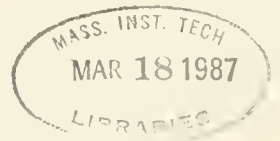


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JAPANESE INDUSTRIAL RELATIONS IN TRANSITION

HARUO SHIMADA

DECEMBER 1986

WP # 1854-⁸⁷~~88~~

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by

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December 1986

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CONTENTS

I. Introduction	1
II. New Environment, New Tasks	3
Historic Change	3
Restoring the International Balance	3
Structural Change in the Domestic Economy	4
The Role of Labor	5
III. The Japanese Model of Industrial Relations	6
Wage Determination	6
Employment Adjustment	11
Productivity and Quality Improvements	14
Summary:	
Labor-Management Interdependence	19
IV. The Historical Evolution of Japanese Industrial Relations	20
V. Challenges and Obstacles	25
Lop-sided Cooperation	26
Institutional Inertia	29
Envisioning New Tasks and Responsibilities	34
VI. A Comparative Evaluation with the U.S. Experience	38
VII. Concluding Remarks	43

JAPANESE INDUSTRIAL RELATIONS IN TRANSITION?

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I. Introduction

There are three interrelated subjects of interest that I will explore in this paper.

The primary subject is the nature and role of labor, particularly organized labor and its interactions with management -- in other words industrial relations in Japanese society. The second subject is changes in the Japanese political economy, past, present, and future. An historical overview will provide insights into the dynamics of these changes, allowing the assessment of possible future developments. Third is an exploration of the meaning and role of cultural factors in the evolution of Japanese industrial relations, particularly in comparison with the United States and other countries. The intent here is a cross-cultural comparison of industrial relations.

The goal of this paper is to discuss and explore the implications of the political and economic issues which lie at the intersection of these three subject areas. To start, in Section II, I will highlight the current issues in the Japanese political economy which have a

bearing on the U.S. Then, I will review those aspects of industrial relations in Japan which attracted worldwide attention in the 1970's and early 1980's, and pose the question of what role Japanese unions can play in the economic transformations on the horizon. Section III will assess the performance of industrial relations in recent years, particularly during the late 1970's. In Section IV, I will review the historical evolution of industrial relations, and in Section V describe the challenges Japanese industrial relations must meet in the future. Section VI will compare the Japanese and U.S. experiences, particularly cultural differences in the institutions of industrial relations, and Section VII will present concluding remarks.

II. New Environment, New Tasks

"Historic Change"

Since the mid-1980's, one major task facing the Japanese political economy has become increasingly obvious, though not perhaps recognized by all affected interest groups. The task is bringing about a transformation of the Japanese economy and society from one dependent on exports to one more reliant on its own domestic market. This transformation must occur through an expansion of the economy rather than a contraction. If it occurs, this transformation would certainly constitute an "historic change", since it would mark an epochal departure from Japan's postwar path of export-oriented industrialization, and would have significant implications, both internationally and domestically.¹

Restoring the International Balance

Internationally, this transformation would contribute significantly to the restoration of healthier balances of trade in international and financial markets. The large and growing trade and financial deficits of the U.S. economy are a source of increasing concern in this area. Although the basic causes for these deficits lie in America's domestic problems, in the areas of industrial activities, government fiscal and monetary policies, and reliance on foreign funds, the trade imbalances cannot continue without causing major damage to the U.S. economy, and therefore to the rest of the world.²

While the exchange rate alignment in the fall of 1985, which caused the yen in particular to appreciate markedly against the U.S. dollar, may help to reduce the U.S.-Japan trade imbalance, strong actions need to be taken in both countries to promote continued rebalancing. These might include increasing domestic investment and consumption in Japan and strengthening the manufacturing base of the U.S. In particular, increasing Japanese domestic consumption is a crucial component.

Structural Change in the Domestic Economy

Domestically, this transformation will require major reforms of the Japanese industrial structure and political economy. For the few decades of postwar industrial growth, and perhaps since the early phases of industrialization, Japan has deliberately concentrated its resources into the industrial sector, especially export industries. The suggested transformation implies a major shift of resources and policy priorities from the export-oriented industrial sector to activities which can promote domestic consumption and investment.

This idea is not totally unrealistic. While Japan has made enormous efforts to develop export-oriented industries, on the presumption that its lack of resources force it to exist on earnings from external trade, these industries were often able to achieve spectacular growth and profitability by using the rather large domestic market as a stepping stone. The suggested transformation would involve

an expansion of the already large domestic market by providing incentives for people to consume and invest. To achieve these goals, however, a series of actions, including institutional and legal reforms and industrial restructuring, will be necessary. Since these reforms will inevitably affect the interests and power bases of various groups in the economy, a high degree of information-sharing, coordination, and cooperation would be needed between the private and public sectors.

The Role of Labor

Of particular interest here is what role organized labor can play in this historic transformation. Is the role of labor relevant in this broad, complex social and political endeavor? If so, will labor's role be significant or marginal?

To address these questions, it would be well to remind ourselves of the role Japanese organized labor has played in the period leading up to this new challenge. It is by now widely acknowledged that Japanese labor has played a significant role in fortifying the competitiveness of Japanese industries by working cooperatively with management, both in the 1960s period of rapid growth, and subsequent structural adjustment in the mid-1970s. Cooperative industrial relations, fostered and reinforced during the period of rapid growth, proved invaluable in overcoming various corporate and macro-economic crises after the oil price shocks of the early 1970s. Japanese industrial relations demonstrated their cooperative, productive nature as well as their flexibility most dramatically during this crisis period by accepting

moderate wage increases, which cooled off inflationary trends, and allowing flexible redeployment of the workforce, which maintained employment security at minimum cost. Furthermore, their contributions to improving productivity and quality helped Japanese industries restore their market competitiveness in spite of vastly increased energy costs.

Under today's much different international and domestic economic circumstances, will Japanese labor be able to play a significant role in meeting the needs of a future Japanese society? What would this role be? To pursue these questions, let us first assess in detail the nature of the postwar Japanese industrial relations system by examining their performance in the crisis periods of the 1970s and 1980s.

III. The Japanese Model of Industrial Relations

Japanese industrial relations, like those of any industrial society, are dynamic - constantly changing and evolving. It is, therefore, difficult and perhaps pointless to describe them as if they fit a particular static model. Nevertheless, it cannot be denied that the Japanese industrial relations system exhibited distinctive behavior during the 1970s and early 1980s. In this section, I will identify that behavior and examine the contextual factors which gave rise to it. Assessing the dynamics of this critical period may reveal, to some degree, the fundamental nature of Japanese industrial relations.

Wage Determination

It is widely recognized, and empirically confirmed, that Japanese wages responded quite flexibly to the macro-economic fluctuations of the 1970s. Of our particular interest here is the notable moderation in negotiated wage increases following the two oil crises, namely the 1975 and 1980 negotiations. Generally, the movements of negotiated wage changes in Japan have been explained rather well by relatively simple multivariate econometric wage equations applied to 15-20 year periods. This analysis suggests that long-term wage determination is economically "rational". However, when these equations are applied to shorter time periods (5-10 years), the relative importance of such explanatory variables as the labor market index of supply-demand balance, changes in the price index, corporate profitability, and terms of trade vary markedly.³

It is of further interest to note that in the critical years of 1975 and 1980, these equations overestimate the actual negotiated wage settlements. This margin was particularly pronounced in 1980. These unexplained residuals suggest that there were forces beyond the conventional economic determinants which affected eventual wage outcomes. Indeed, these forces may have changed the mode of labor negotiations, as indicated by shifts in the relative importance of the economic variables before and after the two oil crises.

