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as a Paradigm Shift**

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ABSTRACT

We define the construct of paradigm in terms of its component elements: subject matter, values, methods, social networks, theories, and exemplars. We show that QWL is a paradigm by describing each of its components. The diffusion of QWL then becomes tantamount to shifting from an existing management paradigm to that of QWL. By characterizing the dynamics and structure of a paradigm shift, we provide a model for understanding and predicting QWL diffusion. International examples illustrate the post facto applicability of the paradigm shift model. Finally, we use the model to illustrate current issues of QWL diffusion in the United States and predict the outcome.

INTRODUCTION

When we survey the area of activity called Quality of Work Life (QWL) we are intrigued by several recent developments. First, it has multiple definitions, techniques and domains. Second, it is characterized by an infrastructure of formal and semiformal networks for communicating these. Third, its diffusion has achieved considerable momentum. These developments suggests that this area of activity (whatever one chooses to call it) potentially represents a very important shift in our societies' entire belief and knowledge systems about human organizations as well as organizational practices themselves.

Whether or not a shift will actually occur is a very important but as yet unanswered question. In order to assess the likelihood that this shift will occur, first we will consider QWL as a paradigm and define what the paradigm is. Then we will consider how paradigms come to be

accepted or rejected in a society by looking at the characteristics of paradigm shift. We will then use the characteristics of paradigm shifts to discuss the diffusion of QWL in the United States and several other countries.

QWL AS A PARADIGM

QWL has many precursors, components, and related movements. Many of them have been around for decades. They all have compatible underlying beliefs and their historical confluence has resulted in an overarching "movement" which we call QWL, but which could have been called participative management, employee involvement, or some other general term. Included in this movement are sociotechnical approaches, joint labor-management endeavors, industrial democracy, participative leadership styles, organization development philosophies and techniques, job redesign, worker involvement, Scanlon plans, autonomous workgroups, and "new design plants". Theoretical bases are found in much of the "humanistic" organizational literature, especially Likert (1961) and MacGregor (1960).

The QWL movement, as we speak of it, is not another item in a list of management approaches. Rather it is a set of mutually compatible organizational philosophies, theories of organization, systems of values and beliefs, practices and techniques, actual examples of QWL efforts, empirical descriptions of those efforts and their results, and a social network for communicating and reinforcing these. It is called a movement because these things have reached a critical mass in our collective consciousness and practices so that they constructively reinforce one another. The vehicles for effecting this constructive reinforcement are

the various communication media, networks of proponents, and centers for action and research which traffic in the substantive content of QWL. When successful, this constructive reinforcement creates the belief that there are new, more efficient ways to design and manage organizations, based on different assumptions about people and backed up by design techniques and principles. The concept of "paradigm" captures this notion quite nicely.

Although the concept of paradigm has had definitional problems, a reasonable consensus exists between Kuhn (1970) and subsequent interpreters (Ritzer, 1975; Eckberg and Hill, 1979). This consensus has proven to be analytically useful (Imersheim, 1977). In describing the use of a new medical technology in a hospital as a paradigm, Imersheim translated paradigm to not only a different, but also a much more narrow and circumscribed domain than interpreted by Ritzer who saw a paradigm as ". . .the broadest unit of consensus within a science" (1975:157). The paradigm concept is not necessarily confined to the arena of science. As Kuhn developed and used the concept it is a tool for understanding and describing the sociology of knowledge in the scientific enterprise. Imersheim simply applied the same conceptual tool to understand the use of knowledge (technology) within a different social enterprise (a particular organization). We use it here to understand a domain of social activity somewhere between and including Kuhn's scientific discipline and Imersheim's organization. In particular, we refer to the range of social activity which could be broadly characterized as organizing for productive enterprise and knowledge concerning how to do it. In essence, QWL is seen as emblematic of a potential paradigm for productively organizing people.

