

MANAGING HUMAN RESOURCES

AS CAPITAL ASSETS

Robert Grandford Wright

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Fulbright Fellow
Universidade Nova de Lisboa
Lisboa, Portugal
Pepperdine University
Malibu, California, U.S.A.

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UNIVERSIDADE NOVA DE LISBOA
Faculdade de Economia
Campo Grande, 185
1700 LISBOA

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Introduction

A new way of thinking about the human resource is emerging. It is apparent that this reconceptualization of the only vital factor of production will have a profound impact on the way managers manage. The new set of concepts is coming as an outgrowth of the design of accounting systems adequate to measure the costs of human resources and to thus report manpower as a capital asset. Though of itself the revised accounting system will not improve the management of people, it will provide substantive evidence of their value and, therefore, act to emphasize that a person is a unique entity requiring individualized consideration.

The multiple bases for measuring investments in human resources and the elements requiring measurement pose no perplexing problems for accountants. Accounting conventions can be adapted easily to include human asset accounting. A practice that can artfully incorporate the notion of "good will" and incorporate it on official ledgers scarcely will find allowing for investments in the people of enterprise a difficulty -- technically or ethically..

The leadership of professional athletic teams has helped to show us the way to account for human investments. It has indeed accounted thus for decades. So, accounting procedures are somewhat in place -- tax conventions contrariwise are not in place at all.

The human asset accounting model is being developed in response to a growing concern among managers with the present inability to quantitatively deal with their organizations' human resources [1]. To them, it is incredulous that annual reports often include a statement to the effect that "our employees are our most valuable asset", but that an interested reader is unable to find this "most valuable asset" in any of the accompanying financial statements. Often incidentally, the significant variances between the amount paid for a company and its book assets is due to the value of its "unshown" human resources and their organization. Further, managers register great concern over their inability to get information on the

To fill these needs, and many other allied requirements regarding the human resource, conventional accounting practices are undergoing changes to accommodate measuring humans as a capital asset. The results will have implications for management strategies that transcend the apparent financial considerations.

Capitalizing a Person

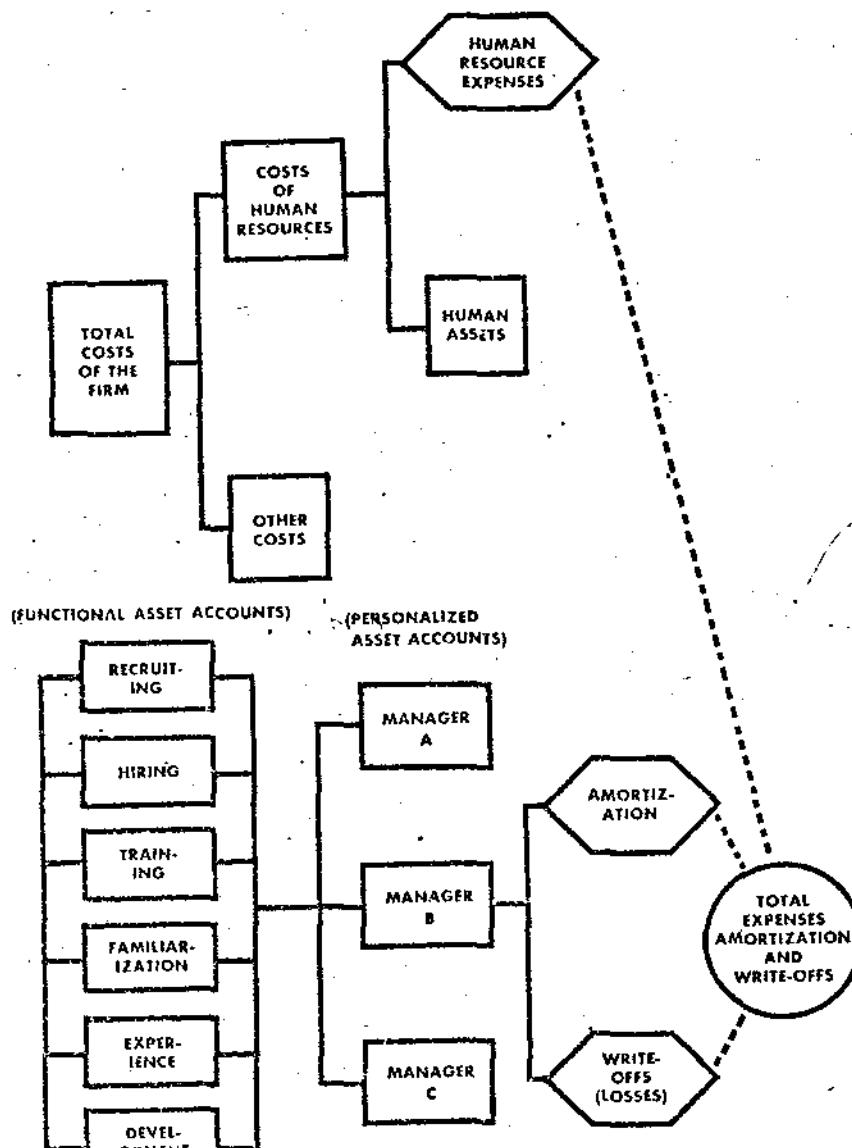
Consider initially the mechanics of human resource accounting. There are several bases upon which the value of human resources can be estimated. Investments can be measured as acquisition costs, replacement costs, or economic value to the organization. Acquisition cost is derived by summarizing historical transactions to acquire a resource. Replacement cost, as the term suggests, is an estimate of the total expenditure to replace a resource. And economic value is an approximation of the present value of a human resource based on that portion of the organization's future earnings attributable to his or her particular contribution. Effectively, these three approaches respectively attempt to measure (1) what the resource costs, (2) what it would now cost, and (3) what its value is,