These changes in the mode of wage negotiations, as partially reflected in the estimates derived from the econometric equations mentioned above, have rather significant implications for understanding the fundamental nature of Japanese industrial relations, which developed

throughout the postwar decades and was reinforced during the 1970s. Before exploring these implications, let us briefly review what has happened in the area of wage determination during the latter half of the 1970s.

Under the rapid and sustained economic growth of the 1960s and early 1970s, inflationary expectations developed and strengthened. Within the institutional arrangement of shunto, i.e. concerted wage negotiations held in the spring, expectations of higher wages grew increasingly strong, both in terms of absolute level and annual percentage increments. The first oil crisis shocked employers and policy planners alike. They feared possible corporate bankruptcies and general stagflation if inflationary wage expectations persisted in the post-crisis negotiations.

In retrospect, we can see two stages leading to the moderation of wages in the 1975 and 1980 negotiations. The first stage was the strong expression of concerns about economic crisis advanced by financial sector and government officials, and the quick response by key labor leaders was a signal of de facto cooperation. These developments in 1974 and early 1975 appear to have affected the 1975 shunto settlements significantly.

The second stage involved the development of institutional arrangements to strengthen the practice of information-sharing and labor-management cooperation. Such developments included the coordinated efforts of the major metal industry unions belonging to the

International Metal Workers Federation - Japan Council (IMF-JC), a round table conference of the eight major steel companies, multi-tier tripartite information-sharing among the companies, unions, and government, and the increased influence of the "economically rational wage demand" platform advocated by the Steel Workers union. These developments exerted a powerful influence on the 1980 wage negotiations.

These developments seem to have contributed effectively to overcoming the inflationary crises of the 1970s through wage moderation. However, the major implication of these developments is not wage moderation per se but the fact that labor, management, and government worked together before the fact to share the anticipated costs of the oil crisis, rather than reacting to the crisis after the fact. In fact, comparatively speaking, the real wage losses experienced by unionized American workers, who were less flexibly adaptive in their wage demands, were much greater and lasted longer than unionized Japanese workers during these years.

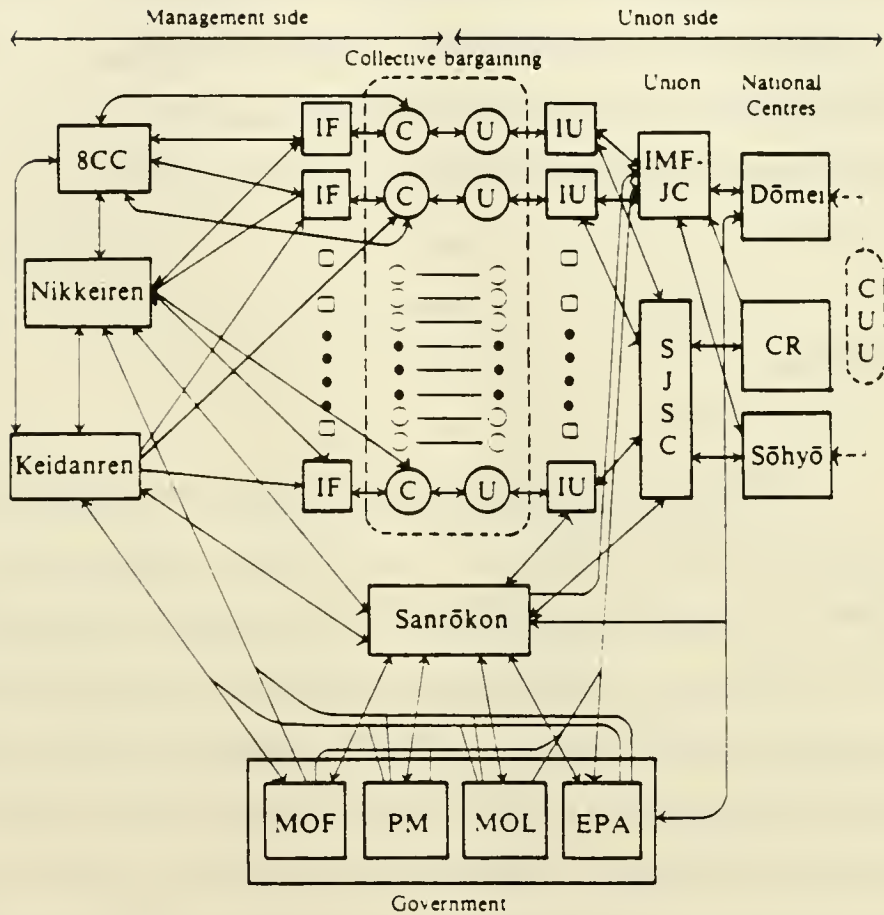
In short, American organized labor stayed strongly committed to rigid wage demands even in the face of macro-economic crisis and managed to obtain nominal wage increases at the time, which subsequently eroded miserably in terms of real purchasing power due to inflation.⁴ Japanese organized labor, in contrast, accepted moderate nominal wage increases because of recognizing the macro-economic constraints, and have subsequently secured real wage stability.⁵

The task of translating macro-economic constraints into collective bargaining terms, without creating considerable frictions, was not easy. Of prime importance was insuring that participants at all levels of negotiations, and workers themselves, understood the economic constraints and feasible options. This process of diffusion and education has been promoted effectively through the complex intra- and inter-organizational network of information-sharing which evolved rapidly in the late 1970s. Figure 1 depicts schematically the skeleton of such a network.

Figure 1 about here

However, the network itself is at most neutral in affecting the direction of the outcome of wage negotiations. While it may help speed up the process of information sharing, it can work in either direction. The fact that Japanese organized labor quickly demonstrated its willingness to moderate wages in the face of macro-economic crisis suggests that some other forces affect the perceptions and choices of organized labor. For one thing, their deep concern with employment opportunity as a higher priority than wage increases seems to have played an important role. This concern was shared by management. Indeed, had management not cared about employment security, organized labor might opted for an alternative choice. So the choice made by labor reflects their perception of management intentions, as part of the larger dynamic of industrial relations. Let us discuss their choices about employment more in detail in the context of the next topic, namely, employment adjustment.

Figure 1 Inter-organisational network of information exchange



Notes:

- C: company or enterprise
- U: enterprise union
- IF: industry federation of companies
- IU: industry federation of enterprise unions
- 8CC: eight-company conference of executives in charge of industrial relations
- IMF-JC: International Metalworkers Federation-Japan Council
- SJSC: *Shunido* Joint Struggle Council
- CR: Chūritsurōren (National Centre of Independent Unions)
- PM: Prime Minister
- MOF: Ministry of Finance
- MOL: Ministry of Labour
- EPA: Economic Planning Agency
- CUU: Council for Unification of Unions.

Employment Adjustment

In the wake of the first and second oil crises in the 1970s, the Japanese labor market experienced the worse contraction in employment since the end of World War II. In the latter half of the 1970s, the employment index of manufacturing registered an absolute decline of 10 percentage points. Since this is the average change for all of manufacturing, including those sectors that were growing, it means that the declining sectors were experienced much more serious employment declines.