In the following paragraphs, we lay out and extend the defining components of a paradigm as delineated by Eckberg and Hill, Ritzer, and Kuhn, and illustrate these components as they seem to take shape in an emerging "QWL" paradigm. Understanding the components of the paradigm is necessary to understand the paradigm shift that we are claiming is the essence of its diffusion and that potentially could lead to a new social definition of how work should be organized in our society.

THE COMPONENTS OF PARADIGMS: QWL EXAMPLES

Between Ritzer and Kuhn six components of paradigms are clearly apparent: subject matters, beliefs, values, methods, exemplars, and social matrices.

An Image of the Subject Matter

In QWL at present the most salient subject matter is the human being and his or her welfare. For instance Suttle (1977:4) defines QWL as " . . .the degree to which members of a work organization are able to satisfy important personal needs through their experiences in the organization." However, the present saliency of the individual is somewhat misleading. The individual's needs are stressed in QWL because that is the element believed to not belong to the paradigm currently dominating management and organizational practice. The emerging QWL paradigm, as we see it, stresses a balance between, or an integration of, the individual and the organization. In this paradigm, the center stage is occupied by attempts to resolve the dilemma of how to both satisfy the organization's needs for "predictability, stability and coordinated effort" and the potentially great variety and " . . .variability of individual needs, interests, and motives" (Katz and Kahn, 1978:286). A current manifes-

tation of this integration of organization and individual as the central focus in the emergent paradigm is the frequent coupling of "productivity" and "QWL".

Beliefs in Particular Theories and Models

Paradigms encompass a number of characteristic theories or models that explain and relate the variables defining the subject matter. In the case of QWL a number of theoretical approaches exist and have been used in various combinations. Among the more prominent are socio-technical systems approaches (Cummings and Molloy, 1977), various theories relating task characteristics and motivation (Hackman and Suttle, 1977), Likert's System 4 (1961) and recently Ouchi's Theory Z (1981). Recent texts in organizational behavior are essentially compendia of these and many other models and theories that can potentially be included in the QWL paradigm. Most of the theories and models stemming from humanistic psychology and the human relations schools are within the emergent QWL paradigm (Burrell and Morgan, 1979). The emerging QWL paradigm gains evenhanded leverage on individual/organization integration by including a number of participative governance models; eg. industrial democracy, participative management, union/management cooperation, etc. (Cummings and Molloy, 1977; Garson, 1977).

Values

The QWL paradigm is permeated by a set of values. These include a humanistic belief in the worth of the individual and, therefore, the importance of individual needs which should not and need not be traded off for reasons of technical efficiency and organizational effectiveness. Further, the QWL writings contain statements about employee rights and entitlements in such areas as participation, due process, privacy, and

dignity. A basic belief is that both organizational and individual needs can be met when attended to simultaneously rather than alternately.

Methods and Instruments

The most frequent characterizations of the QWL paradigm are its methods, techniques, instruments, and approaches. These are increasingly visible in our current "practitioner" literature (eg. Burck, 1981; Business Week, 1981). These include: gainsharing plans, autonomous work teams, QC circles, worker ownership, worker councils, flexible benefits, joint union-management committees, co-determination, work restructuring, realistic job previews, etc. (Lawler, 1981).

It is through these particular methods and instruments that QWL as a paradigm goes beyond its ideological and conceptual content. It is through the use and practice of these methods that people gain a "tacit knowledge" of the paradigm not communicable through theoretical abstractions (Kuhn, 1970; Imershein, 1977). In this sense the paradigm is only learned by doing.

Exemplars

While methods and instruments can serve to concretize the paradigm in an experienced reality, the final and necessary epistemological link between a paradigm's ideological elements and its concrete activities is forged by exemplars (Imershein, 1977). The role of exemplars as part of a paradigm is often overlooked by theorists (as it was by Burrell and Morgan, 1979); but the absolute necessity of exemplars in the existence of a paradigm has been repeatedly stressed (Kuhn, 1970; Ritzer, 1975; Imershein, 1977; Eckland and Hill, 1979) and it is the unifying thread of common exemplars that most ties together the various models, values, and methods comprising the QWL paradigm.

