EQUITY CONCEPTS AND THE WORLD OF WORK

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For a decade or more governmental manpower efforts have focused on equalizing the distribution of earnings. Blacks are to catch up with whites; women are to be paid the same as men; the poor are to escape from poverty. While there has been some limited progress toward all of these goals, the distribution of earnings has been remarkedly resistent to changes. Explicit manpower programs and enormous changes in educational attainment of the labor force have made almost no dent in the pattern of earnings. In the post-war period the distribution of earnings among adult white males--the group not subject to discrimination--has become slightly more unequal.

If you look at the theories lying behind social efforts to reduce inequalities in the distribution of earnings in the post-World War II period, they: (1) follow neo-classical economics and (2) ignore a wide variety of psychological, sociological, and labor economics research.

Almost all government manpower and education programs are based on the neo-classical economic view of the world. Neo-classical economics assumes that workers come into the labor market with a definite, preexisting, set of skills (or lack of skills), and that they then compete against one another on the basis of wages. According to this theory education and formal training are crucial since they create the skills which people bring into the market. As a result it is possible to governmental authorities to impose a more equal distribution of earnings on the labor market by injecting a more equal distribution of skills into the labor market.

Injecting a more equal distribution of skills into the labor market has a powerful three-pronged impact on the distribution of earnings. First, a training program that transforms a low-skill person into a high-skill person raises his productivity and therefore his earnings. Second, it reduces the total supply of low-skill workers, which leads in turn to an increase in their market wages. Third, it increases the supply of high-skills workers, and this lowers their wages. The net result is that total output rises (because of the increase in productivity among formerly unskilled workers), and the distribution of earnings becomes more equal. What could be more ideal?

From this point of view there is no need to worry about, or even to know, anything about the equity judgements of the work force. If society decides to equalize the distribution of earnings, it can do so indirectly through equalizing investments in human capital. The equity judgements of the work force play no role in the economy although they may play a role in the political arena.

The rest of this paper will attempt to argue that the equity judgements of the work force are not irrelevant. They may, in fact, be at the heart of the current distribution of earnings. Any attempt to alter the distribution of earnings may have to take them into account and may have to change them. The first step in any such effort would be more explicit knowledge about the equity judgements of the work force. Some indicator of the equity judgements of the work force, and how they change, might be of crucial importance in government policies to change the distribution of earnings. But this is to get ahead of the argument. The first step is to understand the importance of equity judgements to government manpower policy making.

I. The Importance of Interdependent Preferences

Neo-classical economics and the marginal productivity theory of distribution implicitly assumes that individuals look only at their own wages and productivity to determine whether they are fairly or unfairly paid, or that they are unable to do anything about it if they do in fact look at their relative wages and become unhappy with what they see. Both of these assumptions are open to question.

The history of individuals looking at their relative wages and becoming unhappy with what they see is at least as old as the history of mankind. Man's interests have existed for at least the last 2000 years.

> "For the kingdom of heaven is like a household who went out early in the morning to hire laborers for his vineyard. After agreeing with the laborers for a denarius a day, he sent them into his vineyard. And going out about the third hour he saw others standing idle in the market place: and to them he said, 'You go into the vineyard too, and whatever is right I will give you.' Going out again about the sixth and ninth hour, he did the same. And about the eleventh hour he went out and found others standing; and he said to them, 'Why do you stand here idle all day?' They said to him, 'Because no one has hired us.' He said to them, 'You go into the vineyard too.'
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> And when the evening came the owner of the vineyard said to his steward, 'Call the laborers and pay them their wages beginning with the last, up to the first.' And when those hired about the eleventh hour came, each of them received a denarius. Now when the first came, they thought they would receive more; but each of them also received a denarius. And on receiving it they grumbled at the householder, saying, 'These last worked only one hour, and you have made them equal to us who have borne the burden of the day and the scorching heat.' But he replied to one of them, 'Friend, I am doing you no wrong,

did you not agree with me for a denarius? Take what belongs to you and go."[1]

While an interest in my fellow worker's earnings and the resulting unhappiness and disruptions when norms of social justice are broken may be contrary to the norms of both biblical man and economic man, they seem to be an endemic part of human man. Imagine what would have happened if the parable of Lord of the Vineyard had extended over to another day. Hiring labor and operating the vineyard on the second day would have been a real headache.