The employment reduction was triggered, needless to say, by a sharp decline in production. Several major industries were especially hard hit: shipbuilding, branches of the steel industry such as ferro-alloy and electric oven furnaces, textiles, aluminum refining, petrochemicals, lumber and so on.⁶ There were several reasons behind these declines. First and foremost was the downward shift in the rate of economic growth. Secondly, the drastic increases in energy costs following the oil crisis hurt the competitiveness of energy-intensive industries. Third, increased competition from newly industrialized countries eliminated some high-cost, low-efficiency industries. During the last half of the 1970s, many of these industries had to reduce their employment by anywhere from 20 to 70 percent.⁷

In spite of these sizable reductions, there were some intriguing features of the Japanese employment adjustment effort. One is the fact

that unemployment did not rise as much as one might expect during this period. Another is that the elasticity of employment adjustment was much smaller than that of the United States.⁸ This implies that for a certain amount of reduced production, the employment reduction in a certain period of time was much less in Japan than in the U.S. Or to put it differently, Japanese firms took much more time to achieve a certain amount of employment reduction than did American firms. The sluggish pace of employment reduction was certainly a major factor in keeping unemployment low.

Given an equivalent reduction in output, how could Japanese firms manage to hold to employment levels much longer than American firms? Our review suggests that Japanese firms resorted to a variety of measures to reduce labor costs before they actually began to reduce the number of employees. The typical pattern may be seen in the following sequence of actions: cutting overtime hours, reducing profits or financing by deficits, cutting dividends, selling corporate financial assets, cutting executive bonuses and salaries, transferring workers, stopping new recruits, wage moderation, use of employment subsidy, and then finally laying off workers as a last resort.⁹

The transfer of workers across different work areas, departments, plants, and even different companies and occupations were heavily utilized by hard hit industries in an attempt to minimize the cost of labor hoarding during the adjustment process.¹⁰ The fact that Japanese firms in the hard-hit industries had to reduce employment by the

magnitude mentioned above even after exhausting all these measures suggests how serious the negative impact of declining demand was.

This experience of employment adjustment suggests two questions worth exploring. First, why did Japanese firms retain a temporarily redundant workforce on their payroll for prolonged periods, certainly much longer than in the U.S.? The classical human capital hypothesis seems to offer a plausible explanation. The hypothesis says that the greater the amount of investment in a worker, the greater the incentive for the employer to keep the worker on the payroll, even though the wage rate is temporarily higher than his marginal productivity. If Japanese firms indeed invest more in workers than U.S. firms, their behavior during employment adjustment is justified in these terms.

Although it is not always easy to ascertain quantitatively the amount of investment in human resources, the practice of human resource management in Japanese firms, particularly with regard to production workers, appears to confirm this human capital hypothesis. If this is indeed the case, it has profound implications for labor-management relations in the Japanese context. Given the large investment they make in their employees, firms are compelled to make a commitment to their workers and to develop and utilize their productive potential as much as possible in order to recoup the cost of investment effectively.

The other question is whose interests Japanese firms are serving? The sequential order of actions taken during the employment adjustment process clearly indicates their priorities. The fact that the reduction

of profits and dividends is made at a relatively early stage of adjustment while layoffs are only used as a final resort reveals priorities radically different from the revealed preferences of American firms. That the profits and dividends are sacrificed first, even allowing for the structural differences in capital markets between Japan and the U.S., calls into question whether Japanese firms are truly capitalist institutions. Or is there a broader concept of corporations in a capitalist economy which have both the Japanese and U.S. models as a subset?

In any case, the fact that layoffs are a last resort for Japanese firms, in sharp contrast to U.S. firms, tells us that the basic organizing principle of corporations differ across the two countries. The Japanese corporation appears to be an institution serving primarily labor rather than capital.¹¹ This apparent difference in priorities and corporate objectives is an important factor defining the nature of industrial relations in Japan.

Productivity and Quality Improvements

In spite of sluggish economic conditions, labor productivity in the manufacturing sector increased at a remarkable rate during the crisis-ridden years of the late 1970s. After some absolute declines in 1974 and 1975, labor productivity increased annually from 1976 to 1980 by 12.3, 5.1, 8.0, 12.1, and 9.2 percent respectively. This achievement is comparable to improvements in the performance of the economy as a whole during this period of phenomenal growth.

A number of factors contributed to this major growth in manufacturing productivity. In addition to technological improvements brought about by the introduction of more efficient production facilities, the reshuffling of the labor force in the adjustment process contributed to some degree by reducing labor inputs, thus reducing the denominator of productivity measurement. However, it is worth noting that there has been appreciable progress as well in developing cost-saving and particularly labor-saving production processes. These developments in production management technology were not a temporary phenomenon during this period but rather were the consequence of accumulated efforts over the preceding decades.

Closely related to this conspicuous development in productivity was a remarkable improvement in the quality of products. Quality improvement has been highly instrumental in promoting the export sales of Japanese products, together with productivity increases allowing lower prices. The achievement in quality improvement also results from accumulated efforts in quality control, product design, manufacturing processes and other related areas.

Let me illustrate this kind of development, referring to the experience of the automobile industry, which is a typical case. The production management system which the Japanese automobile industry has developed is quite unique and differs from the American production model in several significant ways.

The model of production management developed by the American industry has three important features: 1) a robust system supported by large buffer stocks of materials; 2) a centrally controlled system by which the distribution of materials and scheduling of production is accomplished; and 3) an emphasis on large volume production in order to take advantage of economies of scale.

In sharp contrast, the production management system developed by Japanese auto makers during the postwar development period, particularly since the end of the 1950s, emphasizes different features: 1) low inventory and buffer stock levels; 2) a decentralized "pull system" of information flow (in contrast with a centralized "push system"; and 3) small lot production.¹²

Let me explain further the unique merits of these features. Low inventory or low buffer stock can contribute greatly in reducing the costs associated with holding and handling them and thus helps to increase productivity. However, reducing buffer stock will also run the risk that disturbances of any kind will force an interruption in the production process. In order to run production smoothly, without disturbances, the quality of material inputs must be very high, since there is little buffer stock to replace defective inputs. The low buffer stock approach, builds in, potentially, an incentive to achieve high quality. Whether this potential is achieved, however, depends on the alertness, motivation, and skill of the workforce.

A decentralized "pull" system reverses the usual direction of information flows. The information about production levels is given from the work station at the end of the line to the preceding work station, and so on back to early stages of the production process. Any work station makes only as many units as the next process downstream "pulls" from them, in contrast with a centralized computer system in which a master schedule is "pushed" down to all subordinate departments. The "pull" system minimizes in-process inventories as well as costs from unplanned in-process redundancies or shortages. Again, whether or not this system will work effectively depends on the sensitivity, coordination, and effectiveness of the workforce at the workshop.

Small lot production is beneficial in the sense of preventing errors or defects from occurring in large numbers. Most Japanese plants which apply small lot production lay out production facilities in such a way as to take advantage of quick and effective feedback from the subsequent production stations to preceding ones to prevent the problem from occurring continuously or proliferating in subsequent production stages. Here again, human control plays a critical role in making the feedback effective.

As illustrated by this example, production management strategies which have developed in Japanese industry focused strongly on minimizing costs by eliminating redundancies and at the same time improving quality, taking advantage of the alertness, sensitivity, skill, and involvement of the workforce in carrying out production, and in improving the production process itself.