Perhaps the earliest exemplar illustrating the QWL paradigm is the Hawthorne studies (Roethlisberger and Dickson, 1939). More recent exemplars are the Volvo plant at Kalmar, the General Foods plant at Topeka, the G.M. plant at Tarrytown, and Japan. Over and over again these exemplars are invoked to illustrate one or the other of the elements of the QWL paradigm. Beyond illustrating the elements, these exemplars illustrate the links among the elements; not analytically, but in a gestalt that at once captures the essence and reality of the paradigm. QWL exemplars have been around for a long time (at the very least since the 1930's) but recently they have become more prevalent, viable, and visible.

Social Matrices

Images, beliefs, values, practices, and examples do not exist without people. The final component necessary to complete a paradigm is the social network or community that consensually adopts its ideas and practices. The extent of this social matrix determines the extent of the paradigm. But more than simply having ideas and practices in common, the members of the paradigm's social matrix must interact with one another. Both the content and the process of these interactions serve to solidify and perpetuate the paradigm socially. In recent years, multiple elaborate social networks designed to diffuse QWL have been built and continue to be built.

The National Commission on Productivity and Quality of Working Life, The American Center for the Quality of Working Life, and The Work in America Institute are examples of organizations in the United States that have actively pursued such networking. Other countries have networked in various ways, each peculiar to the particular context and history in that country. For instance, diffusion of the Japanese

developments in participation and job redesign were heavily influenced by the Japan Federation of Employer's Associations and the Japan Union of Scientists and Engineers among others (Cole and Walder, 1981). In Sweden union-management experiments in shop floor governance were assisted by networks such as the Swedish Employer's Confederation, The Central Organization of Salaried Employees, and the Swedish Trade Union Confederation (Cole and Walder, 1981).

The above examples are national networks created by formalized, long-term organizations. QWL networks are also informal and/or temporary. The recent creation of Network Notes a "transnational" mimeographed communication medium to extend participatory democracy is one example. The recent (September 1981) international conference on the quality of working life, "QWL and the 80s" held in Toronto is another. The existence of the paradigm at any level requires an appropriate social matrix, whether we speak of QWL at the organizational, plant, or work group levels. Certainly in the plant and work groups that operate according to the QWL paradigm the social matrix is probably synonymous with the population of that unit. In large corporations, one can sometimes see formal and informal networks that lace through the corporation to connect the QWL elements, as is currently true in General Motors and Cummins Engine. Often, however, corporate pockets of QWL must rely on networking external to the corporation, such as the networks in the U.S.A. of "high involvement" plant managers.

In summary, it seems clear that the QWL movement has reached the stage where it has all the elements necessary to describe it as a paradigm. This raises the question of how and why paradigm shifts occur.

PARADIGM SHIFTS

It is possible to articulate what constitutes and causes a shift from one paradigm to another. Kuhn (1970) presents three broadly defined stages of paradigm shift: First, the shift is sandwiched between periods of normalcy in which the primary activities are "puzzle solving" within the prevailing paradigms. The shift is fueled by the emerging presence in a period of normalcy of anomalies, or novelties of fact, that do not conform with the prevailing paradigm. Such anomalies are always present and are usually taken care of by adjustments within existing models. The second stage occurs when anomalies accumulate and result in a growing state of crisis, accompanied by a strong insecurity felt by those practicing under the existing paradigm. Finally, there is a point of large-scale paradigm destruction and its replacement by a new paradigm. A major point by Kuhn is that no shift is made until a new paradigm actually exists to replace the old. When the shift occurs the entire gestalt must shift; a new normalcy occurs, characterized by major shifts in its problems and its techniques. Having characterized a paradigm shift in the abstract let us turn to its particular QWL embodiments.