A wide variety of more recent evidence points to the existence of the same type of interdependent preferences. Over the past three decades the Gallup poll has asked, "What is the smallest amount of money a family of four needs to get along in this community?" The 17 answers to this question have all fallen between 53 percent and 59 percent of the average income of the year in which the question was asked.[2] The responses are consistent with respect to the average income in the year in which the question was asked but grew in absolute terms as average incomes grow. A Harvard sociologist, Lee Rainwater, has shown that when people are asked to categorize others as "poor, getting along, comfortable, prosperous, or rich," they do so rather consistently relative to average incomes.[3] A University of Pennsylvania economist, Richard Esterlin, has reviewed the evidence as to how happiness is related to income in different countries of the world.[4] He finds that happiness (utility?) is almost completely dependent upon one's relative income position within his own country and almost not at all as to whether the individual is located in a high income country or a low income country.

The same phenomena are reported in labor negotiations. Bargaining about relative wages is at least as pervasive as bargaining about absolute wages. Perhaps the best recent example occurred in Sweden where college workers struck to increase their pay relative to non-college workers. Their demand was not for more income, but for a wider wage differential. Conversely it is difficult, or impossible, to find any employer who systematically attempts to measure worker's marginal products and then sets pay scales in accordance.

Actual utility functions seem to be heavily, if not completely, determined by relative incomes and interdependent preferences rather than absolute incomes and independent preferences. Sociologists call interdependent preferences 'relative deprivation'; psychologists would label the same phenomenon 'envy'; labor economists refer to wage contours. Whatever the name, interdependent preferences seemed to be a widespread phenomenon.

To say that utility functions are highly interdependent, however, is not to say that men are going to be able to implement their interdependent preferences in the labor market. What allows individuals to exercise their interdependent preferences in the labor market? My utility may depend upon the income of my neighbor, but this would not influence my own wages or productivity in the standard wage competition model. Like it or not, each individual would be paid his marginal product.

The assumed irrelevance of interdependent preferences flows from two counterfactual assumptions implicitly contained in the wage competition model. First, individuals are assumed to have fixed marginal products--skills--that they sell in the labor market. In fact individuals have a vector of possible marginal products depending upon their motivation. An unhappy worker can lower his productivity. Often the reduction can occur in such a manner that it is difficult and expensive to determine whether a worker has or has not reduced his productivity. While a worker's happiness or utility is irrelevant if he has a fixed marginal product, it is highly relevant if he has a variable marginal product. Employers need to set a structure of wages that illicites voluntary cooperation and motivates their work force. The net result is an avenue whereby interdependent preferences can influence the wage structure.

Second, individuals are assumed to be interchangeable parts in the production process. In fact most production processes require a degree of teamwork that can only be acquired through on-the-job experience and a high degree of internal harmony. A team with a revolving membership or a team that is unhappy with its wage structure has a lower productivity than a team with a stable membership and satisfied with its wage structure. There is a high degree of truth in the old aphorism, "there is no institution that cannot be brought to its knees by working to rule." Efficient economic production does not occur if everyone does just what is required or what is compelled. The net result is an avenue whereby group preferences about a "just" wage structure can have a major impact on production.

While economists have ignored the problem of getting individuals and groups of individuals up to their maximum productivity, industrial psychologists have made this a key problem. They ask how wages and other incentive systems can be used to promote maximum productivity. Economists see the work decisions as a zero-one decision where the individual either does or does not sell his time and a fixed productivity for the offered bribe. Industrial psychologists see the work decision as a more continuous decision. A person decides to work, but he also decides how much effort and cooperation to provide. Economists might respond that workers can always be fired if they are not producing at the agreed upon level, but this ignored the costs of hiring and firing, the costs of determining whose productivity is below the norm, and the costs of disrupting the production team. While there is a limited role for inspection and punishment, productivity basically depends upon voluntary cooperation and this requires a wage structure that is in harmony with the interdependent preferences of the work force.

Team wage structures lead to different wages for the same skill (a major puzzle for neo-classical economics). Some workers with a particular occupational skill play on high productivity teams while others play on low productivity teams. Raw unskilled labor makes a very different wage depending upon whether it plays for General Motors or for a Mississippi plantation. The two workers have exactly the same skill, but they are effectively segregated from each other. The low wage Mississippi farm worker is not allowed to make a bid for the job of the unskilled auto worker. One's employer becomes an important element in determining one's wages in a way that could not occur in a simple wage competition. The net result is a structure of wages that is often more homogenous within firms or industries than it is within occupations.

