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RESHAPING JOB TRAINING FOR
ECONOMIC PRODUCTIVITY

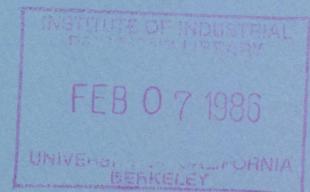
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In his prophetic article, "The Suprising Seventies," Peter Drucker (1971) predicted demands for increases in capital and outlined a strategy to meet them through improved economic productivity. Ten years later, the first Reagan Administration capitalized on the wave of public interest in stepping up productivity by promoting policies to stimulate economic growth. Today, mid-way through the 1980s, proposals that promise to boost economic productivity, and thus to increase employment, continue to draw widespread attention. For example, the Committee for Economic Development (1983), an influential group of 200 U.S. corporate leaders, recently recommended a series of policies intended to stimulate productivity by improving the nation's capital stock, increasing investments in technology, and eliminating barriers that impede market forces. Noting that an adequately trained and educated workforce is essential to increasing productivity, the Committee also recommended policies to insure that training and education would keep pace with projected labor market changes.

Generally considered to be a key ingredient in a nation's productivity, labor force quality is usually defined as a population's ability to read, write, and compute. Measured in these terms, the quality of the U.S. labor force seems to have sunk to an all-time low. A number of recent studies (Business-Higher Education Forum, 1983; National Commission on Excellence in Education, 1983; Goodlad, 1983) confirm the growing public suspicion that a shocking proportion of high

school students and young adults are functional illiterates who cannot solve the simplest mathematical problems or read the "Help Wanted" columns in the newspapers. Most of these studies recommend that the schools "go back to the basics"--reading, writing, and computation--and, because of the projected demand for competent scientists and engineers, that they give greater emphasis to science and mathematics.

In the press for improved productivity, the role of entry-level job training has so far been generally overlooked.¹ This paper, which is based in part upon a series of seminars in which state policymakers and education and training authorities discussed ways of restructuring job training to improve economic productivity, attempts to fill that void. It examines major labor market shifts in California that promise to reshape employers' demands for job training. The paper also analyzes training institutions' incentives, thus allowing policymakers to better anticipate how training institutions are likely to behave in an uncertain economic environment. The paper concludes with suggested policy directions to help reform entry-level job training for a more productive economic role.

The Role of Entry-Level Job Training

Entry-level job training can best be distinguished from

the more comprehensive process of education by its modest aims: to transfer specific job skills from experienced trainers to inexperienced trainees. Nonetheless, job training is an important factor in improving national productivity. Most entry-level jobs require some specific training. No matter how well bank tellers can read, write and compute, they will not be very productive unless they know how to use the bank's electronic information system, and how to treat customers. Similarly, computer operators must understand the specifics of a firm's particular computer system, just as assembly-line workers must learn the tasks of assembly on a particular line.

An estimated 80 percent of the jobs in the U.S. require specific vocational preparation, ranging all the way from a few days of orientation to two years of on-the-job training and classwork in a formal curriculum. Unfortunately, figures on public and private investments in training are not available, since any such estimates always include investments in education as well. For example, Eurich (1985) reports that privately funded and sponsored education and training in corporate settings alone exceeds \$40 billion annually.

In California, entry-level training is a big business. Here, as in the rest of the nation, firms do most of their own job training themselves (Squires, 1979; Wilms, 1983). In 1981-82 more than a billion public dollars were invested in entry-level training carried out in California's public institutions: high schools, regional occupational centers and community colleges (Assembly Office of Research, 1982). In

addition, California's myriad proprietary schools (privately owned vocational schools that operate for profit and contribute to tax revenues) enroll a half-million students each year in training programs. In 1982, these students spent in excess of \$600 million for entry-level job training (Wilms, 1984).

The Politics of Job Training

For more than two generations, public subsidies for job training have been justified largely on the grounds that such training increases worker productivity, improves product quality, reduces structural and technological unemployment (Senate Report, 1929; California Commission on Industrial Innovation, 1982), and thus fosters economic development. But there is a growing consensus that, in the allocation of job training resources, social equity concerns have overshadowed efficiency and productivity concerns.

As Munger (1984) points out, the U.S. manpower model is based mainly on supply-side considerations, without much regard for demand. Between World War II and the 1960s, an expanding economy and ample resources for training obviated the need for much planning. Then, beginning in the 1960s, the Civil Rights Movement inspired various constituent groups (Blacks, Hispanics, Native Americans, women, gays, the disabled, and--more recently--displaced workers) to demand a share of training resources. In response to these demands, job training

legislation--including the Comprehensive Employment and Training Act (CETA), its successor, the Job Training Partnership Act (JTPA), and the Vocational Education Act--provides that resources be distributed according to fixed formulae. For example, the newly-enacted Perkins Vocational Education Act requires that funds be allocated as follows: 10 percent for disabled students; 22 percent for students from disadvantaged backgrounds, with 3 percent going to students who speak only limited English; 12 percent for adults who need job training; 8.5 percent for single parents; and so forth. Thus, constituent demands have become embedded in the legislation under which funds are allocated. Not suprisingly, the politicians who wrote the legislation, as well as the institutions that depend on it for their survival, have become highly sensitive to these constituent demands.