Normal Practice

This aspect of the shift -- normal practice at the present time -- needs little explication. It constitutes the rules of the organization game as presently practiced. It could probably best be characterized as "management" practice to emphasize its hierarchical, unilateral, control-oriented nature. It is theory X, bureaucracy, and mechanistic organization theory, among others. It is driven by functional logic and emphasizes planning, organizing, staffing, directing, coordinating, etc.

Its exemplars and its methods are present everywhere in our everyday life and give rise to an extensive tacit knowledge of the paradigm of which we often are not cognizant. Indeed, we are not even aware of the degree to which we accept its practices, values, theories, and ideas as correct.

Within this paradigm of normal management practice, organizations have for decades engaged in considerable puzzle solving. Many of these puzzles are efficiency related and are solved within the paradigm by, say, industrial engineering and operations research type models. Other examples of puzzle solving are the search for greater validity in performance appraisals and the rationalization of compensation practices and selection systems. They represent efforts to shore up the traditional paradigm and to make it more effective.

Anomalies and Crises

We are as familiar with the anomalies which currently face the established paradigm as we are with the reigning management paradigm. We know, for instance, that increased fractionalization of human jobs does not necessarily lead to increased efficiency and higher quality as predicted. Sometimes planned behavior means failure. Sometimes high paid employees fail to show up for work and fail to obey orders. Many of these anomalies become issues due to occurrences seemingly external to the paradigm: shortage of labor, shortages of managerial expertise, shifting values and expectations in the labor market, increasingly uncertain and ambiguous environments, and competition that uses other approaches. Nevertheless, they can lead to a questioning of the established paradigm.

We have developed contingency approaches to management that are supposed to attend to some of these anomalies; but not only do these approaches threaten to break by their own weight and complexity, they more and more seem wrong in their assumptions. Even as we try to match jobs to individual needs to obtain maximum "fit" we suspect that we are doomed to failure because both jobs and needs are subject to change and redefinition by the individual so that they only "fit" when that individual (and not some external source) so determines.

Paradigm Destruction and Replacement

Conceptually and ideologically the potential destruction of the current management paradigm has been underway for sometime. Most of the attack has occurred at the hands of humanists, and the human relations theorists. A trail of destruction parallel to theirs, and somewhat independent of it, has been that which has challenged the basic assumptions of rationality, objectivity, and cause-effect in the dominant paradigm. These attacks have been associated with organizational theorists such as Simon, March, Benson, and Weick and others. They see organizational realities as being primarily constructed by political and various other social constructionist and enactment processes.

On the practical front, the dominant paradigm is threatened by real problems which are intractable under its framework. Union-management relationships are one potential example. Inability to respond to international competition is another. Not having adequate human resources to meet organizational needs is yet another. No matter to what degree the dominant management paradigm is discredited, however, there will be no shift until a new paradigm exists as a replacement. The process of paradigm shift consists of the dual processes of destruction of the old and construction of the new.

As Kuhn characterizes the period of paradigm shift, or attempted paradigm shift, it amounts to competition between the two alternatives. The competition involves social and political processes, rather than "scientific" or rational ones. On the surface the competition compares the rival paradigms in terms of their ability to lead to understanding and accomplishment. It is a process of selecting the most viable; for verifying one while falsifying the other. At a deeper level, however, the rivals are, by definition, incommensurate. They define the world and its problems in completely different ways. Each attempts to validate itself and invalidate the other on its own terms, which the other can neither accept nor allow since to do so would be to accept the underlying elements of the opposing paradigm. The battle cannot be resolved by proofs. This incommensurability also means that there are no such things as incremental or transitional shifts; the shift when, and if, it occurs must be all at once, a complete gestalt switch.

Kuhn (1970:151) specifies one way paradigms triumph in this quote from Max Planck: "...a new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it." A paradigm shift does not require the physical death of the opposition. Kuhn sees the competitive process as social and political as well as biological. There can be social and political "death" also, but there must be death.