based upon potential earning ability. Each basis for estimating resource value has merit for different types of managerial decisions; each, also, has some special problems.

For example, consider the seemingly straightforward allocation of transactions to determine the acquisition cost of a human resource. The acquisition cost would reasonably include a proration of investment in recruiting, hiring, orientation, training, initial on-the-job experience, and continuing development. The basic accounting model to apply acquisition costs to managers is illustrated in Figure 1.

The reader will note the difficulty of estimating investments in several "functional asset accounts". In the account labeled "experience", for instance, a number of subtle implicit costs might reasonably be considered. Costs assignable to errors and opportunities missed should also comprise this account, together with the unavoidable investment in an employee's time and efforts to assimilate his activities with those in related areas of activity. In a word, the investment incurred to establish acceptable roles, role relationships, norms, and values. In a word, that required for

FIGURE 1



enculturalization.

Any basis to account for the human asset -- acquisition or replacement cost, economic value, or other -- poses special problems. Notwithstanding the difficulties, the utility of the information for managerial decisions made available as a product of the use of a human asset accounting model far outweighs the burden of conceptual complexity and discomfort with inexactitudes.

Omissions of Current Systems

At the outset, let us recognize frankly that treating employees in part as capital assets technically is merely a matter of recording things as they are financially. Conceptually, however, such treatment goes beyond value to financial analysis. Generally, resources used during the period in which benefit is realized by the firm are "expenses". Resources used for benefits related to future time periods, i.e., not exhausted to realize present benefit, are normally "assets". Thus, the nature and timing of benefits to the firm from human resources urge one to conjecture that a major portion of the contribution from this resource will be realized in the future, and that, therefore, a major segment of

the investment in employees should be treated as assets.

When only traditional assets are accounted for, management is responsible only for their prudent use and perservation. So, for instance, when a new building is acquired those responsible simply manage to gain the highest long-term return on their investment and to inhance coincidentally the value of the structure. With human assets the same objective prevails, of course -- gain maximum return through use and increase value -- but the managerial strategy differs.

Non-people assets should be engineered and managed: People must be lead. Leadership becomes the critical strategic factor.

In addition, this matter of capitalizing human resources is essential in the labor and management-intensive service, instead of product industries, where the exclusion of people assets is flat-out misleading. As examples, the balance sheets of the great advertising, consulting, or accounting firms, particularly if they opt to lease physical

assets, are mere skeletal representations of each firm's financial substance. But, when one accounts for the indispensable value of their people, this worth acquires the sinew and muscle that the firm in reality deserves.