Not only do constituent demands for training tend to dominate over labor market demands in the allocation of training resources, but also American tradition gives high priority to consumer demand for training. A California official notes:

The tradition of education is that we provide a publicly financed education. Those who attend public institutions have a right to select what they want to be educated in, whether philosophers, computer programmers, mathematicians or secretaries....If 2,000 young people come to a community college to be trained as secretaries, and the funding is available to train them, then you'll train them because they are taxpayers and they have the right to demand what they want. (Bolton, 1984)

Given the limited impact of the market in determining how public funds for job training should be allocated, it is not surprising that the economic payoff from this investment of resources is questionable at best. Study after study confirms that the economic returns to the job training provided by public institutions usually fall far short of the goals set by optimistic (and frequently self-interested) legislators and program operators. There are several explanations for this failure.

At the high school level, students who have trouble with the regular academic program are frequently shunted into vocational education programs. Besides ending up unable to read, write, compute and think, students all too often graduate from these programs with job skills that bear little or no relation to those demanded by employers (Assembly Office of Research, 1983; Grasso and Shea, 1979; Wilms, 1983).

The vocational training offered by the community colleges is limited by other factors. The revenues of California's community colleges derive from their enrollments. As was noted earlier, vocational programs that are shaped primarily by student demand and by the provisions of categorical legislation may have little bearing on employer needs. Consequently, job placement rates tend to be lower, and costs higher than would be expected (Assembly Office of Research,

1983; California Worksite Education and Training Act, 1982; Grubb, 1984).

Finally, current methods of allocating funds for training are not efficient in targeting them to where they are most needed and will do the most good. For example, Title III of the Job Training Partnership Act (JTPA) stipulates that 70 percent of all funds be spent to retrain displaced workers. But, as an increasing number of studies indicate, only about one in five of the workers displaced by plant closures opt for training. According to a recent study of 22 California reemployment projects, only 19 percent of the nearly 20,000 persons eligible to participate actually enrolled. The majority needed income immediately because of family obligations and simply could not afford to take the time required for retraining. Moreover, many displaced workers lacked basic reading, writing, and computational abilities, which were frequently prerequisite for formal training (Employment Development Department, 1983).

Our inability to link the supply of training to the demand for labor is costly and works against initiatives aimed at increasing productivity. Duscha comments that a politically driven training sector naturally resists planning. Without some way to relate the provision of training to employer needs, he observes, job training costs the taxpayer more because of incentives in the system to overtrain. Duscha also notes that

overtraining has a short-range benefit for employers, who support it out of their own self-interest.

If 10,000 jobs exist, and 30,000 people want training, obviously only 10,000 will get jobs, leaving a surplus of 20,000 trained but unemployed people. If you ask employers if they would rather have 10,000 or 30,000 applicants from which to choose, they'll ask for 30,000. If it costs the trainer \$3,000 to train a person, the total cost is \$90 million to train \$30 million worth of workers. That's too expensive. We need to figure out ways to bring the costs and benefits into greater equilibrium.
(Duscha, 1984)

In an apparent effort to achieve greater equilibrium, new policies have begun to emerge. One significant aspect of these new policies is their emphasis on linking job training to labor market demand by paying training institutions only when trainees have been successfully employed. This approach, called "performance contracting" is modeled after educational experiments first tried in the early part of the 19th century in Georgia and later in Ontario, Canada. Under these performance contracts, schools were paid on the basis of how well their students performed on standardized tests. According to research on the effects of performance contracting in these educational settings, findings show that students' test scores can be quickly raised if subject matter is narrowly defined and students are intensively trained (Education Digest, 1970). The evidence further indicates that teachers, anxious to be paid, concentrate their teaching on the more able students, to the

exclusion of the others. Not suprisingly, the approach was abandoned when public opposition was voiced against sacrificing broad educational values for such narrow ends. More recently, educational performance contracting was tried again under the Nixon Administration. In 1969-70, 170 school districts contracted with private firms to teach reading and math to high school dropouts. However, whatever enthusiasm the public may have had for the plan quickly waned when federal audits showed that students were being taught specific answers to test questions.

Thus, experience with performance contracting shows that it may be an inappropriate approach in educational settings. The evidence shows that tying payments to narrowly-defined performance, drives institutions to define subject matter only in measurable terms, to select students who are likely to succeed, and to simply drill them on these narrow topics.

However inappropriate performance contracting may be for educational purposes, it is perhaps better suited to the more straightforward and measurable task of job training. Further, its built-in incentives for selecting trainees who are likely to succeed, can only help to target job training funds more efficiently and, ultimately improve industrial productivity. The growing public interest in improving economic productivity by orienting training institutions to labor market demand is reflected in the central role given to performance contracting

in both the federal Job Training Partnership Act and in California's Employment Training Panel. Unlike the way traditional government training contracts are usually written, performance contracts withhold payment until trainees are not only trained, but employed as well.

Shifts in the World Economy

Rapid shifts in the geographic centers of economic power have relegated much of the eastern United States and western Europe to what is now called the "Rust Belt," forcing the U.S. into economic competition with the nations of the Pacific Basin. These changes are taking place rapidly and unpredictably. Japan no longer dominates the Pacific Basin economy. Instead, Korea now boasts the world's most efficient steel plant and has garnered 20 percent of the world's shipbuilding market. According to the April 13, 1984 edition of the Wall Street Journal, Korea plans to introduce a line of low-cost automobiles into the U.S. market next year. The Los Angeles Times of July 15, 1984 reports that other "Little Dragons"--Hong Kong, Taiwan, and Singapore--are investing heavily in manufacturing, assembly, and the necessary infrastructure support. The speed of change is increasing as well. For example, Sony's new products used to have a life of two or three years without competition; now copies can be on the street in 120 days.

