

Industrial Organization and Socialist Development in China

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China's unique approach to organizing industrial production has provoked a whole spectrum of reactions among Western observers. The recurrent attempts to alter the social division of labor and its associated power and authority relations are viewed at one end of this spectrum as quixotic, counterproductive skirmishes with the dictates of an invariant social process of modernization (Lewis, 1969; Lowenthal, 1970). These same attempts at directed change are viewed, at the other pole, not only as an effective means to motivate workers, but also as a coherent, workable method of creating patterns of social life quite different from those characteristic of industrial capitalism (Andors, 1969, 1977a; Hoffmann, 1974; Riskin, 1975a).

The contention between these views has led to direct confrontation with some of the most enduringly difficult issues in Western social science. The underlying problem is as perplexing as it is intriguing: how does one distinguish the peculiar characteristics of capitalism from those intrinsic to industrialized societies in general? The specific question raised by the unique approach to organizing socialist production

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pursued in China over the past two decades is directly related to this broader theoretical problem. To what extent are power and authority relations within an enterprise regulated by inherent characteristics of large-scale industrial production, and to what extent are they regulated by the specific class nature and economic structure of society? (Giddens, 1971: 228-241, 1975: 138-143)

The clearest contrast between these two alternative perspectives is still found in the original historical analyses of the genesis of capitalist production performed by Karl Marx and Max Weber. Marx saw that capitalism was a historically limited social form of commodity production based on the undisguised exploitation of labor: the extraction of surplus-value from the labor of formally free workers. Its emergence in Europe from earlier feudal forms was based on the creation of a work force expropriated of its independent means of livelihood, on the development of large-scale commodity markets oriented towards exchange values, and on the appearance of private capital motivated towards continuous self-expansion. Authority and power relations within the capitalist enterprise, as well as class relations in society at large, were determined by the underlying property relations of this system. Workers whose only resource was the sale of their labor power as a commodity were disadvantaged in a market oversupplied with labor and dominated by owners of private capital (Marx, 1967: 877-886, 1973: 83-111).

Marx concluded that the abolition of private property would create the single most important condition for undermining this social form. With the abolition of private property would be eroded the rationale for commodity production and the system of class domination based on commodity markets and the unequal distribution of property. Authority and power relations within the enterprise, by implication, would change along with the surrounding class system (Marx, 1967: 814-820; Giddens, 1971: 228-230).

While Weber also saw that capitalism was a historically limited social form, he disagreed with Marx's conclusion that power and authority relations could be very different in a socialist economy. Capitalist exploitation, Weber felt, was only a specific form of a process of appropriation of surplus common to all economies, including socialist ones. What marked capitalism from earlier economic forms was its widespread expropriation of workers from means of production and simultaneously from means of administration (Weber, 1964: 246-250). Capitalism, further, with the widespread development of money econo-

mies, formally free labor, and commodity markets, created both the pre-conditions and incentives for a rational calculation of profit and for growth on an historically unprecedented scale.

This high level of formal economic rationality, Weber argued, which so colored authority relations between superiors and subordinates in capitalist enterprise, would be a feature common to socialist economies. For Weber, the expropriation of private property did not necessarily return the means of production and of administration to workers. On the contrary, in any "rationally organized socialistic economy," "The expropriation of all the workers would be retained and merely brought to completion by the expropriation of private owners" (Weber, 1964: 248). This continued separation of authority from the masses of workers is due to the fact that a socialist enterprise is still a "profit-making" enterprise, in the sense that it must still rationally calculate money surpluses and money costs (Weber, 1964: 190-191). Such rational calculation would still be necessary because in a planned economy "it is never possible for subjective needs to correspond directly to effective demand" (Weber, 1964: 194). If anything, Weber argued, socializing a capitalist economy would only hasten this process of bureaucratization, because considerable economic coordination formerly achieved through markets and prices would have to become the object of rational, calculative planning. Where Marx, in short, saw features of authority relations as specific to a system of class domination, Weber saw an irreversible historical process of rationalization relatively insensitive to changes in class structure.¹