The inclusion of living assets together with non-living assets of course, will cause a firm's cost functions to shift upward to represent all factors of production. The implications of which are heady for tax bases, investment analyses and management strategies. Yet frankly, this completion of the financial orchestration of a business adds the single and only vital side of enterprise.

Apparent Financial Benefits

The information provided by such a system is essential to managerial decisions for the purposes of financial planning, organizing, directing, and controlling. Examine certain of the apparent merits of accounting for human assets for financial considerations [2].

- Management needs more complete information on the costs of personnel turnover. Currently, managers do not have access to enough information on employee

attrition to assess the magnitude of these losses. Though the cost of employee turnover is commonly recognized as a subjective concern of management, a comprehensive approach to quantitatively analyze the amounts of such financial drains, as they relate to efforts to mitigate the underlying causes of personnel turnover, is not available. And this inability to more effectively manage costs associated with employee turnover is found in firms whose attrition rate is in excess of 20 percent a year, which represents a staggering loss, even when one does not consider that his firm's human assets are at times joining his competitors' forces.

• Managers need estimates of their firms' ratios of investments in human resources to total assets as an indicator of potential to generate future profits. Such analysis over time (trend and comparisons) may become useful as a prime determinant of a firm's capabilities to effectively compete. Both a priori reasoning and certain empirical evidence leads us to believe that a positive correlation exists between investments in the acquisition, orientation, training, retraining, and retention of human resources, and the future profitability of corporations (or the effectiveness of other social organizations). The

idea suggests that, at least in enterprises in which the human resource is a critical factor of production, high profits can be ultimately expected from a high human asset investment ratio, and declining profits can be anticipated by firms with a low ratio.

• Human asset accounting is thus needed to evaluate alternatives to make decisions on capital budgeting. Currently, managers are able to accurately analyze investment alternatives in other assets, whereas opportunities for strengthening the human resource can only be given qualitative consideration, or crude quantitative approximation. As a result, justification is weakened for further investments in the human asset, and as a consequence, such investments are often the first to be "red lined". It should be stressed that the denial of human investment opportunities is commonly missed not because they do not represent potentially high yields, but rather because management is uninformed of the potential payoffs.

• Management can use additional data for those frequent decisions on capital budgeting when alternatives involve both investments in human resources and other capital assets. For instance, consider a decision that involves investments in human

assets and a physical asset. This might mean making a choice among alternatives for the location of a new plant. Typically, with conventional accounting data, the impact of this decision on the employees is considered as a qualitative factor, and as such, may be ignored: ignored because of the substantive nature of evidence for locating the facility in a certain place.

Human resource accounting would integrate both human and physical considerations into the capital budgeting decision model by moving the human factor to a quantifiable position. Thus, in hybrid investment decisions (such as the location of a new plant with its impact on the potential loss of valuable personnel), management could sample the receptivity of employees to relocation in relation to the various alternatives under consideration. In turn, full turnover costs could be calculated with sufficient precision to be quantitatively weighed against the advantages of various physical locations. The

• Rates of return on investment could be more intelligently interpreted if the value of human assets was estimated and included in the rate base. As it now stands, employees are assumed implicitly to be a free good -- a costless resource. This assumption seriously distorts both evaluating performance and weighing alternative investments. Since some enterprises have the lion's share of their capital invested in people, rather than physical assets, (e.g. the accounting, advertising, and consulting firms mentioned earlier) calculated rates of return that exclude the human value from the rate base are inadequate. And further, evaluating investment opportunities to the exclusion of the cost of human resources is misleading because employees as well as physical assets have an opportunity cost related to their use, i.e., the increment of loss of profitability from alternative investments not selected.

• Management needs to be able to estimate the value of training and development programs. Most successful enterprises invest heavily in training programs for employees throughout their organizations. It is particularly fashionable for corporations to devote substantial resources to the continuing

development of members of management. Though we can reasonably assume that their value is enhanced, and research supports this proposition [3], large capital commitments are made to such programs without even an estimate of expected payoffs or return on investments.