The conventional American system did have its own merits and rationale in the past, under different circumstances. Perhaps the primary merit is the system's robustness against minor errors or disturbances. Thanks to large buffer stocks, production can be continued without interruption. The system is also robust against human resource ineffectiveness, such as a wide variance of workers' performance, because it is protected by rigorously defined jobs. Large buffer stocks is certainly costly. However, this disadvantage can be offset by high volume production, since economies of scale reduce cost per unit. The conventional American system with these features worked well historically when the American auto industry enjoyed a de facto monopoly of its large domestic market and major technological advantages over foreign competitors. The current challenge to them is whether and how effectively they can change their conventional institutional and technological structure to cope with drastically changed environments.

While the automobile industry naturally has its own unique technological idiosyncrasies, the features discussed above, including an extraordinary emphasis on minimizing costs, pursuing high quality, and exploiting human potential are common to other Japanese industries. Of particular importance is the fundamental dependence on human resources in this type of production system. If human resources do not contribute effectively to production improvement activities, the production system will not only run poorly but will lose its entire competitive advantage.

This approach to production management has profound implications for Japanese industrial relations. The management commitment to human resources in their organizations arises not because of benevolence or paternalism but because their own survival in competitive markets hinges on human resource effectiveness.

Summary: Labor-Management Interdependence

The three outstanding phenomena which were observed in the 1970s and early 1980s and the background factors promoting these phenomena may be summarized to point to the fundamental nature of Japanese industrial relations.

Japanese industrial relations are characterized by these features: workers as a critical human asset, employment security as a primary strategic goal, and an information sharing network within and outside of the corporate organization. Taken as a whole, these features imply that a very close labor-management interdependence is the fundamental nature of Japanese industrial relations.

Since workers are a vital asset for management's survival for technological reasons, management makes a strong commitment to workers. It is not surprising, therefore, that employment security is given the highest strategic importance. In return, from the viewpoint of workers, the prosperity of the corporation is critical for their own wellbeing and survival. Consequently, workers are prepared to accommodate their demands for working conditions within the range that will assure

corporate survival, and are willing to cooperate to fortify corporate competitiveness. An information-sharing network which transmits information between strategic, administrative, and operational levels of both organizations is used to buttress this interdependence.

IV. The Historical Evolution of Japanese Industrial Relations

Based on a review of the crisis-ridden years of the late 1970s and early 1980s, we have speculated about the basic characteristics of Japanese industrial relations which gave rise to the notable performance of those years. We concluded that Japanese industrial relations operate on the basic premise that human resources are the critical asset for the competitive survival of corporations, and therefore management makes a deep commitment to developing the effectiveness of human resources, resulting in a relatively high degree of employment security. This interlocking relationship between management and workers is buttressed and reinforced by a well-developed network of information sharing. Although the nature of Japanese industrial relations has evolved through intensive interactions between management and labor, the initiative has been in the author's judgment more on the side of management which has made human resource effectiveness a top corporate priority.

One might argue that these qualities of industrial relations are linked to the culture of the Japanese people and Japanese society. There are in fact many examples of cultural explanations along these lines.¹³ However, if "culture" is interpreted as something deeply embedded in the basic human and social nature of the Japanese that has

characterized their behavior for hundreds of years, just as the Japanese language is an expression of Japanese social life, the author would disagree with such an explanation. I disagree because this form of industrial relations evolved relatively recently, particularly in the postwar period of industrialization.

On the other hand, if "culture" is interpreted as a value system commonly shared by actors in industrial relations at any point in time, I would very much agree with a cultural explanation of the industrial relations system. There appear to be values and concepts that are shared by the people who play different roles in the industrial relations system, and which could well be called "culture". "Culture", defined in this way, may work to provide momentum for or a constraint against the behavior of people and organizations.

The cultural approach is useful in the sense that the term "culture" can encompass a whole set of shared values and concepts. But the author is somewhat skeptical about whether a cultural approach can explain much about the evolution of the culture. To the author, it seems that much of the evolutionary process of these values and concepts can be explained by the dynamic interactions of economic, political, and technological factors. An analytical description of such a process may in effect provide an explanation how a "culture" evolves and comes to take a particular form.

In what follows, let me describe briefly the historical evolutionary process of Japanese industrial relations, focusing particularly on the process of postwar industrialization.

Although I shall emphasize here postwar developments, this does not mean that all the factors of industrial growth are attributable to that period. In fact, Japanese industrial society before World War II had very advanced industrial technology. However, the dominant mode of contemporary industrial relations is not traceable to the prewar period, except for the early emergence of a relatively well-developed internal labor market centered around Japanese heavy industries.¹⁴ Most of the institutions and values of contemporary industrial relations have been fostered and reinforced during the postwar period.

In tracing the historical evolution of Japanese industrial relations, one may conveniently divide it into five stages: 1945-1950; 1950-1965; 1965-1975; 1975-1985; and 1985 to the present.

The first stage, 1945-1950, was characterized by the initial postwar reforms. Amid the chaos that followed the end of the war, a series of basic institutional reforms were made through major legislation in such critical areas as land ownership, competitive market structure, the education system, and the industrial relations system. Labor-management relations were, however, highly confrontational and conflictual at this time.¹⁵ While the basic legal framework laid out during this period certainly provided an institutional basis on which to build industrial relations, the dominant mode of labor-management

relations was far from the model that would evolve in subsequent periods.

The second period, 1950-1965, was characterized by the development of the industrial base. Growing out of the widely shared perception of economic crisis in the wake of the Korean War, and the recognition of economic difficulties following national independence, a number of important steps were taken which helped construct a strong technological, economic, and social base for the industrial development to come.

These steps included the vigorous introduction of technological know-how and large-scale investments in major industries to implement this technology.¹⁶ Genuine innovations were also made in what might be called social engineering technology, such as the extended application of industrial management innovations to a network of cooperating firms.¹⁷ The major transformation of labor-management relations took place during this period, from a confrontational to cooperative mode on the shop floor, and from politically militant to economically rational at the level of the national labor movement. Early development of information-sharing networks within corporations through joint-consultation systems, refined roles for supervisors, and small group activities also characterized this period.

It is in this period that the contemporary mode of Japanese industrial relations began to emerge simultaneously with the development of the industrial base.

The third period, 1965-1975, is the well-known period of rapid economic growth. During this period, the mode and structure of contemporary Japanese industrial relations was firmly established.

This rapid economic growth was promoted to a large extent by vigorous investments in the industrial sector. With large-scale investments, corporations have grown to have a large organizational structure, which necessarily led to the development of well-organized internal labor markets. This process of investment has given rise to and at the same time been buttressed by the development of an organizational capability of generating ongoing internal technological innovations, particularly process innovations at first, and later extended to product innovations.

Under this process of dynamic expansion and development, the Japanese model of the production system which heavily depends upon and utilizes human resource effectiveness was established. This system necessarily exerted a strong influence on the mode and dominant values of Japanese industrial relations, as discussed in the previous section.

The fourth period, 1975-1985, was characterized by the oil crises and subsequent macro-economic and structural adjustments. The Japanese production system and industrial relations proved highly instrumental in overcoming macro-economic shocks and difficulties during this period. However, at the same time, the same system which had proved successful during a period of rapid economic growth seemed to act as a deterrent to

meeting the needs of an increasing "internationalization" and the domestic structural shifts that will be required. The fifth period of 1985 to the present is a time when this gap between the institutional inertia and the environmental changes affecting the political economy, both internationally and domestically, appears to be growing.