This abstracted scenario from Kuhn can be concretized in examples from the QWL movement. Examples can be found on both the academic and practitioner sides of the paradigm. Nehrbass (1979), for instance, berated those academics who espouse QWL approaches for allowing them-

selves to be blinded by their humanist values and ignoring the research that, he claimed, fails to substantiate their claims. Sometimes the same data points, eg. the General Foods plant at Topeka, have been used as supporting evidence for both paradigms. For example, depending on one's point of view and choice of criteria Volvo's Kalmar plant can be seen as more effective, less effective, only as effective, or just as effective as other approaches to car manufacturing.

Examples can be found regarding the degree of diffusion of QWL also. Lawler (1978) sees a snowballing trend, while others (eg., Cole, 1981) see no evidence for making such a claim. Without getting concerned with which is right these examples serve the purpose of showing how incommensurability precludes the possibility of deciding the competition with evidence. In this regard, it is interesting to note that in instances where a version of the QWL paradigm has been rather well accepted (e.g., Japan and various European examples) few felt compelled to validate the paradigm they chose.

INDUCTION OF A NEW PARADIGM

Now that we have reviewed the stages that are involved in a paradigm shift, we are in a position to consider how is it that people are converted to the new paradigm. Many of the influence processes by which this is done are well documented in the social sciences (Rogers and Shoemaker, 1971; Zimbardo, Ebbeson, Maslach, 1977). Of more concern to us are the characteristics of the paradigm that influence conversion.

It is necessary, but not sufficient, for the new paradigm to solve the problems facing the paradigm in crisis. The reason that it is not sufficient is that the prevailing paradigm also may be capable of handling the crisis with appropriate adjustments. A current example

illustrates the point: One of the problem areas facing the current management paradigm has been articulated as worker alienation and is theoretically seen as stemming from a shift in values of the work force. It is a problem area recognized by both paradigms. Some theory and research indicate that alienation is accompanied by a poor fit between individual needs and job characteristics. The prevailing management paradigm responded to these findings characteristically by seeking to improve traditional selection practices by better psychological testing. Although such sensitivity to individual needs sometimes goes under the label of QWL, the QWL paradigm we see emerging would put the selection decision—implicitly maximizing need-job fit—jointly into the hands of the perspective organization member and the organization. Such a decision requires information, of course, perhaps in the form of a realistic job preview (Wanous, 1980).

What are some additional characteristics of new paradigms that facilitate conversion? Kuhn suggests that when new paradigms can lead to phenomena or achievements entirely unsuspected or unattainable under the old paradigm, or when the new paradigm offers more aesthetic appeal, perhaps in the form of simplicity and straightforwardness, we tend to develop a faith that the new paradigm will be successful. In addition, a successful appeal to widely accepted values, such as democracy, can facilitate conversion.

When rival paradigms are in competition their incommensurability prevents verification of one over the other. Each paradigm, however, offers its own way of dealing with the crisis faced. Within its own terms each sees its own approach as progress. During shift, however, no progress is possible because there is no common definition for it and

each rival invalidates the criteria of the other. After paradigm shift, however, progress is perceived by definition, not only in the subsequent accomplishments of normal puzzle solving activity within the paradigm, but in the revisionist interpretations the new paradigm makes of previous accomplishments. Under the terms of the new paradigm historical events are no longer perceived as disruptive social and political revolutions, but as sensible incremental stages of progress toward the present state of knowledge and practice. Progress is measured in the paradigm's terms as development from prior states and not in terms of approach toward an ideal.

INTERNATIONAL ILLUSTRATIONS OF QWL PARADIGM SHIFT

In this section we sketch the acceptance of the QWL paradigm as it has occurred in several countries. We draw on secondary sources in these illustrations. In a real sense, therefore, we are dependent on the degree to which the original sources have interpreted their observation in a manner compatible with the concept of paradigm shift. These comments are meant to be illustrative only. They are necessarily incomplete.