Since the value of developing human resources is largely taken on faith, the expenditures are too frequently treated as a luxury in which successful corporations indulge themselves. Unhappily, but consistent with this attitude, when profits are not sufficiently high to afford such "self-indulgence", training is restricted -- restricted at the point in time when an investment in the human asset may be pivotal to reversing the downward profit trend. Management sorely needs analytical tools to weigh decisions heretofore made on subjective grounds. They need a systematic approach to estimate the yield, or return on investment, over time, of expenditures in human assets.

- In addition, management needs information about the categories of its human resource investments so that standard costs and replacement costs can be established for use in planning. Data is needed to set standard costs on recruiting, hiring, orientation, training, and integrating new employees to a

sufficient level of interaction with fellow workers. These costs would form the basis for controlling personnel cost. And at least of equal importance, they would provide management with guidelines to estimate the replacement cost for persons in various positions so that manpower acquisitions could be planned to become a segment of the capital budget.

• And last, management would value information on the composition of the human asset inventory. Currently, "net income" is, of course, not adjusted to include changes in the value of human resources. "Profits", as a consequence, include amounts derived from the use (or partial liquidation) of human assets. Hence, management can withhold investing in human resources during a given period with a subsequent increase in net income the close of that period. This illusion of profitability, at the expense of poverty in the personnel ranks, can represent the genesis of failure to profit in the future.

Though unconventional in a reporting sense, accounting when used for managerial decisions should adjust net income for changes in the value of human assets. Whether appreciated or depreciated, this

would give managers a more realistic measure of true profit, an improved basis for approximating future earnings, and a manpower audit to forecast requirements to acquire and develop human assets.

Potential Behavioral Implications

The value of human resource accounting to financial decision makers seems apparent. In a word, the approach moves financial abstractions closer to concrete reality. The concern in the remaining sections of this article is for managing an employee as a capital asset. It seems reasonable and consistent that management will reconceive an employee as the only vital aspect of business, and as such will restore individualistic treatment for each employee leading to heightened congruency and improved relationships among human beings. The focus is on "managerial accounting", rather than on "stewardship accounting". As such, we will attempt to predict changes in leadership patterns as a consequence of managers' change in perceiving the value of employees.

Little is known about the impact of human resource managerial accounting on the behavioral patterns of people. Through conjecture, we can reasonably assume that this new way of thinking about

employees may lead to certain rational reactions by managers. Assuming that a correlation generally emerges, after an expected time lag, between investments in human assets and profitability, it would follow that management would insist that such investments be made in a desired ratio with other assets. Let us now consider certain generalized statements about managing a person as a human asset.

• Today, a line manager is responsible largely for the development of his immediate subordinates, with intermittent specialized assistance from staff personnel. But this arrangement produces dubious results for at least two reasons. First, the typical day of a line manager is absorbed by matters of an operative and administrative nature. Operative matters are immediate requirements imposed by his subordinates and their duties, and administrative work comes from related units in the organization and higher authorities. Tasks from both areas are usually of an urgent nature in varying degrees. As a consequence, time for the development of subordinates commonly is simply not available. Either the workload is too great, or in a Parkinsonian sense, work expands to fill the time available for work. Whatever the cause, employee development suffers since it is often

the single aspect of a manager's work that can be deferred.

Second, no means are available to give the line manager an incentive for adding value to human assets. His costs and those of his subordinates are neatly labeled "operating expenses" and commonly related exclusively to current productivity. Interestingly, though no distinction exists between expenses and investment in dealing with human beings, a careful separation is made when a manager invests his time in developing other capital assets.

In sum, little incentive is given to line managers to develop human resources, and such development efforts assume low priority among the varied demands competing for the manager's time. Viewing an employee as a human asset, however, would normally cause us to reconceive responsibilities for his or her development in several ways. First, upper management would insist upon the completion of approved (capital budgeted) human development programs. Second, spans of management (ratios of subordinates to superiors) would be narrowed to facilitate the fulfillment of responsibilities both to current matters and to building the value of future resources. Third, managers would be given an

incentive to develop subordinates since one measure of their effectiveness would be the "value added" to subordinate employees. Fourth, in response managers would allocate their time and intellectual energies to include the development of the human assets under their direction. The catalyst, in essence, would be provided in the form of incentives to invest in the continuing development of employees consistent with investments in technology and other fixed assets toward organizational objectives.