These are issues of seemingly inexhaustible complexity. An acceptable theoretical solution has eluded scholars since the beginnings of industrial capitalism raised such issues and put them at the center of the emerging disciplines of modern social science (Giddens, 1971). But concerned as they are with the extent to which existing social arrangements are determined by processes beyond the sphere of conscious human intervention, these theoretical issues also have undeniable political implications. Since political orientations towards existing structures of power and authority are intimately related with one's theoretical understanding of the viability of different structures, political sentiments have more than once in history been intermingled with social theory.² English Methodism's sanctification of submission and moral condemnation of idleness, for example, served simultaneously to discipline industrial workers and to reconcile them to their new regime, often at the conscious urgings of political economists and mill owners (Pol-

lard, 1965: 192-208; Tawney, 1926: 253-273; Thompson, 1966: 355-362; Weber, 1958: 60-77, 199). Specific secular conceptions of human abilities and motivation, further, served the same purpose at a later stage of industrial growth (Bendix, 1956; Braverman, 1974). Bendix argues that these ideas, eventually incorporated into managerial and other social theories, served as "ideological defenses of the position of industrial elites" in the course of industrialization (Bendix, 1956: 2-13).

Given this historical perspective, one should be doubly sensitive to the possible intrusion of political sentiments into social theories. For this reason, we cannot dismiss lightly the criticism that the application of western development theories to the study of China suffers from the intrusion of biases rooted in America's social structure and counter-revolutionary world role (Andors, 1969, 1977a: 3-23; Peck, 1975). While such critiques do little to sort out competing theoretical claims,³ they do help nourish a healthy sense of skepticism that demands detached examination of assumptions many of us have learned to take for granted.

INDUSTRIAL RELATIONS IN CHINESE MARXIST THEORY

The theoretical rationale behind the distinctive organizational experiments at issue here—and thus the self-conception of the Chinese of what they are attempting—has been only partially understood in the West.⁴ This understanding has been heavily mediated by the distinctive concerns of Western radical and liberal political theory. One popular interpretation traces the Chinese concern with altering the social division of labor to Marx's concept of alienation. The Marxist impulse to eliminate human alienation, in this view, commit the Chinese to eradicating the dehumanizing aspects of industrial work responsible for worker dissatisfactions and antagonisms—a strategy that will propel industrial growth by tapping powerful hidden sources of human motivation (Andors, 1969; 395, 400; Hoffmann, 1974: 23-27).

The emphasis this interpretation places on individual feelings—the subjective aspects of alienation so emphasized in the West—is reflected neither in the importance attributed to alienation in Chinese Marxist discourse nor in the dominant interpretation the Chinese place on Marx's original concept. Not only is the term "alienation" rarely invoked in theoretical discourse, but the terms commonly used to trans-

late it—*yihua*, *waihua*, *waizaihua*, and *shuyuanhua*—emphasize only the objective separation of the worker from both the mental aspects of production and the product itself (Munro, 1974). Because alienation, when rarely invoked in China, does not connote subjective feelings, a commitment to reduce alienation in the sense of worker dissatisfaction cannot serve as the source of Chinese efforts to transform work organization. The objective mental-manual split in the production process, as we will explain shortly, does have a central place in the Chinese Marxist emphasis on transforming the social relations of production, but this does not take the form of a moral commitment to reduce dehumanizing aspects of industrial labor.

A second popular, but no less misleading interpretation, stresses the importance of worker participation in decision-making as a check upon managerial power—a central element of a strategy to prevent the emergence of a new bureaucratic class of administrators who exhibit increasingly “capitalistic” values and behavior. The Chinese, according to this view, aim to create transitional institutions where worker participation in decisions is integrated into a system of “checks and balances” (Brugger, 1976: 215-252; Nee, 1975). This distinctly Madisonian interpretation projects onto Chinese Marxism the faith in procedural democracy and formal institutions that distinguishes the liberal West. Worker participation in managerial decisions has constituted an important concern in China, but a liberal gloss places it in an entirely different light than that reflected in the discussions of the Chinese themselves.