The threat posed by an increasingly competitive Pacific Basin economy has not gone unheeded by U.S. industry and labor. For every billion dollars lost to the U.S. in foreign trade, an estimated 25,000 jobs are lost as well. According to Semple (1984), investments in research and development that lead to new technologies are important sources of long-term productivity growth. Semple also maintains that an increasing number of U.S. firms are investing in technology to boost their productivity and to improve their competitiveness in the world economy. The Executive Director of Reagan's Commission on Industrial Competitiveness confirmed Semple's observation when he noted:

If you look at General Motors today, one of the largest firms in the world, it is clearly a hi-tech operation. It's the largest purchaser of robotics, CAD/CAM, and other materials. We're seeing a transformation of an old, mature industry made possible by new technology. It is a transformation that is beginning to happen in almost all manufacturing sectors of the country.
(Milbergs, 1984)

Implications of an Uncertain Future

Obviously technological advances affect the demand for skills in some occupations and, consequently, affect the demand for training as well. But little agreement exists about which occupations are affected and how training should be shaped to meet the changing demand. One view holds that technology increases skill requirements in upper-level jobs but reduces skill requirements in lower-level jobs. For example, in a study

of New York City employers, Lynton (1979) found no evidence that new technology creates more jobs requiring advanced skills. Indeed, in some of the industries studied by Lynton, new technology had resulted in an increase in the number of lower-level jobs, thereby widening the gap between skilled and unskilled workers. Similarly, Wilms (1983), found that more than two-thirds of a sample of Los Angeles area employers reported that improved technology had led to no change in skill requirements. The lower the job level, the smaller the impact: Thus, changing technology had almost no effect on unskilled and semiskilled jobs, only a slight effect on clerical jobs, and a greater impact on professional, technical, managerial and sales jobs in that it led to an increase in skill requirements for about one-third of the jobs in this category. The work of Levin and Rumberger (1983) also supports this view. They observe that, even though an increasing number of jobs will be affected by technology, operating new equipment is quite simple, and most new skills can be learned on the job.

In a discussion of how robots, a leading edge of new technology, are likely to affect the workplace, Levitan (1984) points out that their impact will probably be limited, at least for the foreseeable because they cost so much. For example, General Electric was reported to have spent \$316 million to refit a conventional locomotive manufacturing plant with state-of-the-art technology. Thus, only the largest and

healthiest U.S. firms can afford such technology. Even if 250,000 robots were introduced into U.S. industry over the next dozen years (and most estimates are far lower), they would replace only a tiny fraction of the 131 million workers. Further, Levitan maintains that work itself is not going to change very radically, noting that sweepers are going to continue sweeping, and although they may use a technologically advanced vacuum cleaner, "it is the same old dirt."

Changing demographics will also have a distinct impact on the supply of and the demand for job training. Most observers agree that the labor force will grow steadily from 110 million workers to about 131 million in 1995. Women, who now constitute 39 percent of the labor force, will account for 47 percent in 1995; the proportion of workers who are Blacks will increase from 10 percent to 15 percent, whereas the proportion who are young adults (from 16 to 24 years of age) will drop from 22 percent to 8 percent (U.S. Bureau of the Census, 1984).

Nearly half of the projected growth is confined to 40 job classifications, most of which are relatively low-paying and require little education or training. The ten job classifications projected to add the greatest number of jobs to the economy are: building custodian, cashier, secretary, clerk, nurse, waiter, teacher, truckdriver, nursing aide, and orderly, and sales representative. On the other hand, most of the jobs in the fastest-growing occupations--which include computer

service technician, legal assistant, computer systems analyst, and programmer--pay relatively well and require more education and training (Silvestri, Lukasiewicz, and Einstein, 1984).

(These classifications will contribute far fewer jobs to the overall economy because of their small base.)

Noting the disproportionate growth in low-level, low-paying jobs, some observers have characterized tomorrow's labor market as one without a middle, a labor market that may polarize society into the "haves" and the "have-nots." Some data support this hypothesis. For example, according to Bluestone (1983), between 1960 and 1975, the highest- and lowest-earning classes increased as proportions of the total workforce, whereas the proportion in the middle of the job distribution declined. Levin and Rumberger (1983) report that the number of low-skilled jobs will expand much faster than the number of high-skilled jobs. Thus, the demand for computer programmers is expected to reach 150,000 by 1990, whereas the demand for janitors is projected to be nearly nine times larger, reaching 1.3 million in the same year.

The hypothesis of a labor market without a middle is also supported by evidence of sustained growth in the service sector, a growth that is largely attributable to shifts in demography and in consumer tastes. As more women enter the labor force, and as two-income families become more common, the demand for such services as real estate sales, insurance,

housecleaning, daycare, and education increases. Moreover, as the population ages, more health care is required.

That the growth of the service sector will necessarily have negative effects is a notion challenged by an article in the July 9, 1984 issue of Business Week. The authors maintain that the decline in manufacturing (and its higher-paying jobs) is over; that, as women and young people remain in the labor force, their wages will increase; and that service-sector wages will rise as those jobs become increasingly unionized.

Whatever the shape of the future labor market, most observers agree that major changes are taking place with increasing speed. A central policy issue, then, is how to coordinate job training with these unpredictable shifts.

Labor Market Information: The Missing Link?

