset them unduly for entirely separate development programs. The man who can be encouraged to set out to broaden his own knowledge, understanding, perceptivity and values can, and will, find a way to do so.
10. Don't be afraid to continue to use basic training and development ideas that are simple, tested and workable. But realize that they can only produce if applied, used and followed through. So watch for correlation of actions and measurement of results—especially when measurement and decision-effects cycles are not closely co-terminous.

New Educational Thought

That's just one list. The important list is that which each training development manager makes, and uses, for his own situation. The worst list is the missing list.

In a letter to a friend recently, the following key areas for new educational thought in business were offered as promising.

A. Differences in Motivation—as the real differentiators in theories useful for managing different types of organized institutions.
B. Tendencies to "manage" on the basis of oversimplified models or simulations, or Indicators—especially if from quantifiable statistics rather than to manage "the real thing" with all its internal contrasts, discontinuities and human element in the economic world.
C. Responsibility in the use of increasingly scarce resources—both human and material, and both in and out of the particular organization. They can't be distributed only to "the strengths;" and have often to be distributed unequally by applied executive and professional judgment, however tough; so that large, diversified organizations don't wind up a mediocre fifth or sixth in all their markets instead of in optimum overall shape and leadership.
D. The managing of "professionals"—with high education and with natural loyalties to own intellect and profession rather than to the organization goals and its best balanced progress towards those aims. As a 1966 report of the Aerospace Industries Association, to the Pentagon, well put it,

> "In as complex a business as ours, there is almost no end to the areas of specialization in being or coming. This in itself presents a difficult management task: keeping cultists from becoming the tail that wags the dog."

We have always managed "specialists," but without confusing the specializations of their work with

their being "special" as human beings or persons. The new dimension of today's specialist is the high level to which he may be educated in his specialty, coupled too often with most inadequate education to be able to function in his "specialty" in the real world with other equally self-important human co-workers. As one non-specialist so aptly said, "He has to put his pants on one leg at a time, same as I do."

E. The increasing urgency, and growing difficulty of organizing and managing effectively the greater proportion of total community resources, both human and material, focusing in the field of education itself. This field really does need a Vail or a Sloan to sense and articulate the principles for its effective organization, growth and productive use of the great resources in its care. Old habits, however cherished or articulately mouthed, need a new look square in their eyes.

Moral Choices

That could be a timely place to terminate this appraisal of "Training and Development—Today." But one other thought crowds for final expression here. It is well capsulated in a section headed "Moral Choices Aren't Easy" in an article by Dr. Roy Menninger on "What Values Are We Giving To Our Children;" to quote

> "Every day our newspapers confront us with stories of misdemeanor and immorality acted out by people of all ages. Not only these accounts, but our own experiences, would lead us to conclude that there is no end to public and private corruption in every day life, that expediency and opportunism are the basis of ethics for almost everyone.
>
> In facing problems that our forebears had little conception of—extreme technological changes, population explosion, weapons promising total destruction—we find little usefulness in the touchstones and guidelines relied upon by an earlier, calmer, more stable society.
>
> Moral choices aren't so easy any more. There are contradictions on every side. No longer do we have standard, clear-cut, ready-to-hand answers.
>
> We want to be decent to others, as long as we can still make a profit. We want to be good, but we also want to be successful. Whether this confusion is the cause or the result of our world situation, this is the state of contemporary morality.
>
> It seems abundantly clear that the morality among us adults is far from what we think it might be and wish it were. As devoted and concerned parents and citizens, we want our children to do better than we have done. But we are afraid they are not even doing as well.
>
> It is from such a concern that we ask, "What values are we giving to our children? I do not think that I can answer that question for you as it is phrased. It implies that values are a gift, some tangible object we are going to take from the closet where we have hidden it, and hand it to our child. It also implies that the giving is a conscious premeditated, determined act on our part—that children are somehow passive recipients of this gift, waiting patiently for us to drive home some morals.
>
> Such a picture is hardly accurate. The children are *there*, acquiring values whether we will it or not, whether we even think about it or not. The progress goes on inexorably . . .
>
> So let us attack the problem from a new quarter and suggest a different question, 'How do children get their values?' for if we know 'how' we may also be able to influence 'what.'
>
> First, let me define what I am re-

ferring to. 'Values' to me are empty, meaningless philosophical notions when they are discussed in the abstract. Honesty and dignity do not refer to concrete objects. It seems to me that such values really have meaning only when we are talking about relationships among people; how John deals with Mary, how you deal with me, or how I deal with you.

Morality, to be an effective force in the lives of people, requires more than codes of ethics, laws and the like—it requires the existence of relationships among people in ways which are significant, substantial and mutually valued.

One basic point to remember about the transmission of values is that not everything we have been taught stays with us. The values which stay with an individual are those which he successfully internalizes, the ones which really get inside and become his own."

The Discipline of Training

So, in closing, just possibly Dr. Menninger's words—especially if coupled with Walter Guzzardi's observation that one of the clear competences of today's higher-educated young executives is to "perceive relationships (among) many specialties"—suggest the most important new dimension of all for "Training and Development—Today."

Training to impart and improve knowledge has a long record of progress. So does training to build new skills, of ever more technical depth and wider impacts.

Training, or education, to help all individuals in the modern organization to think and act more clearly, consciously, conscientiously and compassionately in *values*, in their relationships among people, in their teamwork as well as in their work, however complex or difficult either may be, and to do so in voluntary self-discipline so the need for imposed power or for contractual limitation of personal freedom is minimized this is, indeed, the opportunity for new meaningful training, development and educational thinking and action today. It needs to be performed with clear personal understanding and practice, especially in complex organizational situations, of the old adage,

> "Freedom is the right to discipline myself so I don't have to be disciplined by others."

Lippitt and Nadler "Bio" Information Error

Both Dr. Gordon Lippitt and Dr. Leonard Nadler were identified as President of Leadership Resources, Inc. in the biographical information accompanying their article on Page 2 of the August *Journal.* Dr. Lippitt is now Chairman of the Board of Leadership Resources and Dr. Nadler is President.