The theoretical source for this concern with transforming the work process stems not from a moral commitment to reduce worker alienation or from an explicit conception of formal institutionalized checks upon elite power, but from the application of the concept “mode of production” to the analysis of socialist society. In a Marxian conception of society a mode of production is a “totality” of property, exchange, and distribution relations, to which corresponds a set of production relations distinctive to that mode (Marx, 1904: 11-12). Understood by Marx as the direct relationship between different social groups in the production process, production relations form the very core of social structure, and are the basis of forms of political and economic domination.

The specific economic form, in which unpaid surplus-labour is pumped out of direct producers, determines the relationship of rulers and ruled, as it grows directly out of production itself and, in turn, reacts upon it as a determining element. Upon this, however,

is founded the entire formation of the economic community which grows up out of the production relations themselves, thereby simultaneously its specific political form. It is always the direct relationship of the owners of the conditions of production to the direct producers—a relation always naturally corresponding to a definite stage in the development of the methods of labour and thereby its social productivity—which reveals the innermost secret, the hidden basis of the entire social structure, and with it the political form of the relation of sovereignty and dependence, in short, the corresponding specific form of the state [Marx, 1967: 791].

According to Mao Ze-dong and those theorists who have been closely aligned with him, the transformation of production relations in a socialist society should not stop with the transformation of property relations and those distribution relations most immediately linked to private property (Bettelheim, 1974: 67-103; Mao, 1961-1962). Instead, in order to transform “the entire formation of the economic community” and thus the forms of domination within it, continual changes must be effected in distribution and power and authority relations (Walder, 1977: 148-157). Failure to push these changes will have, in this view, at least three serious repercussions. First, it will be impossible to sustain attitudinal and behavioral changes necessary for the operation of a fully socialist society; second, production will be “fettered” by the persistence of unreformed “irrational” production rules and regulations, and by the continuing calculative involvement of workers; and third, managerial and administrative personnel may use this untransformed authority and power to consolidate their positions and become an entrenched elite, slowing and perhaps even reversing the desired process of social change (Mao, 1961-1962: 347-348, 385-386; Zhang, 1975).

This theoretical perspective has direct implications for industrial organization. Since industrial organization embodies power and authority aspects of production relations—or, as the Chinese put it, “relations between people in the midst of productive labor” [*ren yu ren zai shengchan laodong zhong de guanxi*—Mao concluded that

After the question of the system of ownership has been resolved, the most important question is that of management—that is, the question of how to manage an enterprise under ownership of all

the people or under collective ownership. This is also a question of relations between people under a specific system of ownership. . . . Within a specific period there are always limits on changes in the system of ownership, but within this same period it is possible to change without interruption the relations between people in the midst of productive labor. [Mao, 1961-1962: 386]

Because the transformation of social relations in the work process was, in his estimation, both centrally important and entirely possible under socialist conditions, organizational experiments, Mao continued, would be performed in Chinese industry.

In enterprises under the ownership of all the people, we have adopted such models as the integration of centralized leadership with mass movements, the integration of Party leadership with the worker masses and technicians, cadre participation in labor, worker participation in management, and continuous changes in irrational systems of rules and regulations. [Mao, 1961-1962: 386]

These measures summarize the distinctive Chinese approach to industrial organization. The elements Mao outlines here: use of directed campaigns to create pressure for change, the cooperative handling of technical, leadership, and operative tasks, the blurring of distinctions between mental and manual labor, and repeated reform of organizational procedures, are the concrete steps through which the Chinese have attempted at irregular intervals to transform the relations between people in the midst of productive labor. Combined with attempted changes in distribution relations—restricting wage differentials and extending cooperative and nonmaterial incentives—these organizational experiments form a conscious effort to transform the production relations of socialist society. By transforming these work relations the Chinese have hoped gradually to erode the basis of political and economic domination of one social group over another.

LIMITS ON DIRECTED ORGANIZATIONAL CHANGE

At issue is the extent to which these principles can provide a workable basis for industrial organization in a rapidly developing society. This issue has most often been approached by trying to determine the degree

of success with which these changes have been implemented and, if less than successful, by attempting to uncover those factors that restricted their success. Because these organizational experiments have been implemented irregularly and appear to be difficult to maintain in their initial form for a sustained period of time (Andors, 1974b, 1977a), attention in the field has focused on explaining this irregular pattern of implementation. Each explanation of this irregular pattern carries an implicit or explicit statement of those crucial factors that hamper the operation of these new forms of organization.