The belief that changes in labor markets can be accurately predicted and closely coordinated with employers' requirements underlies the use of economic models for national and state planning. The macro-economic models, such as those used by the Bureau of Labor Statistics (BLS) and the Institute of Economic Analysis (IEA) rely on labor market forecasts derived from estimates of output growth for each industry. These estimates are then translated into more specific occupational requirements, the job openings which are then aggregated for the entire economy. States frequently

forecast labor market needs on a less systematic basis by monitoring key economic indicators (e.g., construction permits, wage and salary levels) on a statewide basis. Planners at the county and Standard Metropolitan Statistical Area (SMSA) levels then interpret these indicators in light of local factors.

While there is general agreement that the BLS and IEA models have been useful in identifying the impact of new technologies on the labor market, Rumberger and Levin (1984) note that the BLS model tends to overstate technical job growth and understate the decline of key industries. Further, they point out that, because the IEA model does not take into account the effects of foreign trade, its value in a dynamic world economy is limited. Equally important, neither model is capable of making reliable predictions in such an unpredictable environment.

Like the national models, state forecasting models frequently have shortcomings: They are based on subjective assumptions; the data they generate usually cannot be disaggregated beyond the county or SMSA level, limiting their use by local planners and program operators; and their powers of prediction are limited by the dynamic nature of the economies of most states.

The personnel practices of individual employers thwart even the most rudimentary approaches to planning. According to a recent study of Los Angeles area firms, 77 percent of the firms simply fill entry-level jobs as they open, without regard for planning (Wilms, 1983). A former Labor Department official noted the limits of entry-level personnel planning when he quipped to the Wall Street Journal that the average U.S. firm engages in planning for its nonprofessional workforce like a drunken sailor on leave in Marseilles.

According to Arnold (1984), an improved model could be developed by estimating the level of the Gross National Product and factoring in labor force participation and productivity rates. The management of the national economy, or the balance between fiscal and monetary policy, would also have to be taken into account, to establish the probable economic settings within which labor force estimates can be made. As an example, Arnold points out that the rest of the 1980s could witness either robust economic growth or instability, depending on how the problem of the growing deficit is resolved, and how the balance in international trade is restored. The macro-economic information derived from such a model could be disaggregated by region and integrated with qualitative data on the dynamics of industries within regions. Employment estimates could then be made.

To be effective, such planning must be done on a "rolling" basis, with annual adjustments for unanticipated events. That is, under a rolling plan, the critical variables for each new year are readjusted in light of unplanned changes, and their impact is projected forward in the planning cycle. As each new year passes, a new future year is added.

While most authorities agree that planning of this type could make the allocation of training resources more efficient, an information and planning system would require long-term political support and a commitment to sustained funding. The weight of history suggests, however, that the necessary financial and political support will not be forthcoming in an environment where short-term political interests prevail. Further, as Bolton observes, the training system's responsiveness to political influence limits the potential impact of planning:

The public training sector has an enormous amount of inertia. As long as planning supports the existing arrangements, then planning is tolerated. If, however, planning becomes too obstreperous, then the sector tends to extrude the planning and the planners.
(Bolton, 1984)

Institutional Responsiveness to a Changing Environment

Most evidence indicates that our short- to mid-range economic future will be characterized by a continued press for productivity aimed at restoring the nation's competitive

foothold in the Pacific Basin and reestablishing a favorable balance of trade. In addition, the domestic employment market will be marked by rapid and unpredictable fluctuations in supply and demand stemming from continued adjustments in the Pacific Basin economy and accentuated by further economic dislocations brought on by geographic moves and investments in new technologies designed to improve U.S. competitiveness in the world market. The labor force participation of women and minorities will increase and the demand for services will grow adding to the uncertainties of the labor market.

Finally, no evidence suggests any national or state-level impetus toward improved labor market information or planning. Thus, any such improvement will probably be marginal at best. On the other hand, it seems reasonable to assume that training policies will continue to evolve in the direction of performance contracting, a hallmark of both the JTPA and California's Employment Training Panel. By tying payment to institutional performance, performance contracts give training institutions an incentive to shape their programs according to employers' current demands.

How will the chief training institutions--high schools, community colleges, proprietary schools, and private industry--respond to this new situation? One way to predict institutional response is to examine the incentives that drive them. From his research on the organization of the Air Force, Anthony Downs (1967) made some distinctions that are relevant to

this issue. According to Downs, there are two basic types of organizations: those which are oriented toward output markets and those which are not.

Market-oriented organizations--those whose income is related to whether or not customers buy their products or services--tend to have relatively simple goals and objectives. Because they base both their personnel decisions and their resource allocation on market demands, managers must consider signals from output markets if the organization is to operate profitably and survive.

In contrast, many public organizations in capitalistic democracies carry out social functions that cannot be entrusted to private interests: redistributing income (the Internal Revenue Service), regulating monopolies (the California Public Utilities Commission), and providing services with indivisible benefits (public schools). These organizations, which Downs calls "non-market-oriented," closely resemble the bureau model. They tend to be large, they depend on full-time membership, and they base their personnel decisions on merit, with little regard for output markets. While they must compete with other non-market-oriented organizations for resources, their products are not directly evaluated in output markets. Thus, their income and hence their survival depend not on the marketplace but on their ability to deal with the political process that ultimately governs them. Lacking direct connections to output markets, non-market-oriented organizations must use other

devices to guide their resource allocation decisions. Probably the most common of these devices is last year's budget, which is of primary importance in determining this year's budget because it represents consensus among competing factions (Wildavsky, 1964). While this tendency to maintain the status quo from year to year gives these organizations stability, it also means that any budget and program changes will be small, incremental, and perhaps unrelated to market needs.