- More exacting deliberation and greater concern would be expended to assure that employees were assigned to sufficiently challenging positions. To do otherwise would fail to provide the means for realizing a maximum return on the human investment. The rate of return on human resources would be suboptimized should a person be "cast" for a role not requiring his or her capabilities.

For example, assume that a certain management position is conservatively estimated to require the talents of a manager who represents an investment of, say, \$100,000. Assume further that the position is currently filled by a manager who has been developed to the degree that she represents a \$200,000 investment. In a word, she is "cast too low" to bring

on a reasonable rate of return.

With the use of human resource accounting, top management would be provided with data that would alert them to situations in which investments were disproportionate in relationship to job requirements. As a consequence of this surveillance, the frequency of such incidents would be minimized. And where they were unavoidable, corrective measures of an interim nature might be taken to protect the integrity of the investment.

Promotions are currently based in large measure on attrition. A vacancy occurs causing the upward movement of the candidate chosen. This is followed by sequential readjustments of personnel indirectly affected by the initial appointment. As a result, the ability of people with high earnings potential to perform, i.e., human resources highly capitalized, is often thwarted by impediments posed by limitations on employee turnover. In turn, the enterprise fails to realize "payoff" from its investment at the time when a resource's potential is prime.

Reflect now on the impact of impeded advancement on the individual. The employee believes that he/she is ready for expanded responsibilities, but also is

aware of the organizational realities blocking immediate progress. Confronted by this common set of circumstances, a number of alternative paths of action emerge for the employee's consideration. First, he can acquiesce to the limitation and accept limited contribution. Second, he can involve himself in internal activities of a "dysfunctional" nature, such as leadership in organized resistance to formalized arrangements or as an informal leader of dissidents or malcontents. Third, he can realize certain fulfillment as a leader in activities apart from the company, such as charitable, cultural, religious, or athletic groups. Or fourth, faced with this restrictive situation, he can disassociate himself from the company and join an enterprise where his potential and actual contribution are more commensurable. Whatever prerogative he selects, his "payoff" will not occur for the firm that has made the capital investments.

Management must first recognize that man does not live with "cognitive dissonance" -- in this instance, a dissonance between what an employee believes (feels) he can contribute and what he is permitted to contribute. Instead, he reconciles this discontinuity through the alternatives cited, or through other

means.

Human resource accounting can give management another indicator of each employee's potential. Astute managers will react by providing work-related activities to fill the disparity between immediate capabilities and present demands from the job. The horizons of employees' contributions will be broadened on the basis of competence, rather than only attrition. And considerations of employee treatment on this basis are practical and sound, not only to realize a sufficient return on a vital asset, but also to create a work atmosphere in which individual enterprise can flourish. Hence, the practice encourages good management on both financial and behavioral grounds.

- Managers would strive to expand the spans of responsibilities of employees who represent major investments even when formal positions of advancement are not available. Otherwise, the expected return from the asset would be partially sacrificed.

As examples, it seems reasonable that management would take bold steps to provide opportunities to competent people whose progression is blocked by the mechanical selection process dictated by the pyramidal

structure of a corporation. A number of workable alternatives come to mind: First, job enlargement, or expansion, can be accomplished laterally as well as upwards. Analyses of investment in human resources on a given authority level might clearly lead to the expansion of certain individuals' spans of responsibility and the contraction of others [4]. Second, potential achievers can be appointed to "shore up" managers whose areas of responsibility now exceed resources available to deal with the demands of the position. The arrangement might be on a part-time or full-time basis. (The use of junior managers to serve senior executives is not common in the United States, although it is an important managerial strategy in Japan.) And finally, special assignments can be provided for those persons considered to be exceptionally qualified in their positions. These added responsibilities might come about through service to such activities as ad hoc resource teams for special projects, standing committees, or junior boards of directors.