The variability of individual and team production functions creates problems for a marginal productivity theory of distribution since there is not a distribution of marginal products but many potential distributions of marginal products. If an employer attempts to pay a group its marginal products and these ran counter to the interdependent preferences of the group, the employer may find a completely different set of marginal products from what he originally found. What is worse, an employer that attempts to impose a marginal productivity distribution of earnings on a contrary set of interdependent preferences finds that productivity substantially decreases in the process. Interdependent preferences lead to a situation where group and individual performances depend upon having a set of relative wages that the group itself regards as fair and equitable.

Since their profits depend upon it, employers are anxious to establish a wage structure that their employers regard as equitable.. There is a profit maximizing wage structure, but it need not be a marginal productivity wage structure. Individual marginal products may have little to do with the structure of wages even if average wages are governed by average productivity. The structure of wages within this average depends upon the structure of interdependent preferences rather than upon the structure of individual marginal products.

Interdependent preferences combined with self-controlled individual and team production functions leads to the rigidity that is prevelent in the wage structure. Wages are not flexible in the manner that neo-classical economics would hypothesize since rapid wage flexibility becomes counter-productive in production environment where wage increases for one worker show up as a real wage (utility) reductions for others. This loss in utility causes them to lower their own productivity and to disrupt team activities. Given the need for production teamwork and the existence of interdependent preferences, wages are negotiated and set on a team rather than an individual basis. Unions formalize and perhaps strengthen the process, but they do not cause it. Non-union profit maximizing employers have the same interests. The same wage rigidity is noted in the non-union sectors of the economy.

II. The Analytical Problem

Analytically the problem is to know what factors produce and alter interdependent preferences and group norms of industrial justice. Sociologists have extensively studies this process under the title of "relative deprivation."[5] Sociological studies indicate that individuals have strong feelings that economic benefits should be proportional to costs (i.e. effort, hardships, talents, and the like), but that equals should be treated equally. Since there are various "costs" and rewards (income, esteem, status, power, etc.) in any situation, the problem immediately arises as to how equals are defined and how proportionality is to be determined.

This leads to the difficult problem of "reference group" determination. To what group do you belong and to what groups do you compare yourself when trying to determine whether you are being treated equally and proportionally. In any historical situation it is relatively easy to describe the different reference groups that exist, but it has proven difficult, or impossible, to find general principles that govern reference group determination.

Reference groups seem to be both stable and restricted. People look at groups that are economically close to themselves and require great social shocks, such as wars and economic depressions, to change specifications of relative deprivation. Conceptions of what constitutes proportionality and equality tends to be heavily determined by history and culture. Distributions of the past are fair until proven unfair.

This explains why inequalities in the distribution of economic rewards that are much larger than inequalities in the distribution of personal characteristics seem to cause little dissatisfaction, and why people tend to ask for rather modest amounts if they are asked how much additional income they would like to be making. The happiest people seem to be those that do relatively well within their own reference group rather than those that do relatively well across the entire population.

The importance of social shocks can be seen in the income changes caused by the Great Depression and World War II.[6] In the Great Depression, an economic collapse was the mechanism for change. Large incomes simply had further to fall than small incomes. In World War II there was a concensus that the economic burdens of the war should be relatively equal ("equal sacrifice") shared, so the federal government used its economic controls over wages to achieve more equality. Wage policies during World War II were a manifestation of a change in the sociology of what constitutes "fair" wage differentials or relative deprivation. As a consequence of the widespread consensus that wage differentials should be reduced, it was possible to reduce wage differentials deliberately.

After the Great Depression and World War II wage differentials had become embedded in the labor market for a number of years, these differentials became the new standard of relative deprivation and were regarded as the "just" wage differentials, even after the egalitarian pressures of World War II had disappeared. Basically the same differentials exist to this day--30 years later.

It is important to note, however, that the new standards were not imposed by government or a reluctant population but were imposed on the labor market by population beliefs as to what constituted equity in wartime. No one knows how to engineer such changes in less extreme situations.