Downs (1967) observes that public schools are bureaucratic organizations with quasi-monopolies over the provision of education. Hence, they are ill-suited to perform some tasks--particularly tasks like job training that are dictated by markets. According to Downs, the provision of services in these circumstances suffers from three deficiencies. First, little evaluative information is available either to consumers or to policymakers because the producers control the source of evaluation. Because the producers--in this case, the public schools--have a virtual monopoly over the provision of education, they have no incentive to produce or divulge evaluative information. Second, because little or no competition exists, public institutions have few incentives to increase individual productivity. Because they may retain inefficient individuals and systems, they are often unable to meet new social needs. Finally, bureaucracies typically control the financing and planning of services, as well as their provision and evaluation. Thus, they have even fewer incentives to respond to market needs.

Downs's analysis has important implications with respect to the likely responses of training institutions to a quickly changing economic environment. The remainder of this section discusses the characteristics and incentives of California's chief training institutions: high schools, regional occupational centers, community colleges, proprietary schools and private industry. The discussion is intended to serve as a framework for the concluding remarks on new policy directions.

High Schools

California's high schools have multiple missions. Not only are they entrusted with teaching students basic academics and transmitting cultural values, but they also are mandated to insure that students leave school with "marketable skills" (California Education Code, Section 51004). Their revenues are based on the number of students they enroll. In 1981-82, California high schools received \$291 million for vocational education (Assembly Office of Research, 1983).

Vocational teachers are given tenure after three years of full-time teaching. Most observers agree that dismissing teachers for incompetence or lack of contemporary vocational knowledge is extremely costly and very rare. Teachers are further protected from lay-off or dismissal by union agreements (Assembly Office of Research, 1983).

Most evidence suggests that high schools are relatively insulated from local labor markets. For example, though federal legislation requires that states use current labor market

information in program planning, a study done for the Legislature notes that the California labor market information system, which was developed to meet this requirement, remains unfunded (Assembly Office of Research, 1983). The same report also observes that advisory committees have had little success in strengthening connections between high school vocational programs and employer demand.

Further, despite federal requirements, neither the state nor the schools allocate many resources to evaluating the outcomes of vocational training. High schools generally do not have time or money to provide job placement or to conduct evaluation (Assembly Office of Research, 1983). Consequently, program needs are determined more by history than by current labor market demand (Scott, 1982).

Regional Occupational Programs

Regional occupational programs (ROPs) are intended to provide part-time vocational training to high school students and part- and full-time training to adults. Unlike high schools, ROPs have a single mission: to provide training for "gainful employment" (California Education Code, Section 52300). Like high schools, they derive their income from enrollments. In 1981-82, ROPs enrolled 150,000 students at a cost of \$153 million. According to a recent report, ROPs compete with high schools for resources, staff and the better students (Assembly Office of Research, 1983). While the

competition for students may help to explain their relatively low enrollments, some evidence suggests that ROPs are unattractive to many high school students because they require that the students leave their home campuses to attend (Minicucci, 1985).

In contrast to high school faculty, ROP teachers are certified on the basis of their experience, rather than their formal education. They are not granted tenure and are usually not covered by union agreements. Instead, most ROP teachers are hired from industry on semester or yearly contracts. Salaries are low, and ROPs have difficulty retaining good teachers, who can earn substantially more in private industry (Assembly Office of Research, 1983).

To help insure connections with local labor markets, ROPs are required to use labor market data and advisory committees in documenting employer demand. They also give higher priority to job placement than do high schools, and some evidence suggests that their placement rates run about 10 percent higher than those of high schools (Assembly Office of Research, 1983). Finally, while the State Department of Education evaluates ROPs annually with respect to their cost-effectiveness, no adequate assessment of their performance is possible because of the lack of reliable outcome data.

Community Colleges

Because California's community colleges depend on federal,

state, and local political processes for their income and survival, they are subject to varied and often conflicting signals about their mission and priorities. On the one hand, they provide the first two years of college work to students planning to transfer to four-year institutions. On the other, they offer vocational training to somewhere between a half-million and one million students each year (Assembly Office of Research, 1983; Berman, Weiler Associates, 1985). Like high schools, community colleges derive their income from enrollments. The Chancellor's Office estimates that in 1982-83, \$590 million was spent on community college vocational programs. Some evidence suggests that community colleges are becoming increasingly vocationalized, with a reduced emphasis on the transfer function (Grubb, 1984).

Faculty members are appointed on the basis of academic degrees and previous teaching experience; employment security is protected through a tenure system. According to a recent report, community college teachers are poorly paid in comparison with others of similar education, and uniform salary schedules preclude campus-based incentive plans to reward and retain outstanding teachers (Assembly Office of Research, 1983). Instead, faculty advancement depends chiefly on seniority and on the accumulation of additional college credits. Rarely are ineffective teachers dismissed. Some experts think that more part-time teachers should be recruited from industry, thereby

reducing instructional costs and increasing institutional flexibility. But legislation (advocated by community college academic senate members) limits the use of part-time teachers (California Education Code, Section 87613).

Other evidence suggests that community colleges lack direct connections with labor markets. Though federal law requires that the placement rates of vocational programs be documented, such evaluations are conducted primarily to comply with the law rather than to adjust programs to labor market demands (Benson, 1980). A report recently prepared for the California Roundtable noted that "objective, quantifiable data are still comparatively rare" (Berman, Weiler Associates, 1985, p. 96).