There are a number of spheres of activity in nearly every corporation in which specialized, probing investigations and analyses are needed. In the unusual case when such efforts could not be assigned

to an underutilized employee, it is within the realm of feasibility that the person might serve another organization until such a time as his talents could be effectively used in his own. For instance, a manager possessing general skills could be traded to an affiliated branch of the firm to serve during an interim period and by this means continue his growth and contribution. This agreement might include "waivers" so that he could be recalled to his primary enterprise at such time as his talents could be more fully used.

In addition, by extending this line of thought further, it seems reasonable to assume that management might be encouraged to negotiate exclusive contracts with persons representing substantial investments as human assets. This tack would merely be a step beyond providing a package of fringe benefits that increases in value as an employee builds longevity and, therefore, encourages her to continue affiliation with the firm to which the benefits are tied. The exclusive contract is frank acknowledgement that the contributor is considered to be a "living treasure" to his or her employer.

The personnel practices that will emerge from human resource accounting will candidly recognize a person as a valuable property. As such, every effort will be made to realize her or his full contribution to the team effort, and will include the means to protect the corporate team from losing a capable performer.

• Management may become more selective in making investments in human resources. As suggested previously, it is now common practice to invest in the continuing training and development of employees throughout the organization, with substantially large sums invested in management. Though generally a sound investment because it increases employees' future value to the enterprise, consider the special case in which an individual is unresponsive to efforts to enhance his capabilities. And further, assume that although he has been exposed to a potential wealth of training, with an accompanying burden of cost, no evidence of his increased value has been witnessed. In a word, an investment is not paying off! The question seems apparent: Would management continue to invest in any other asset that is not generating a sufficient rate of return knowing the amount invested would fail to enhance its capacity to perform?

There are a number of associated issues that would require consideration to adequately deal with this question. Questions might be posed, such as, was the opportunity given to demonstrate increased competency; was a sufficient "lag time" given between investment and return; or were there mitigating circumstances of an intervening nature that impeded improved performance? Notwithstanding the complexity of deriving satisfactorily accurate answers to such questions, it seems reasonable that if, after fair deliberation, it was found that efforts to further develop an employee were apparently in vain, then management would divert the resources and invest them in employees whose performance and potential would be enhanced.

This personnel strategy also squares with sound human relations practices. Currently, management apparently assumes that like efforts to develop managers will end with like results for all participants. This assumption coupled with the common practice of promoting people largely on their performance at the next lower level, gives credence to the view that men are advanced to their level of incompetence. In certain instances, this is doubtless true. Though human resource accounting cannot

eliminate advancements beyond one's capacity, it will provide an additional indicator of the candidate's potential strength for consideration before an advancement is made.

● Last, and most important, when personnel problems occur an employee will receive treatment as a valuable resource, rather than merely an operating expense that acts to drain corporate resources. As a consequence, consider the new behavioral patterns of management that logically emerge from this reconceptualization of an employee's contribution.

To illustrate the point, picture a manager faced with the problem of a physical asset that has become incapable of producing at its optimum level. For instance, a piece of machinery has idle capacity because of inefficiency due to changes in the production process for which it has not been retooled: It is, therefore, not integrated into the new flow of production. Several apparent alternatives might be considered initially: (a) replace the machine, (b) eliminate the machine, (c) continue to accept substandard output, or (d) retool the machine. If we assume further, however, that the equipment is a valuable asset and can bring a return on investment if converted to produce increased marginal return (i.e.,

prorated differential conversion costs exceeded by differential revenues from production), then a manager would reject alternatives a, b, and c to select alternative d, and would retool and integrate the equipment.

Consider now the implications of this type of managerial problem related to managing the human asset. Often, an employee losses optimum effectiveness because he is unable to adjust to new expectations concerning such things as his role, role relationships, scope of authority and responsibilities, and priorities of duties. Nor can he adopt and support new organizational goals and be dedicated to them. This is a common problem brought on by swiftly moving adaptations required to keep pace with innovations in technology, product development, market movements, and growth.