Crises

The following analogy used by Kuhn (1970:76) can now be directly reversed. "As in manufacture, so in science--retooling is an extravagance to be reserved for the occasion that demands it. The significance of crises is the indication they provide that an occasion for retooling has arrived." The historical accounts of the societal shifts regarding QWL type practices in Yugoslavia, China, Japan, Sweden, and West Germany (e.g., King and van de Vall, 1978; Garson, 1977; Cole, 1981; Cole and Walder, 1981; Tsuda, 1981) have a prominent period of crisis that is pointed out as the critical point.

These crises take a number of forms. In Japan and Sweden, for instance, the crisis took the form of severe labor shortage (Cole, 1981; Cole and Walder, 1981; Tsuda, 1981; Garson, 1977) especially in blue collar jobs that were least desirable due to such factors as working conditions and routinization. In China and West Germany societal commitment to participative systems took place in response to severe lack of management expertise (Cole and Walder, 1981; Garson, 1977) and workers needed to assume the responsibility. In Yugoslavia economic blockade and large military expenditures during ideological conflict with Russia put severe pressure on an inefficient centralized management system and forced decentralization to the commune and a system of worker management (King and van de Vall, 1978). These were all crises for management that forced it to go to the resources provided by the worker and attend to the needs of the worker.

Components of Replacement Paradigms

Each country's history of the QWL movement has led it to look different places to develop its QWL paradigm. Germany, for instance, could look to its pre-Nazi days for examples and methods of participation that were incorporated after the war into its co-determination legislation (Garson, 1977). China could not, and literally created its exemplars and methods through actions necessitated by crisis. These, in turn, drove a rethinking of ideology, helping to create the break with Russia (Cole and Walder, 1981).

Japan borrowed heavily from U.S. human relations theorists for the conceptual underpinnings of the paradigm that allowed continuity with the paternalism of prewar management style. The QC circle technique also is attributable to U.S. sources (Cole, 1980). Similarly, Sweden

found the socio-technical approaches developed in Great Britain to be of great use in their emerging paradigm. In turn, recent pressures from the common market have resulted in British labor organizations turning to Germany's co-determination model as an exemplar (Garson, 1977).

An obvious generalization from these few observations is that there has been considerable cross-fertilization internationally regarding the components of the QWL paradigm. This not only indicates the probability that it is a single paradigm evolving, but that paradigm development is accelerated in the presence of externally created components and exemplars.

Politics of Paradigm Shift

According to the theory of paradigm shift, during the shift there should be political activity of one form or another by which competition between rival paradigms is carried out. In many European countries the predicted political activity has taken the form of legislation and union activity. In Sweden, for example, the whole issue of the meaning of work was debated nationally as a result of a strike in a nationalized industry. The strike was as much against centralized union and governmental policy toward work as it was against its particular management. This resulted in a union stance for decentralization and experiments in local "shop floor" control. Shop floor democratization, such as at Volvo, did not change the basic paradigm of management networks and the experiments tended to be "encapsulated"--not diffused. This spurred union activity toward legislation of worker participation at all levels and beyond the initial experimenting sector (Cole and Walder, 1981; Garson, 1977).

In Japan the changes which occurred (e.g., QC circles) took place without much political activity. Evidently the changes were completely under management control and accepted as extensions of a paternalism and spirit of "common destiny" (Tsuda, 1981) and as a societal need. There appears to be no paradigm shift at this point. It could be argued that the shift really took place after the war when the Japanese society had to work out a system of company unions in reaction to a system of external unions imposed during the occupation.

A PARADIGM SHIFT IN THE UNITED STATES?

Now that we have outlined and illustrated the conditions which are hypothesized to lead to paradigm shift we are in a position to ask whether this is about to occur in the United States. In our view, the hypothesized conditions are in place for a paradigm shift to take place and, thus, should occur if the theory of paradigm shifts articulated here is correct.