From an analysis of the relation between economic conditions and program completions, Grubb and Jassaud (1984) concluded that completion rates appear to be insensitive to almost all labor market conditions. Once established, vocational programs tend to perpetuate themselves and are slow to adjust to new conditions. Similarly, the California Commission on Industrial Innovation (1982) noted that, both in high schools and in community colleges, expenditures for vocational education go to support existing programs rather than to develop new programs that will meet changing labor market needs.

Proprietary Vocational Schools

California's 1,387 proprietary vocational schools

(schools that are organized as profit-making entities) exist in a highly competitive environment, competing with each other and with community colleges. They tend to be small, the average enrolling fewer than 100 students. Because they derive their income solely from student tuitions, they must hold out the promise of successful job placement to attract students. Consequently, proprietary school owners must pay attention not only to student markets but also to signals from employers.

California's proprietary schools enroll an estimated 500,000 students per year. From the tuitions paid by these students, they are estimated to generate \$292 million in payrolls and \$610 million in gross annual revenues, on which they pay corporate and personal taxes. Private investments in school buildings and curricula are estimated at \$784 million (Wilms, 1984).

Teachers are usually recruited from business and industry and are hired mainly for their ability to teach. Formal educational credentials generally count for little. Teachers are not unionized, nor do they receive tenure. They are evaluated frequently, and promotions and pay raises are based heavily on these evaluations (Wilms, 1984).

The typical proprietary school offers only two or three vocational programs, adding or dropping a program every two years. School owners report that direct employer requests figure most heavily in their decisions to add new programs,

whereas declining enrollments and difficult job placements are the chief reasons for dropping programs (Wilms, 1984). Hyde (1976) found that students' decisions to enroll in proprietary school training were related to prevailing local wage rates. He also noted that, as labor market demands for specific occupations slackened, proprietary vocational programs disappeared.

Private Industry

Precise figures are lacking on the extent to which private employers provide job training to their workers, not only because the private sector is decentralized but also because employers are reluctant to divulge such information for competitive reasons. According to one estimate (Eurich, 1985), \$30-40 billion is invested annually in corporate education and training for some 64 million workers, with the costs typically passed on to the consumer in the price of goods or services produced. The training done by private industry tends to be functional and mission-oriented, aimed chiefly at developing specific job skills (National Commission on Student Financial Assistance, 1983).

Such training is usually done on the job by employees who have other responsibilities. In a survey of a national sample of firms, Lusterman (1977) noted that only 17 percent--most of them large firms--had full-time teaching staffs. Two-thirds of the firms in a sample of Los Angeles area employers reported doing their own training for entry-level jobs, usually because

they felt that their operations were unique and that no outside agency could provide suitable training. Nearly two-thirds of the employers surveyed said they were most concerned that entry-level workers have appropriate work habits and attitudes; they preferred to do the skill training themselves (Wilms, 1983).

Implications for Training Policy

As this brief analysis indicates, some training institutions are more naturally connected to labor markets than others, depending on the way in which they derive their income: Those that rely on the political process for their mission and survival must pay more attention to constituent demands, whereas those whose income is contingent upon their performance in output markets must focus more on market demand.

Most Americans agree that certain social functions are best performed by institutions which are purposely insulated from the intrusive aspects of output markets. Public schools are organized as bureaus because they are entrusted with educating the young--a process which carries indivisible benefits for all citizens. Further, most Americans agree--in theory at least--about the substance of education: We believe that all children whatever their backgrounds and their ability to pay, should have a common, general education through secondary school. Thus, the job market should have little bearing on the educational mission of at least the elementary and secondary schools.

Such is not the case, however, with job training. No public consensus exists as to the substance of job training because it is job-specific and always changing. Nor are its benefits indivisible. Rather, the benefits from specific job training accrue directly to the trained individual and to the employer. Any public interest lies in achieving a greater equilibrium between the demand for and the supply of job training to reduce costs and to increase productivity and efficiency. A public interest also lies in promoting equity: that is, in insuring that those who might otherwise be precluded from training because of its cost have access to it.

Until recently, public policies on job training have tended to emphasize social equity considerations and consumer interests over economic productivity, giving little weight to shifting labor market needs. As concern over economic productivity grows, new policies--aimed at making job training more productive--have already begun to emerge. As mentioned earlier, performance contracting, which promises to foster increased productivity, is already built into federal and state job training policies. However, such policies are still at an embryonic stage and require refinement through experience, evaluation and continued public debate. Four aspects of these new policies, in particular, warrant discussion--separating job training from education; encouraging diversity and flexibility in training institutions; separating financing and planning from the provision of training; and insuring independent evaluation

and the provision of standard information. These four issues, and their implications for training policy are discussed in the remainder of this paper.

Separating Job Training from Education

As mentioned earlier, job training entails transferring specific job skills from one person to another to achieve a specified level of on-the-job performance. Thus, its purpose is considerably more modest and straightforward than that of education, which aims at developing students' intellectual abilities, shaping their personalities, and transmitting the dominant culture and its values. (For a thoughtful discussion of the distinction between education and training, see Bereiter, 1972.)

For more than half a century, however, we in the United States have failed to make the distinction between education and training. This failure can be attributed to our failure to resolve the underlying philosophical issue of whether all children can be educated for productive social roles. This issue surfaced in the debate surrounding the development of the first vocational education act in the early part of the century. According to one view, held by progressives like John Dewey (1914) and Jane Addams (1916), education is a universal process that develops the general abilities of all children. The opposing view holds that only some children can benefit from a comprehensive public education, while others cannot for a variety of reasons. Those who cannot succeed in the academic

program, according to the latter view, should be spared the stigma of failure (and the public should be spared the cost) by being trained for specific jobs. In this way, they will be given a foothold in an increasingly automated job market, and the public will have fulfilled its obligations to all its citizens (Commission on National Aid, 1914).

