# sección especial en idioma inglés



Contradictions inherent in industrial society are challenging its very legitimacy and are taking it to the brink of a profound transformation. Will it lead to catastrophe? Or will it lead of an evolutionary leap...

Industrial society in particular and the world in general are headed for a climacteric hat may well be one of the most fateful in the history of civilizations. This convulsion has not far off, and most people sense something of it—although interpretations vary widely.

Lewis Mumford observed in The Transformations of Man that there have probably been no more than a half-dozen profound transformations of Western society since the time of primitive man. Each ot these, Mumford states, "rested on new metaphysical and ideological base; or rather, upon stirrings and intuitions whose rationalized expression takes the form of a new picture of the cosmos and the nature of man." Thus, during the founding of the great world riligions, at the fall of the Roman Empire, or at the end of the Middle Ages, there were major changes not only in social roles and institutions but more fundamentally in cultural premises, in dominant values, and in man's very image of himself. Willis W. Harman

Events of the past decade suggest that industrial society may be on the verge of a similar fundamental transformation, perhaps more wrenching than any that preceded it because of the rapidity at which we are approaching it, more extensive because it involves all parts of the globe, and more thoroughgoing because of the depth at which cultural premises will be shaken.

### The industrial-era paradigm

In recent years, the term paradigm has come to refer to the basic way of perceiving, thinking, valuing and doing associated with a particular visión of reality. The dominant paradigm of society is seldom, if ever, stated explicitly; it exists as unquestioned, tacit understanding that is transmitted through culture and to succeding generations through direct experience (rather than through being "tauaht").



A paradigm cannot be defined precisely in a few well-chosen sentences. In fact, it is not something to be expressed verbally at all. It is what the anthropologist hopes to understand after he has lived in a foreign culture for a long time—what the natives in a society perceive with their eyes and value with their feelings. A dominant paradigm encompasses more than an ideology or a world view but less than a total culture.

The present Western, industrial-era paradigm began its climb to dominance several centuries ago. Since then, it has had a major impact on all aspects of Western society and Japan and had a significant influence on the rest of the world. Among its characteristic features are:

\* Industrialization of the production of goods and services. Achieved by organizing and subdividing work into increasingly elemental (and less intrinsically significant) increments and replacing human labor by machines, industrialization leads toward goals of labor productivity and a higher material standard of living.

\* Use of the scientific method as the supreme mode of inquiry. Science is wedded to technology, making the scientific search for knowledge predominantly utilitarian, with prediction and control as its guiding values and technological progress as its goal.

\* Belief in unlimited material progress, in man's expanding control over nature, and in his unlimited ability to understand the universe from the data provided by his physical senses. Acquisitive materialism is a central operative value.

\* Adoption of pragmatic values that allow the individual to seek his own self-interest, as he defines it, in the marketplace. Hence the future is neither determined by tradition nor achieved through an organized plan, but rather happens as a consequence of relatively autonomous units in the system pursuing their own practical ends.

Born out of this industrial-era paradigm have been the fabulous products of modern industrial organization and technology. Yet this paradigm is clearly showing signs of a breakdown; its greatest successes are presently leading to major societal problems. For example, the remarkable success of modern public health measures in reducing infant

mortality and death rates has led to problems of overpopulation. Achievements in lengthening the adult life span have created problems incaring for the aged. Advances in nuclear and biological weaponry have resulted, not in security from enemies, but in the threat of mass destruction. Technological developments in communication and transportations have created the political volatility of a shrinking world as well as increased air and noise pollution. Success at generating widespread affluence has aggravated environmental spoliation and resource depletion. Automated production systems have created monotonous and dehumanizing jobs and, with further automation, unemployment. The list is nearly endless.

These problems of technological success worsen steadily. The trade-offs (tor example, economic growth vs. environmental quality) grow more and more intolerable. Their origins are inherent in the characteristics of the industrial-era paradigm, and thus the problems may be ultimately unresolvable without a major shift away from it. The result is a cultural crisis of major proportions — a growing and massive challenge to the legitimacy of the present industrial system.

## The great legitimacy challenge

From the perspective of history, the mightiest force for social change is the unproclaimed power of a society's citizenry to challenge and withdraw legitimacy from any or all of the society's institutions. Familiar examples in U.S. history include the challenge to the legitimacy of monarchical government in the Declaration of Independence, the withdrawal of legitimacy from the institution of slavery, the successful challenge by labor unions to the legitimacy of business' treating workers as its property, and, perhaps most remarkable of all, the complete withdrawal of legitimacy from the institution of political colonialism since World War II.

Over the past 10 or 15 years, industrial society has experienced a growing challenge to its legitimacy—particularly to its economic, political, technological—industrial, corporate, and scientific aspects. This challenge may mark one of the most important events in the history of human civilization, and its resolution, more than anything else, will determine the future course of events.



Although the exact nature of this challenge is not clear event many of its participants, it is identifiable by a number of sings:

- —Third World insistence on a new international economic corder.
- ---Protest movements led by environmentalists, consumers, minority groups, women's liberationists, and youth.
- Criticisms of industrial products, business practices, and manipulative advertising.
- —Survey data showing values and attitudes that imply need for change in the old order.
- —A growing sense that old answers no longer work.
- —Indications of disenchantment with the assumption that all scientific and technological advance is unqualifiedly good.
- —Decreased trust in institutions of business and government.
- —New labor demands for meaningful work and participation in management decisions.
- —Increasing signs of alienation from work and from the noncommunities called cities and suburbs.
- —Evidence of widespread search for transcendental meanings to provide a sense of "what is worth doing".