Viewed in this way, we may identify factors and forces which have helped form the dominant values, or "culture", of Japanese industrial relations during its historical evolution. Such values and culture are never static. However, once grown dominant, they often tend to develop inertia, and a tendency to become self-perpetuating. This is not surprising because any social system is closely tied to the power and interest structures which support it. The inertia or resistance to change tend to be strong especially if a current system has worked well until the recent past.

Now let us discuss the nature of the issues that will challenge Japanese industrial relations in the era which is now unfolding.

V. Challenges and Obstacles

Despite, or perhaps ironically because Japanese labor has contributed greatly to the Japanese economy in overcoming the serious economic crises of the 1970s and early 1980s, the challenges and obstacles to making effective contributions in the current era are more difficult than ever. Let us describe these challenges and obstacles in three areas.

Lop-sided Cooperation

Japanese labor's cooperation with management in working jointly to overcome hardship imposed by the oil crises of the 1970s and subsequent stagflationary economic conditions is certainly appreciable. Had labor not cooperated with the management as they did in the areas of wage determination, flexible reallocation of the workforce, and productivity efforts, the undesirable impact of the economic shocks would have lasted longer and taken a more devastating toll.

The emphasis on cooperation was focused on efforts to reduce costs and raise productivity in order to combat inflationary pressures threatening the economy and individual firms. Labor accepted moderate wage increases which barely compensated for lost purchasing power, reassignment to different jobs, work groups, or even different firms, and worked together earnestly with management to increase productivity and improve quality. Labor's cooperation with management worked marvelously well in terms of fortifying the micro-level efficiencies of corporations and in moderating inflationary expectations.

Japan's Steel Workers Union, considered an opinion leader and pattern setter in the Japanese labor movement, announced in 1977 a epochal platform of "economic rational wage determination". By this they claim to mean wage determination which can assure employment security and long-term welfare for workers. In the economic environment of acute stagflation, rampant inflation, and deteriorating employment

opportunity, their principle of economic rationality was interpreted as meaning moderate wage increases.¹⁸

Such a rational economic principle would obviously dictate an entirely different course in a different economic environment, such as that which has existed since the mid-1980s. The major economic factor has completely changed direction -- inflationary pressures have almost disappeared. The economic environment has shifted to the conditions typifying a depression, with excess capacity and insufficient demand. While the Japanese economy now benefits from lowered crude oil prices, its growth potential has been severely curtailed by the sharply appreciating value of the yen since the end of 1985. Reflecting these depressive economic conditions, corporate profits have been squeezed sharply and unemployment has begun to rise, despite the stabilizing of prices. Under these circumstances, what should be done to assure employment security and maintain workers' welfare?

The single most effective measure would be to increase aggregate demand or national income to enhance employment opportunities. If the national income is to be expanded, what should be done in the sphere of wage determination? Unless the number of people gainfully employed increases dramatically, which is highly unlikely, wage levels should be increased substantially to generate and support an increase in national income. This is the specific prescription which should be derived from labor's position of "economic rationality".

The question is whether Japanese labor can or cannot effectively pursue this goal? The results of wage determination in the last few years suggest that they have failed to do so.¹⁹ Needless to say, union leaders at the national and industry levels are fully aware of the need to increase wages substantially to counteract the current depressive conditions of the economy, and are quite vocal on this point in their public speeches. However, there appears to be a difficult hurdle to overcome to make this policy a reality.

The hurdle is what might be called the logic of corporations. Corporations, particularly those which had been growing during the rapid growth in export markets for their products, are undoubtedly suffering now from a loss of competitiveness. Even though material input prices are stable, substantial increases in wage rates may well threaten their survival under the current constrained market conditions. So apparent is this constraint to union leaders at the enterprise level, who work as competitive partners of the management, that their call for a wage hike is weakened. Indeed, their more immediate and responsible interest is with the maintenance of employment opportunities for their union members working in the company rather than wage hikes as such.

Given such corporate constraints and union leaders' attitudes, wage increases are inevitably tamed in adverse economic conditions such as those today. The hope for a substantial increase in national income thus loses one of its important generators. This is ironic. The labor movement is apparently caught in a trap of self-contradiction. While knowing labor's societal role in the macro-economy, they cannot act

accordingly because they are trapped in the micro-corporate context in which they live. The challenge is whether and how the Japanese labor movement can get out of this trap and resume their societal role effectively in the current and future world economy.

Institutional Inertia

An important challenge to Japanese employers and unions is finding a way to reform the system of industrial relations which allowed them to pursue their joint interests successfully in the past in order to meet the needs of the new era.

The Japanese system of industrial relations, having close interdependent relations between management and labor at its core, undoubtedly worked well both in the period of rapid economic growth and in the period of the oil crises. In the period of rapid growth, the late 1960s and early 1970s, labor-management cooperation in the production process was built on management's strong commitment to the workforce and was highly successful in increasing productivity and product quality. In the years of adjustment in the wake of the oil crises of the 1970s, their cooperation worked again in terms of moderating wage increases, adapting flexibly to structural change, reducing the cost of production, increasing productivity, and improving product quality, which helped corporations regain international competitiveness in spite of drastically increased energy costs, and the economy suppress inflationary pressures and restore a better macro-economic balance.

The system worked well for both management and labor in pursuing their joint interest, which is defined essentially within the realm of corporate or micro-level optimization. In both the rapid growth and crisis periods, what was good for micro purposes was also good for macro purposes. The growth of corporations helped the growth of the economy, and the survival of corporations also helped the survival of the economy. However, the problem which we face in the new era is that the protection of the joint interest of management and labor may not necessarily be good for the protection of the macro-economic wellbeing and the maintenance of the international economic and political order. The challenge before us is how to modify our well-worked system of industrial relations to meet societal and international needs without destroying the fundamentally productive nature of Japanese industrial relations.

The most desirable end for Japanese unions to pursue in the new domestic and international environment is increased domestic consumption, as I discussed earlier and will elaborate further here. What can unions do to contribute to this goal effectively? Perhaps the most important task for the union is to obtain much higher wages and much shorter working hours not only for their members but also for workers as a whole, and also to work together with management and government to reallocate resources effectively to achieve this goal.

This is easy to say but difficult to achieve. For one thing, the pursuit of much higher wages and shorter working hours contradicts the

micro, corporate-level logic of survival under the current and foreseeable future economic conditions. Attaining higher wages and shorter working hours for the non-unionized stratum, which is characterized by lower income and working conditions, will be even more difficult.

It is not impossible to obtain high wage increases in those segments of Japanese industry which are relatively prosperous, but it is extremely hard to make it a prevalent pattern across all industry. This is difficult particularly because the key industries which are seen as pattern setters, such as the iron and steel industry, are currently in deep trouble and are expected to be caught in even deeper hardship in the future.

There are perhaps two possible ways to break this impasse. One way is to shift the leadership in the economic and political power structure of industrial relations from the traditional heavy industries, many of which are troubled and declining, to those newly rising and more viable industries. The other way is to dissolve and then structurally reorganize the troubled major industries, where political power still resides, to make some of their sectors profitable and economically viable. Needless to say, neither of these measures would be easy to accomplish because of the resistance of vested interests in the traditional power structure.

For unions to be effective in pursuing the stated goal, they will need to overcome this political and institutional resistance. To do so,

and to generate a force for change, unions will need to have a strong power base to counteract the anticipated political pressures. However, Japanese unions as they are now seem to have their own difficulties which further weaken their ability to undertake such a task. One such difficulty is the relative shrinkage of their organizational base in the working population, and the other is their adaptation to the corporate logic of optimization for survival.