This latter view has predominated. In a country like the United States, with its belief in the inherent morality of hard work and in the possibility of pulling one's self up by one's bootstraps, this view found a deep-rooted appeal. It rapidly gained wide public support and was instrumental in establishing vocational education as a permanent part of public education. Since then, as vocational education and job training became increasingly important tools of social policy, the distinction between training and education was rarely drawn. Thus, the seemingly unresolvable conflict between the two views has remained submerged beneath the surface of public debate.

Now, however, it seems that the distinction between training and education should be redrawn in the twin interests of improving economic productivity and of better educating young people to cope with a rapidly changing economy and culture.

In summary, most evidence indicates that continued competitive pressures will cause a further shift of U.S. economic interests to the Pacific Basin, that investments in technology will continue, and that the demand for services will grow. While it is generally agreed that changes will occur

rapidly, their impact on the labor market is impossible to predict. Consequently, as Downs (1985) pointed out:

There's a limit on the extent to which the present system can meet the objectives of training people to meet labor force needs. The system cannot work in a highly dynamic market. This does not mean that training institutions will not try to adapt. The proprietary sector--with its short-run, fast response capability--will try to continue to meet immediate needs. Firms will continue to provide their own training to meet their own current needs. But the system cannot adapt perfectly because we cannot perfectly forecast future needs and train people to meet them.

Thus, if they are to weather this predictably dynamic future, the institutions which provide entry-level job training must be connected to markets through their incentive structures so that they can respond quickly to market shifts. Further, they should have incentives to keep costs as low as possible by insuring that programs are short and that a market demand exists for their graduates. Currently, the institutions best adapted to the task of entry-level job training by nature of their incentive structures appear to be the proprietary vocational schools and private employers themselves.

The distinction between job training and education should be drawn for social as well as economic reasons. The weight of history and the experience of many nations demonstrate the futility of trying to mix job training and education in the same institutions. In a study of education planning in Ghana, Foster (1965) observed a social dynamic that has also been manifested in the U.S., Tanzania, Somalia, New Guinea, Sri Lanka, Japan,

Great Britain, Kenya, and other countries (See Dore, 1976, and Vulliamy, 1982, for example): Ghana's public schools comprised two tracks, a regular academic program for the "better" students and a vocational training program that was set up to accomodate rejects from the academic track. But Ghanaian students quickly realized that the most direct route to better jobs was through the more prestigious academic program. Though these students continued to aspire to an academic education, they often used their vocational courses as a way to get back into the the educational mainstream. Thus, student pressures and other subtle factors tended to blur the distinctions between vocational training and education. Foster concluded that so long as vocational and academic education were treated as substitutes for each other, they were likely to be incompatible in the same institutions.

Failure to recognize and maintain the distinction has other negative social consequences. When training is substituted for education, as is frequently the case in U.S. high schools, a disproportionate number of vocational students come from low-income and minority backgrounds. Because these youngsters--who represent the fastest-growing segment of California's population--have limited resources and are unlikely to continue on to college, their high school years represent their only opportunity to learn the basics. The representative of an influential employer group expressed the problem in the following way:

The three Rs have to be reemphasized because technological changes require a greater degree of sophistication in English, and sometimes in math, even for factory workers. A few years ago, a high school diploma was not necessary to go into the factory. Today it is. (Ellick, 1985)

Bill Honig, California's Superintendent of Instruction, underscored the importance of basic elementary and high school education, not for just the first job, but for the entire career:

Even if you go in at an entry-level job, you are going to have to be retrained, three, four, five times. Thus, the ability to learn becomes very important. The General Motors plant in Fremont had a hard time retraining people because they didn't have the basic ability level to be retrained. (Honig, 1985)

Honig also emphasized the distinction between training students for jobs and educating them for life, pointing out that all children need the benefits of a complete education:

...not just for economic reasons, ...but to develop their citizenship, to give them choices in society. Forthcoming changes in society will demand more writing, more thinking more speaking in class, a more sophisticated kind of program than many students are now taking. We need to change our conceptualization. (Honig, 1985)

Encouraging Institutional Diversity and Flexibility

Diversity and flexibility are rarely built into the provision of any public service for two principal reasons. First, public policymakers give highest priority to maintaining a balanced budget, so that expenditures do not exceed revenues. Therefore, they tend to favor monopolistic arrangements with suppliers, which are easier to plan and control, and to argue

against redundant services (multiple suppliers), even though evidence suggests that monopolistic practices are inefficient (Thompson and Zumeta, 1981). Second, the budgetary process is one of making peace between competing factions. Thus, policymakers tend to avoid conflict by spreading scarce resources among powerful interests and by pursuing policies that emphasize the coordination of services rather than competition among suppliers.

Consequently, it is not surprising that public funds for job training have been allocated heavily to public institutions. In fact, until recently, public institutions had a virtual monopoly on vocational education funds. While private institutions (corporations and community-based organizations) participated widely in the Manpower Development and Training Act programs and in CETA, their role as training providers under JTPA appears to be increasingly overshadowed by financially hard-pressed public institutions.