First, as was mentioned earlier, QWL has rapidly developed recently, and has all the characteristics of a complete paradigm.

Second, the United States is experiencing a crisis which is calling the old paradigm into question. The crisis has a number of different dimensions and outcroppings, but fundamentally is a crisis of organizational effectiveness that has in part been brought on by increasingly tough international competition. So far the existing paradigm has not responded well to the crisis. Productivity growth has been minimal to nonexistent, and in some markets U.S. goods are high priced and low quality. There is now increasing recognition that if this continues, the standard of living in the U.S. will drop (indeed it did during 1980). This crisis along with the development of the QWL Paradigm has pushed

the United States to the point where a national debate is taking place between the traditional and QWL paradigms. This debate, which is taking place in the national media as well as in workplaces, seems to signal the beginning of the third phase of paradigm shift--destruction and replacement (see e.g., NBC Whitepaper, 1980).

Finally, the QWL paradigm has many of the characteristics which are needed for it to replace the existing one. First, it promises to solve the organizational effectiveness problem by better human resource utilization and motivation. Particularly in the last few years, instances of superior productivity, quality, flexibility, freeing up of managers, etc. have been claimed to result from QWL efforts (e.g., in General Motors). This has added an important dimension to a movement which, in many people's minds was primarily identified with humanist concerns. In the eyes of its adherents, the emerging QWL paradigm certainly has a beauty in its synergistic balancing of the individual and organizational needs that inspire a faith that presently intractable problems, such as maximizing selection of the right people, quickly balancing out a line of workflow at time of product change, adjusting to down times in economic and production cycles, etc., can be eventually resolved by involving those affected. Finally it appeals to values which are fundamental in the United States: democracy, equity, personal growth, human dignity, and due process.

The emphasis so far on a societal view of QWL diffusion, does not mean that a paradigm shift cannot take place at other levels of aggregation. The components of QWL diffusion enumerated above can exist at all levels of social aggregation. It is therefore possible to describe the possibilities for paradigm shift using the framework for large

corporations, small companies, and individual work groups equally well. Indeed there currently appear to be some companies where the shift has already taken place.

In summary, the QWL paradigm has not yet replaced the traditional one in the United States, but our analysis suggests it may be about to. But why now? The concepts in QWL certainly are not new. In our view, what is new is the organizational effectiveness crisis and the growing belief that QWL can solve it. The condition has not been present before and, as a result, the traditional paradigm has not been displaced. This crisis is relatively new and, indeed, unless it continues it may not be sufficient to dislodge the old paradigm, particularly if the old paradigm can be altered in some way to solve it. However, if it continues and if the paradigm shift model is valid, then the QWL paradigm should eventually replace the existing one. In essence, this means that a test of the shift model in the United States cannot take place for a few years. However, the examples from other countries and a few U.S. organizations illustrate the idea that the QWL paradigm can replace the traditional one during a period of crisis.

CONCLUSION

The theory of paradigm shifts and our reviews of diffusion in several countries suggest some intriguing conclusions about the diffusion of QWL. First, diffusion requires many necessary components—crises, exemplars, social networks, etc. The timing of the creation of these components does not appear to be critical. What is critical is that they are all brought together simultaneously. Second, contrary to the tendency of many to think so, diffusion is not a process

that can be settled in a rational manner, although the comparative seductivity of the rationality offered by each side plays a large part. Finally, the nature of diffusion is such that once it occurs it will no longer appear to be radical. In situations where QWL has been completely diffused, those having adopted the new paradigm will not see major discontinuities from the past, since they will now be looking at the past from a framework which successfully incorporates it. While still in the past paradigm, however, the rival paradigm represented a completely foreign approach to the enterprise. If the theory is correct, one day managers in the United States may soon see the QWL paradigm not as a radical approach, but as the only way to operate. Right now this would represent a radical break with the past, but one which seems due.

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