The Japanese trade union movement has been suffering from a steady decline in the unionization ratio for more than a decade. Compared to a level of about 35 percent in the late 1960s, the unionization ratio is only only about 29 percent. U.S. unions have also suffered a decline during this period of a somewhat greater magnitude. However, in view of the fact that Japanese trade unions have an organizational advantage over U.S. unions because of their coverage of white-collar and blue-collar workers under the same union shop contract, this decline indicates a serious retreat in their capacity to organize the workforce.

This decline has been caused not by an absolute loss of union membership in the sectors which have been traditionally unionized but primarily by their failure to organize new members in areas where employment is increasing. Whatever the reasons, the marked decline of the unionization ratio indicates the relative shrinkage of union political power in Japanese society. This trend certainly undermines the unions' voice in society, which is necessary to wage political campaigns on behalf of social reforms.

Can unions stop and reverse the declining trend of unionization? To do so, they would have to engage in completely different organizing strategies and tactics. This is because the workers who will be the target of organizing efforts are quite different from the members of traditional enterprise unions. They are, for example, part-time workers, mostly female but including older male workers in the second stages of their careers, employed in the small enterprises of the service sector. Their employment relationship is much less stable and homogeneous than that of traditional members. Also, trade unions will have to attract the interest and secure the involvement of well-educated, highly skilled white collar workers engaged in research, development, engineering, finance, sales, and other professional areas. Many of these workers are employed by large firms and are formally organized by enterprise unions, but they have not generally been active supporters of the union movement. With an increasing shift of the workforce from manual production workers to service and professional workers, whether or not Japanese unions will be able to assume an integral role in the new and growing segments of industry as they did in the manufacturing sector will greatly affect their prospects for the future. If they are not successful, their voice in the society as a promoter of social, legislative, and institutional change will be seriously hampered.

Another difficulty for Japanese unions is their being trapped in a "corporate logic", as discussed above. Partly because of the organization constraint of being enterprise-based unions, and perhaps more importantly because of their very success of the past few decades

as a partner of management, it has now become extremely difficult to enlarge their perspective and scope of activity beyond the realm of the individual corporation by mobilizing those resources at the enterprise level. Without overcoming this constraint, Japanese unions will not be able to increase their voice effectively to promote the much-needed social and institutional changes.

Envisioning New Tasks and Responsibilities

What are the needs of the new era? What should Japan pursue to fulfill societal and international needs? As I have discussed at the outset, the most desirable path for Japan to pursue is increasing domestic consumption drastically to reach a healthier balance between the nation's productive capacity and consumption. If this task is accomplished properly, Japan's trade imbalance with many other major economies would be modified in a healthier direction, and the quality of life for the domestic population would be enriched.

The desired increase in domestic consumption must be on a massive scale. Minor increases will not serve any purpose. During the last few decades of economic growth, major Japanese industries such as steel, auto, and home electronics have developed a productive capacity of roughly twice as much as the Japanese population can consume domestically. Construction of this large productive capacity was propelled by an enormous investment in fixed productive capital at a rate of about one third of total GNP during the rapid growth period. An important reason for the current massive imbalance between savings and

domestic investment lies in the fact that Japan, since the mid 1970s, has ceased to make investments on that scale. The increase in consumption will have to be large enough to cement this gap.

How can we increase domestic consumption by such a magnitude? Such a change must be generated and supported by drastic changes in the expectations of people as to their life style as well as changes in the conditions and opportunities for consumption.

The nominal level of income per capita of the Japanese has risen markedly, particularly after recent exchange rate realignments. Notwithstanding, it is commonly recognized that the real purchasing power, content of spending, and quality of life is remarkably low for the level of income. They suffer from extraordinary high prices for land, food, and recreational services. Although the number of dwelling rooms per capita or per family is plentiful, the room space per capita is extremely narrow. Japanese workers work much longer hours than their counterparts in other advanced nations. They enjoy many fewer holidays, both on a weekly basis and in terms of extended vacations.

One might argue that all this is inevitable for Japan because of her narrow band of inhabitable land, low level of self-sufficiency in food, particularly agricultural produce, and heavy reliance on imports of energy and raw materials. However, closer examination indicates that none of this is inevitable. In fact, most of them reflect the contrived consequences of specific policies, and as such can be altered intentionally. They may have been inevitable as a result of the

extremely lopsided policy emphasis on industrialization during the postwar period. But Japan has now passed that stage of economic development. It is much overdue that policies be directed towards improving the level and enriching the content of people's lives.

Prohibitively high prices of land can certainly be modified by policy actions for land and housing development, necessary land regulation policies and tax policies that encourage the sale of land. Food prices could be drastically reduced by introducing imports. Work week and vacation schedules could be modified somewhat by legislative action, but more powerfully by pressure from workers expressed through unions. Acquisition of more housing space, and more leisure time could certainly lead to much different patterns of consumption and related investments. Many of these institutional policies and reforms could be successfully promoted with the support of expansionary expectations among the population. In fact, without such optimistic expectations, these reforms would probably not attain the desired results.

Envisioning the task in this way, what role should unions play? Obviously, the scope of effort required is so broad and so deeply entwined with national policies and legislation that the union role will be only a partial one. Despite this limited role, there seem to be two areas where unions can make important contributions.

The first is envisioning more clearly the tasks of the nation from the viewpoint of the union, an agent representing workers' collective voice. Improving the standard of living and enriching the quality of

people's lives in balance with the level of industrial capacity is undoubtedly a commonly supported goal of Japanese workers and the population at large. Unions can describe clear policy priorities in order to achieve this general goal. The general gap between industrial power and people's real standards and quality of life will be closed eventually through the inevitable operation of market forces. However, the crucial matter of political and economic importance is to accelerate such a move as quickly as possible. Japanese trade unionism has shown recently some appreciable progress in this respect as indicated, for example, by the policy actions of Zenminrokyo (National Council of Private Sector Labor Unions). Efforts such as these need vigorous support.

The second task unions would carry out is strengthening their organizational base in order to make their voice more powerful and effective in the Japanese political system. To do so, unions should maintain a sufficiently large coverage of the overall workforce, and should promote their interests in a national, centralized rather than local, decentralized way. So far, Japanese unions have had mixed success in these areas. In the area of unionization coverage, they are suffering from a relative decline, as discussed above, while in the area of organizational unification, some steps are taken to consolidate private sector unionism.

Whether Japanese unions can reorganize their organizational strategies to make their voice more powerful and effective in promoting

necessary policy and institutional reforms will affect their future position in Japanese society significantly.

VI. A Comparative Evaluation with the U.S. Experience

How does the experience of Japanese industrial relations compare with the U.S.?

The United States is very different from Japan in many important ways: historical and cultural background as well as political structure and institutions. The differences are large also in the sphere of industrial relations, which are the outcome of the complex interaction of social, political, economic, and cultural factors. Given these differences, one might even doubt the usefulness of comparing the two countries.

However, there seems to be at least one common issue shared by the two countries. This is the question of how to reform industrial relations in order to better adapt to current and foreseeable changes in the economic environment. Although the meaning of a changed economic environment for industrial relations is quite different for the two countries, the fact that industrial relations are under strain and are faced with major challenges to meet the needs of a new era is common to both.

Indeed, the industrial relations of both countries seem to share remarkably similar difficulties, challenges and hurdles in this respect.