Because many public institutions have come to depend heavily on job training funds, they are prepared to fight bitterly, should any cuts be threatened. When Washington issued JTPA regulations giving local Private Industry Councils the power to allocate job training funds, the California community colleges sensed just such a threat and formed the California Community College Occupational Education Coalition to protect their economic interests. This special interest group claimed "primary" and "presumptive" job training rights, arguing that

"Community Colleges [should] be given the first right of refusal by SDAs [Service Delivery Areas] prior to seeking other alternative deliverers of job training" (California Community College Occupational Education Coalition, 1984, p. 2).

Monopolistic tendencies are not necessarily inherently evil, but it is questionable whether a public sector with monopolistic tendencies can efficiently meet the increasingly dynamic demand for job training. While some public institutions may be able to overcome those built-in incentives that insulate them from output markets and to provide job training efficiently, most cannot.

What is needed are policies that encourage institutional diversity and flexibility and promote competition among providers, the classic antidote to inefficiencies produced by monopolies. A diverse, flexible, and competitive job training sector would help to insure that employers have alternative sources of trained employees and that prospective trainees have a variety of institutions from which to choose. A growing number of policymakers feel that the incentives generated by competition would force institutions to focus on the missions they do best. As a former California Community College Chancellor observed: "The colleges that can't compete ought to get out of the business" (Hayward, 1985).

Speaking for the California manufacturers, Tom Ellick commented on the need for diversity:

[Job training institutions] should be judged on the basis of whether or not their students get jobs. We feel that a

free market model rather than a single centralized system is more likely to be responsive to the variety of labor market needs. We think it's better to have a variety of providers that are mindful of the needs of employers, rather than to have just one single system from which there is no choice (Ellick, 1985).

Separating Financing and Planning from the Provision of Job Training

When products or services are provided through bureaucracies that are also quasi-monopolies, the providers typically finance and plan the product or service themselves. For example, the local bus line finances and plans its service. It also provides the service. This arrangement has at least one major drawback. Because such institutions are insulated from output markets, as long as they control the resources to finance, plan and provide the services, with little or no competition, they have few incentives to ask consumers what they want.

Those who are critical of relating public institutions' performance to their budgets often voice the fear that such incentives will drive institutions to avoid difficult and costly social tasks. For example, some feel that training policies that emphasize performance contracting may cause training institutions to "cream" many of the better prepared participants into performance-based training programs, thus neglecting many other less-well prepared, but equally deserving men and women. As one labor union spokesperson said:

...what happens to the participants, the chronically unemployed,...workers who will be displaced for a whole number of reasons, who are also only minimally literate or illiterate? What happens to them in that kind of com-

petitive mode? (Stanley, 1985)

Evidence suggests, however, that many job seekers who remain unemployed do so not because they lack job skills but because they lack other abilities--basic education they missed in earlier years, work habits or motivation (American Association for the Advancement of Science, 1984; Wilms, 1983). It is likely that some sort of "preparatory training"--including remediation in the basics and work experience programs to foster positive work habits and attitudes--should precede specific skill training.

Separating the financing and planning from the provision of job training, in which one agency plans and finances job training, and awards contracts to providers based on their performance, could be an important step in balancing social demands for efficiency and equity. As Downs put it:

Such separation has the great advantage of allowing the planners and financers of services to engage in unified, coordinated actions, which are appropriate to non-market institutions, while at the same time permitting competitive provision of the actual service itself....The service would still be publicly funded, but it would not be provided in the same way. (Downs, 1985)

Insuring Evaluation and the Provision of Standard Information

Unlike education, which is characterized by multiple and complex outcomes that are difficult to measure, job training has relatively simple and straightforward outcomes: Either trainees get and hold jobs, or they do not. To make wise choices,

prospective trainees and policymakers must have reliable information on outcomes. Thus, the performance of training institutions must be evaluated. However, as Downs points out:

Evaluation is a difficult task, and no bureaucratic producers are motivated to engage in it, since their compensation does not depend on the quality of their output. Why should they risk being revealed as lower than average in quality?
(Downs, 1985)

By separating the planning, financing and evaluation from the provision of services, the funding source would be motivated to evaluate the competing providers to determine which are doing the best job and warrant continued support.

The elements of such a system are already in place. For example, California high schools seem to be moving away from vocational education cast as narrow skill training. The movement to reemphasize the basics for all students seems clear. Similarly, programs offered under the JTPA already provide preemployment training--counseling designed to improve motivation and attitudes, as well as instruction in how to find a job. Also, proprietary vocational schools, which are funded by student tuitions, appear to enroll a large proportion of low-income trainees, many of whom finance their training through state and federal grants and loans. Finally, an increasingly large share of specific skill training is being done by private industry, community colleges, proprietary schools, and community-based organizations under performance contracts with the Employment Training Panel. The Panel, which is funded by

Unemployment Insurance revenues, does the planning and financing. Training agencies are paid only after trainees have been placed and on-the-job for at least 90 days. According to a recent report, the Panel has authorized the expenditure of \$97 million to 210 separate training projects to train 31,644 participants (Arthur Young, 1985). The Panel's reported placement rates of 87 percent, and average costs of \$3,019 per participant, are early indications of the potential value of this approach.

In summary, given the current dynamic economic environment and the uncertainties of the labor market, recent job training policies seems to be moving in the right direction. Further steps should be taken to distinguish between education and training, to withstand the monopolistic tendencies in the training system, to separate financing, planning and evaluation from the provision of training, and to provide accurate information on program outcomes.

Notes:

1"Entry-level" job training refers to specific training required for entry-level employment that concludes at the pre-baccalaureate level.

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