In its way, each factor contributes to challenging a system that increasingly is perceived to fall short of achieving the humane goals it espouses.

### A three-pronged attack

Legitimacy of a social system and its power concentrations is fundamentally based on its being duly constituted, adherence to adequate guiding moral principles, and effectiveness in achieving agreed-upon goals. The contemporary challenge to our social order involves all three of these fundamental bases.

1. Although the governments of the industrialized democracies are clearly duly constituted, other concentrations of power are not—the main example being the tremendous power inherent in the world network of multinational corporations and financial institutions. Because of their widespread influence, these gigantic organizations are quasipublic. As the largest corporations have grown to wield influences over human lives

that are comparable to those of governments, similar demands are being made of them that have historically been made of governments—demands that they assume responsibility for the welfare of those over whom they wield power. Among those who believe they have been disenfranchised by their lack of representation in institutions of power are members of nonindustrialized nations, minorities, consumers, youth, the elderly, and women.

On a separate front, some people are contesting the intellectual power of the scientific-technological establishment. They are challenging science's position as the ultimate arbiter of truth on grounds that it is guided and dominated by prediction-and-control values that serve industrialism rather than by humanistic goals that enhance man.

- 2. The industrial system is not guided by adequate moral principles, particularly in the matter of equitable distribution of the earth's resources. Especially with regard to food, energy, and economic resources, the poor continue to get poorer relative to the rich nations. The industrial system possesses no effective ethic or mechanism of redistribution; economic incentives predominate over all. The system provides no effective ecological ethic, and consumers often feel manipulated and defrauded. The sense of pride in striving toward noble goals seems clearly to be dwindling; the system does not foster goals that enlist the deepest loyalties and commitments of citizens.
- 3. The system is proving ineffective in achieving even its own declared goals. The successes of technology and industrialization themselves appear to be primary causes of contemporary problems. The labor of the poor and unskilled is rendered of little value, and there is a lack of sufficient satisfying work roles. The system does not foster preservation of the planet's habitability or enhancement of the environment's capacity to promote the total health of individuals. Incentive structures of the industrial system fail to ensure that future generations will have fossil and mineral resources and clean air, land, and water.

The strength of this three-pronged challenge is difficult to asses. Conceivably the problems may be alleviated to the extent that the legitimacy challenge will weaken and disappear. But if the challenge continues to



grow, several outcomes may occur. The challenge may become so alarming that a highly authoritarian regime will arise and put it down by strong governmental action. Or the challenge may become much stronger and result in a major whole-system transformation.

In the middle of the eighteenth century it would have seemed preposterous to suggest that monarchies, with their preponderant military and financial power, would bow to a form of government "deriving its just powers from the consent of the governed". Yet the same forces that inexorably brought about the development of modern democratic governments and overthrew colonial rule may now be at work in modern economies. Industrial society is moving toward business "of the people, by the people, and for the people"—business "deriving its just powers" from the consent of all those whose lives are affected by it.

Closely related to this challenge to the legitimacy of industrial-era institutions is the appearance in the culture of a "new transcendentalism" (manifested in numerous cultural indicators such as book purchases, interestgroup affiliations, survey data, and new areas of scientific exploration such as biofeedback and consciousness research) along with a renewed concern with the fundamental moral and value premises that shape any society. In the emerging view, there exists a spiritual order, discoverable and explorable and in some sense testable, against which human value choices can be assessed; there are evident supraconscious evolutionary tendencies toward development of man's sipiritual potentialities beyond the realm of his mundane experiences. The view of man that became dominant in the industrial era is perceived to have overemphasized materialistic and economic motivations and neglected aesthetic, humane, and spiritual motivations. In the emerging view, the primary emphasis is on "to be" rather than on "to have" or "to control".

This hypothesis, that industrial society is experiencing a profound and rapid change in its dominant image of man, may seem unlikely—as unlikely as Christianization of Rome might have seemed in the third century. But it may also be as accurate.

## The future prospect

The prospect of living through a thoroghgoing societal transformation is sobering. History gives scant cause for anticipating that it will not entail economic decline, political and social disruptions, and extensive human suffering. A period of chaos seems inevitable as the powerful momentum of the industrial era is turned in a new direction and the various members and institutions of society respond at different speeds.

Accurate interpretation of this disorder is crucial. The form—and success—of society's policies and actions will greatly depend on whether the disruptions are seen as necessary steps in the change toward a more workable system or are perceived as capricious and essentially destructive.

Psychotherapy has shown that at the precise moment that an individual most believes his whole life is crashing down around him, he is most likely to achieve an inner reorganization constitutiing a quantum leap in his growth toward human maturity. Perhaps, similary, precisely when society's future seems so beleaguered—when its problems seem almost staggering in complexity, when so many individuals seem alienated, and when so many values seem to have deteriorated--society will most likely achieve a metamorphosis in growth toward maturity, toward being more truly enhancing and fulfilling of the human spirit than ever before. Thus it may be that industrial society will experience an evolutionary leap to a transindustrial society that not only has know-how but also has a deep inner knowledge of what is worth doing.

WILLIS W. HARMAN is associate director of the Center for the Study of Social Policy, Stanford Research Institute, and professor of engineering-economic systems at Stanford University. He received B.S. and Ph.D. degrees in electrical engineering from the University of Washington and Stanford respectively and also holds an M.S. degree in physics from Stanford. Dr. Harman has authored several engineering texts and has served as a consultant to the National Goals Research Staff of the White House and to The Conference Board.

This article was originally published in "Management Review"- Volume 65, No. 7, of July 1976.