In both countries, the trade union movement is losing its popularity and is suffering from the relative decline of its organizational ground.²⁰ Unions are faced with the serious question of whether they can maintain a power base to act as an effective agent to represent workers' voice.

The major challenge for unionism in both countries is whether or not and how swiftly they can reform themselves to meet the changed economic environment.²¹ In both countries, the current form of industrial relations is the consequence of the experiences and practices that accumulated and evolved during the historical development of industrialization. Since industrial relations are essentially dynamic and constantly evolving, the current mode of industrial relations will definitely be modified in the future. However, the different pressures and momentum for change are not always of the same magnitude. They become very powerful at some times and remain modest at other times. The similarity in the challenge facing the two countries now is that the pressures and potential momentum for change have been very strong in recent years.

The obstacles to change, which will work against attempts at reform, are also quite high in both countries. These forces stem from the power and interest structure associated with the conventional system, which seeks to perpetuate the status quo. Such forces of inertia and resistance are stronger the better people perceive their experiences under the old system. Again, another similarity between the two countries is that the conventional system worked so well during certain historical periods that it is hard to recognize the flaws of the

system in the current and future environment, or, even if the flaws are recognized, to make changes because of the powerful structure and interests entrenched in the system.

Let me now briefly describe the nature of the challenge faced by American industrial relations.

For more than four decades, since the institutional reforms of the New Deal, the American industrial relations system operated quite well as an integral institution in the American political economy. Under the basic legal framework established by the National Labor Relations Act during the New Deal, American industrial relations have operated effectively through the institutional arrangements of collective bargaining to resolve labor-management conflicts and gradually improve working conditions for organized workers.

While management reluctantly accepted the duty of collective bargaining, industrial unions developed a strategy of imposing the same wage pattern across the industry. This practice made union wages a neutral factor in inter-firm competition, and was helpful in improving the working conditions for workers across the board, not only organized workers but also unorganized workers through a spillover effect. Union wage pressure also had a "shock effect" on management, spurring them to attempt to improve productivity through capital investment and more effective management systems. Increased union voice at the workplace has also been helpful in gaining the commitment of workers by stabilizing the employment relationship and make work rules more

explicit. The industrial relations system operated effectively in this mode because it was compatible with the economic and social context of American society. This mode prevailed as long as the major unionized American industries were dominant in market competition and in the use of technology.

However, during the 1960s and certainly by the early 1970s, the dominance of American industries began to be eroded on many industrial fronts by the increased competitiveness of foreign industries, in such sectors as iron and steel, automobiles, and household electronics. Industrial relations did not react promptly to those changes. The expectation of improving working conditions through the conventional collective bargaining approach has continued to be held firmly by many union leaders and workers. Both management, engineers, unions, and workers stick firmly to the conventional rigid rules of the workshop and the complex job classification system. American industries, constrained by these expectations and a rigid administrative structure, began to fall behind foreign competitors especially in terms of productivity and flexible adaptation to technological change. Increasingly, many American companies began to shift their resources to invest in foreign operations or in non-union areas of the U.S. All of these developments began to erode domestic employment opportunities, particularly of the traditional union sector.

Some unions have become keenly aware of these problems and have begun efforts to reformulate their strategy to meet these environmental changes. Some companies have also embarked on new strategies of working

with unions.²² However, these developments still appear to be much less influential than those needed to adapt the entire system of American industrial relations to the needs of a new economic era. Many managers, union officials, and workers are still unaware of the changed environment, or find it difficult to perceive the changes clearly. Or even if they become aware, many of them resist the necessary reforms because they have their own vested interests in the conventional system. This is perhaps especially true for middle managers and local union officials. Resisting necessary change will eventually erode the positions of those who resist most strongly. But it is hard to admit the need for change when the system people are accustomed to has worked well throughout their lives.

Although the specific nature of the issues confronting each country is quite different, the fact that many Japanese people cannot perceive a problem or cannot transpose their theoretical recognition of a problem into necessary actions is remarkably similar to the American situation. As we have seen, Japanese management, union leaders, workers and the government reacted quite sensibly and effectively in the face of economic crisis in the 1950s. This collective reaction and subsequent collective efforts, in the author's judgment, have been responsible for setting the benchmark by which the current mode of Japanese industrial relations was established.

Mobilizing the necessary actions to meet the needs of "crisis" of the 1980s and 1990s will be more difficult than the experience of the 1950s for two reasons. First, the essential cause of the crisis lies in

international imbalances which are more remote and difficult to recognize that the domestic problems of poverty and unemployment in the 1950s. Second, the reforms that would be required contradict a system which has worked very well and is still working well for some people. It was relatively easy to call for reforms in the 1950s because people had many things to blame and not much to praise. The current challenge is to reform a system that many Japanese think is the best in the world. In this respect, the Japanese challenge is remarkably similar to that facing American industrial society.

VII. Concluding Remarks

Focusing primarily on the nature of Japanese industrial relations, particularly the role of organized labor, I have attempted in this paper to discuss its historical evolution up to the recent past, suggest the prospects for the future, compare the Japanese experience with that of the U.S., and probe the meaning of "culture" in analyzing a dynamic system.

In lieu of conclusion, let me point to three implications which seem to be derivable from our discussion.

One is the role of Japanese labor. The role that organized labor has played in Japanese industrial relations is undoubtedly significant and important, particularly in the sense of strengthening corporate competitiveness working closely with management as a kind of "competitive partner". However, this role is currently being seriously

challenged. Whether Japanese unionism could assume in the future as important a role as they have played in the process of industrialization to date will depend on how effectively they can change their policy and organizational strategies to meet the needs of the new era, particularly in such areas as contributing to restore a healthier international economic balance and to promote social reforms to enrich people's lives.

Second is institutional inertia. Our review of past and recent experiences with both Japanese and American industrial relations suggest that institutional inertia can be strong, particularly when the system has worked well for long periods of time. The Japanese system of industrial relations which evolved during the postwar period has grown into an institution which is difficult to reform or restructure, even in the face of a drastically changed economic environment. This is partly because the conventional system is often closely knit together with the power and interest structure, and partly because people's perceptions and expectations are molded in a certain rigid pattern by their experiences. Although the specific nature of changes in economic environments and the consequent challenges are very different in Japan and the U.S., both countries share remarkably similar problems in the sense of a gap caused by changing environmental requirements and institutional inertia.

Third is culture. If culture is defined as something which characterizes the norms and behavior of people as a fixed value over thousands of years, the author sees no relevance to the concept for this paper. But if culture is conceived of as certain values which are

shared by significant groups of people at a given point in time and which affects their norms and behavior, I would find such a culture to be widely prevalent in Japanese industrial relations.

The basic organizing principle of Japanese industrial relations which emerged in the postwar reconstruction period and was developed during the period of rapid economic growth hand-in-hand with a corporate strategy of human resource management may be said to have been governed by a dominant "culture" widely shared by managers, union officials, and workers. Many of the current problems and challenges in the transition to a new era may also be interpreted as problems of cultural adjustment or adaptation, or of fostering a new culture. Much of the evolution of such a culture, however, appears to be reasonably well explained by close examination of the complex interactions of technological, economic, and political factors.

NOTES

1. The Maekawa report (the report of Keizaikozo kenkyukai, or the Economic Structure Study Group) which was made public in 1986 is a symbolic expression of concerns in policy circles of important tasks facing Japan. The "historic change" called for by Prime Minister Nakasone during his visit to the United States prior to the Tokyo summit caused many repercussions in the United States, though with many cautious reservations.