The labor economics literature has the concept of relative deprivation under a different name--wage contours.[7] Different groups of workers expect to be treated relatively equally and to have a fixed structure of wages with respect to other groups. Historical differentials are to be observed. In peace as opposed to war, wage controls are used to reestablish historical wage differentials in an effort to control inflation. It is thought that one of the major elements leading to wage inflation is the leapfrogging that occurs when wage structures start go get out of line with historical wage contours. One group gets ahead of its historical position and other groups attempt to reestablish their historical position, or even to get ahead so as to "get even" for the initial violation of "equity." As with relative deprivation, the wage contour theory runs into problems in that it seems to be impossible to find general principles for why specific wage contours exist. They are easy to describe but hard to explain. The inability to find analytical explanations of reference groups or wage contours makes it difficult to know how to alter reference groups or wage contours, but it in no way diminished their importance to the structure of wages.

If utility functions are interdependent and conditioned by experience and history, relative wages may be rigid regardless of changes in the underlying distribution of marginal products. The historical wage differentials have the sanction of time. They are assumed to be just until proven unjust. Even more importantly, the longer they exist, the more they condition worker's beliefs about what constitutes justice and injustice.

To say that relative earnings are conditioned by interdependent preferences is not to say that relative earnings are immutable. Slow changes in relative earnings might be accepted since they never seem to challenge the accepted norms. Relative deprivation does, however, stop short-run wage changes from being used as a market clearing mechanism. The static benefits to be gained by clearing markets with wage changes simply are not large enough to offset the losses from the labor disruptions that would follow.

As a consequence to understand the structure of earnings and the factors that produce changes in it, it is necessary to have a sociology or psychology of interdependent preferences. Lacking a consistent theory of reference group determination, the sociology of wage determination is in a rudimentary form, but this does not diminish its importance. Worker's views about what constitutes an "equitable" wage structure have an important role to play in the determination of wages. Relative deprivation, wage contours, interdependent preferences, envy--they all mean that economic stratification is man-made, but that it is to a large extent self-perpetuating and autonomous.

III. The Need for Indicators of Equity Judgements

This brings us back to the subject of labor force statistics. If it granted that interdependent preferences both exist and can influence the actual structure of wages, interdependent preferences become important in any efforts to alter the structure of earnings. To know how interdependent preferences affect the structure of earnings, it is necessary to know something about the structure of interdependent preferences. What is in fact regarded as a fair differential between two jobs? Do norms of social justice differ across geographic, racial, occupational, and industrial groups or are they general widely-shared American norms. Answers to all of these questions might be important in efforts to alter the structure of wages.

Knowledge about the structure of interdependent preferences and changes in the structure of interdependent preferences is also necessary to study what, if any, factors cause changes in interdependent preferences. It may be true that only major wars can bring about changes, but this is only a hypothesis until some efforts are made empirically to measure interdependent preferences and until some efforts are made to see if any "controllable" variables have an influence upon them.

I do not pretent to be an expert on attitudinal studies and the appropriate questions to ask in constructing valid statistical measures of equity judgements, but let me briefly indicate some of the kinds of things that might be useful. The basic need is to go beyond satisfaction measures to determine norms of social justice. What does the average worker perceive as the "fair" wage differential between the highest and lowest skilled worker in his place of work? Does this differential differ from the actual wage differential? Similar results would be interesting for white collar workers and for managers. How do these differentials differ from what would be perceived as a just distribution of wages across the entire economy? Should the highest paid worker make 100 times as much as the lowest worker or should he make 10 times as much? Obviously these are crude questions that need refinement, but they indicate the general type of information that might be useful. While it is interesting to know whether a worker is happy or unhappy (satisfied or unsatisfied), it would also be interesting to have some quantitative measures of what he perceives as fair or unfair. Satisfaction and fairness are not necessarily the same thing.

FOOTNOTES

1. Bible, Matthew, Chapter 20, Verse 1-14.

2. Lee Rainwater, "Poverty, Living Standards and Family Well-Being," Joint Center for Urban Studies of MIT and Harvard, Working Paper No. 10, Page 45.

3. IBID, Page 49.

4. Richard Esterline, "Does Money Buy Happiness?" The Public Interest, Winter 1973.

5. For an example see: Walter Garrison Runcimen, Relative Deprivation and Social Justice, Routledge & Paul, London, 1966.

6. World War II is the most recent period where the distribution of earnings became noticeably more equal.

7. John Dunlop, Wage Determination Under Trade Unions. Kelly, New York, 1950.