An employee who has become ineffectual can be the product of discontinuities between new work expectations and actual performance. Should management consider its alternatives for correcting the problem to be based solely on traditional views of an employee as an operating expense, its spectrum of relevant alternatives might be as follows: (a) replace the man by relegating him to a less sensitive

position, (b) terminate the man, (c) continue to accept substandard performance, or (d) reorient and redevelop the employee to integrate his abilities with the altered position. Viewed dominantly as a loss of operating revenues, performance perceived as incompetent frequently, and quite understandably, results in demotions, restricted areas of authority, or terminations. Each such decision minimizes or fails to generate return on the human investment.

If, by contrast, management had considered the employee first as a valuable asset, and second as an asset necessitating an operating expense, its line of reasoning would have followed a quite different path. For instance, first, management would concede that it has, say, a \$200,000 human resource; second, that for some as yet undetermined reason, the asset is unable to yield an acceptable return in the form of contribution to productivity; and third, management would correct the condition so that a maximum return on investment could be realized. The priority and relevance of its alternatives would be greatly reshaped by incorporating sunk costs, i.e., investment, in the human resource into the decision model. As a result, alternatives dealing with replacement, downgrading, termination, and continued

acceptance of sub par performance would lack relevancy, at least initially, because they fail to maximize return on investment. One alternative remains the primary consideration because it will result in the optimum solution of the problem as defined: Efforts should be made to reorient and "retool" a \$200,000 human asset just as a reinvestment would be made in a valuable fixed asset, as it become necessary in order to achieve maximum utilization under new operating conditions.

Indeed, it is interesting to muse that if management had prioritized its options with other capital assets as it does now with the human asset -- i.e., (a) replace, (b) eliminate, (c) accept substandard, or (d) retool -- the management would be criticized summarily for mismanagement (probably more likely, malmanagement) and dealt with correspondingly. Yet, alas, management is fully accountable to administer prudently, thoughtfully all resources, save one.

Concluding Remarks

In the future, managers may come to insist upon estimates of their investments in human resources as individuals. Human resource accounting will emerge as explicit recognition that man is a valuable corporate asset. It will also provide additional quantitative data for difficult managerial decisions involving this vital resource.

Accounting for an employee as a capital asset should not result in dehumanization. To the contrary, it can restore the personal treatment of each one in complex organizations and lead the way to more humanistic treatment of employees. Greater attention may be given to individual selection, development, placement, advancement, incentive, and redevelopment. Greater care may be taken to avoid overextending employees, underutilizing talents, and allowing managerial obsolescence. When managers are informed on financial facts, and thereby enabled to act as "economic men", the resulting decisions often also lead to sound human relations. This is true because in part "economics" summarizes quantitatively the results caused by the fulfillment of the values, needs, and wants of individuals.

It is the writer's hope that this article triggers interest, controversy, and encourages reflection on the treatment of employees as valuable human resources so that the hypothesis matures further toward widespread use. Though the approach only redefines existing knowledge, it should persuade managers to reconceive their way of thinking about employees, and to reconsider the terms surrounding their dealings with them. For accountants, reconceiving an employee as a human resource poses mere problems of a conceptual and mechanistic nature: For managers, this reinterpretation of a person's value to an organization poses the perplexing problem of effectively managing the only vital resource of enterprise.

NOTES

- [1] This article is derived as an analysis from a managerial viewpoint of R. Lee Brummet's contribution, with Eric G. Flamholtz and William C. Pyle, entitled "Human Resource Measurement - A Challenge for Accountants", The Accounting Review, XLIII, 2 (April, 1968), 217-224.
- [2] Brummet, et al, op. cit., pp. 218-221.
- [3] Robert E. Boynton, "Attitude Change in Management Development", in process. Professor Boynton finds that managerial talents are strengthened as a result of changes in attitude so that views are more consonant with contemporary management theory and employee expectations. The researcher derived this knowledge through empirical pretests and posttests of 166 participants in two-week management development courses.
- [4] American managers generally set the same ratio of subordinates to each supervisor in areas of closely related work, particularly when the work units are in close physical proximity. Presumably this approach to organizational design brings on equity, or consistent treatment, to all super-

visors on that level. If, however, the supervisors have different capacities for accomplishment, uniformity brings on inequity, as well as economic inefficiency since certain human resources are underutilized.