2. If substantial and effective measures are not taken in both countries to restore healthier trade balances, continuous declines in the value of dollars vis-a-vis the yen and the continuous increase of Japanese investments, partially propelled by this reinforced trend in exchange rates, in the U.S. and other countries whose currencies are growing weaker relative to the yen may well reach sooner or later a dangerous stage where the value of the dollar will have to realigned drastically downward to accommodate the accumulated imbalances in both trade and financial markets. Such a catastrophic adjustment would be likely to trigger a major international reallocation of trade and employment opportunities as well as financial assets in a largely retreating environment of the world economy.

3. For a brief survey of wage equation analyses, see Shimada, Haruo "Phillips Kyokusen to Nihon no Rodoshijo Kiko (The Phillips Curve and the Mechanism of the Japanese Labour Market: A Survey), Mita Gakkai Zasshi (Mita Journal of Economics) Keio University, vol. 75, no.2 (February 1982), pp. 1-34, and for summaritic replications of the principal types of these equations, see Shimada, H., Hosokawa, T., and Seike, A. "Chingin oyobi Koyo Chosei Katei no Bunseki" (An Analysis of Adjustment Processes of Wages and Employment), Keizai Bunseki, Economic Planning Agency, vol. 84, (March 1982). See also Shimada, H., "Wage Determination and Information Sharing: An Alternative Approach to Incomes Policy?" The Journal of Industrial Relations (Australia), June 1983, pp. 177-200.

4. American organized labor suffered not only the subsequent erosion of purchasing power through ex post inflation but also had to make substantial compromises in some industries in the form of "concession bargaining" during 1982 and 1983.

5. The 1980 Shunto (centralized wage negotiations held each spring) which followed immediately after the outburst of the second oil crisis of 1979 concluded with an average negotiated wage increase of 6.7% for major companies. The average nominal wage increase for the entire industry for this year turned out to be 6.3 percent. A wage increase of this magnitude was not enough to compensate for the 7.8 percent increase in consumer prices for this year, and resulted in an absolute decline in

real wages (by 1.6 percent) for the first time since the shunto started some 25 years previously.

Notable is that such wage moderation was accepted by organized labor in a year when the economy grew by 4.5% in real terms, and the productivity of the manufacturing and mining sectors rose by 9.2 percent. However, perhaps as a result of this moderation and other factors working together, real wages quickly gained a consistent pattern of increases thereafter.

6. Many of these industries were designated by the government as structurally depressed industries and were provided special assistance under the ad hoc legislative arrangements known as "Extraordinary Measures for Stabilization of Designated Depressed Industries 1978-1983". For details of these policy measures, see Shimada, Haruo, "Employment Adjustment and Employment Policies: The Japanese Experience". Paper prepared for the workshop on Trade Policy for Troubled Industries, 1984, Institute for International Economics, Washington, D.C.

7. Just to quote a few examples: the employment level of the textile and weaving industry declined from 270,000 workers in 1977 down to 190,000 in 1984, in the ferro alloy industry from 11,000 to 5,000, in the shipbuilding industry from 250,000 to 120,000, in the aluminum refining industry from 10,000 to 4,000, in petroleum and chemical industry from 40,000 to 30,000, and in the paper and pulp industry from 78,000 to 64,000 in the same period.

8. This striking difference in employment behavior between the U.S. and Japanese industries has been confirmed quantitatively by applying employment adjustment functions, which measure the behavioral differences in terms of the magnitude of coefficient of adjustment of employment in response to changes in actual and expected production. For details, see Shimada, Haruo, "International Trade and Labor Market Adjustment: The Case of Japan," in Hancock, K. and Sano, Y. (eds.) Japanese and Australian Labour Markets: A Comparative Study, Canberra and Tokyo: Australia-Japan Research Center, 1983, pp. 227-317.

9. For detailed descriptions of employment adjustment processes and relevant cases, see Shimada, Haruo, "The Japanese Labor Market after the Oil Crisis: A Factual Report (I and II)," Keio Economic Studies, vol. 14, No. 1-2, 1977.

10. In cases of industries which had to go through substantial restructuring together with employment reductions such as ship-building, some 15-20% of workers were transferred across different departments, 10% of workers were transferred out of the plants, and some were transferred to different occupations. These permanent transfers were made in addition to the more prevalent temporary transfers. For details

of cases in the shipbuilding and steel industries, see 1984 Shimada paper for I.I.E, op. cit above.

11. Itami and Evans respectively advance interesting views in characterizing Japanese corporations in relation to this particular feature. Itami, Hiroyuki "The Japanese Corporate System and Technology Accumulation", paper presented at the Kobe International Symposium on Innovation sponsored by the Japanese Association of Business Administration, April 1986, in which the author coins the concept of "peoplism" as an important organizing principle of Japanese firms. Evans, Robert Jr., "The Japanese Firm as a Worker-Managed Enterprise", Brandeis University, Economics Department, Discussion Paper, February 1986, presents both historical and analytical appraisals of the basic nature of Japanese corporations on this aspect.

12. A detailed explanation of the Japanese production system and its relationship to human resource management strategy is given by Shimada, Haruo and MacDuffie, John Paul, "Industrial Relations and 'Humanware': A Study of Japanese Investment in Automobile Manufacturing in the United States," Research Paper, International Motor Vehicle Program, M.I.T. 1986, and Discussion Paper, Industrial Relations Section, Sloan School of Management, January 1987.

13. A brief review of such explanations may be found in Shimada, Haruo, "Japanese Industrial Relations - A New General Model?" in Shirai, T. (ed.) Contemporary Industrial Relations in Japan, Madison, WI: University of Wisconsin Press, 1983, chapter 1.

14. For a detailed analysis of the development of internal labor markets for some heavy industries, see Gordon, Andrew, The Evolution of Labor Relations in Japan: Heavy Industry 1853-1955.

15. The conflictual mode of Japanese industrial relations in the early postwar years may be seen, for example, by the high figure of man days lost by labor disputes. Average man-days lost per 10 employees per year were 4.6 for the latter half of the 1940s and 4.5 for the first half of the 1950s, as compared to 1.1 for the 1970s. For the discussion of transformation of the labor movement in Japan around the 1950s, see Shimada, Haruo, "Japan's Postwar Industrial Growth and Labor-Management Relations," Proceedings of the Annual Meeting of the Industrial Relations Research Association, Madison, WI: 1982.

16. One of the most notable investment projects was the two-stage five year rationalization project in the steel industry.

17. The well-known Kanban system of Toyota Motor Company is one visible example of these innovative efforts.

18. The proposal by union leaders in favor of accepting moderate wage increases presumed that all other possible measures were taken by both management and the government to suppress overall price increases.

19. See Hayami, Hitoshi, "Kokusai Keizai Kankyo to Chingin Kettei (International Economic Environment and Wage Determination)" Monthly Journal of Japan Institute of Labor, June 1986.

20. For a comprehensive analysis of the organizational decline of American union movement, see Freeman, Richard B. and Medoff, James, What Do Unions Do?, New York: Basic Books, 1984.

21. See Kochan, Thomas A., Katz, Harry C., and McKersie, Robert B. The Transformation of American Industrial Relations. New York: Basic Books, 1986, which deals systematically with the challenges to American unionism.

22. Kochan et al (1986) analyze the new strategies of managements and unions as well as other relevant developments in American industrial relations using a three tier model consisting of a strategic choice level, a collective bargaining level, and a workshop level.

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