The explanations forwarded for this irregular pattern fall into two broad groups. These groups are distinguished by the extent to which they attribute difficulties in implementing organizational change in China either to such nonstructural factors as human motivation and behavior, or to structural characteristics demanded of individual organizations in industrial societies: the complexity of technology, the degree of specialization necessary in large-scale organizations, and so forth. With few exceptions, scholars heavily emphasize either human motivation and behavior (nonstructural factors) or formal organizational characteristics (structural factors) in their analyses of attempted organizational change in Chinese industry.

The classic nonstructural analysis of organization in China, Schurmann's *Ideology and Organization in Communist China* (1968), is the only nonstructural perspective not to specify human action or worker motivation as a key factor. For Schurmann, the alternating emphasis and deemphasis on organizational change is in large measure a product of the dialectical world view of Chinese Communist elites. The concept of "contradictions" which suffuses this ideology requires shifting patterns of action as a contradiction sharpens and demands reconciliation (Schurmann, 1961, 1968: 73-104). Because ideology, for Schurmann, is a "manner of thinking characteristic of an organization," and because organization is "a rational instrument engineered to do a job" (Schurmann, 1968: 8-9), it follows that this systematic set of abstract ideas has real consequences for the action and purpose of Chinese organizations. The expansion and contraction of mass campaigns to implement change is, thus, an example of "ideology in action." The dialectical world view, when translated into a "practical ideology" that faces "concrete problems," results in a unique, erratic form of organizational behavior (1968: 74).

Schurmann's account of those concrete problems that face organizational efforts in industry, unfortunately, is not so well developed as his

elegant conception of ideology and organization. His own account of industrial management during the 1950s insightfully relates the alternative “human” and “technical” orientations to management considered by Chinese elites to the important themes in western organizational literature, but the discussion of the concrete problems that constrain the implementation of one or the other of these approaches forms only an occasional backdrop to an otherwise enlightening discussion (Schurmann, 1968: 220-239, 278-307). Concerned largely with demonstrating the relevance of his perspective on ideology and organization to different sectors of Chinese society, Schurmann leaves to other scholars the task of systematically investigating those concrete problems constraining one or another organizational approach in industry.

Andors’ various writings (1969, 1974b, 1977a) are in many ways an attempt to build upon Schurmann’s pioneering work by extending the focus to include the 1960s and 1970s, and by more carefully investigating the concrete problems that exist. Andors, in fact, keeps some of Schurmann’s key analytical distinctions—“policy/operations,” for example (Andors, 1969: 396; Schurmann, 1968: 223-225)—and Andors’ interest in alternative “human” conceptions of management, where organizational procedures are less specialized and formalized, finds its roots in Schurmann’s original explorations of these themes (Schurmann, 1968: 225-239). Where Andors gains by jettisoning the ideology-organization perspective that prevented Schurmann from more closely investigating concrete organizational problems, he loses the sustained analytical focus that Schurmann’s own perspective afforded him. His explanations are, as a consequence, offered in an unsystematic, often ad hoc fashion, without an underlying theoretical framework to order a variety of concrete problems and render them coherent.

As are Schurmann’s, Andors’ explanations are primarily nonstructural. Using political and historical factors as explanatory devices, Andors rejects technological and other structural factors which smack of “convergence” or other perspectives emphasizing the necessary structural similarity of all modern societies (Andors, 1969, 1977a: 3-23; 243). In what amounts to an interpretive history of management policy in Chinese industry, he introduces a wide variety of concrete problems intended to explain particular shifts in policy orientation—conflict between individuals with varying skill and educational levels, class backgrounds, and thus, political orientations towards change; policy conflicts among top Party leaders; and the sheer enormity and complexity of the task of large-scale change. Clearly implicit in this account

is the crucial nature of human motivation, attitudes, and political action. One derives the impression that if only the political struggles over management and the problems due to the complexity of implementation eventually can be decisively resolved, and if the new system of management can overcome the hostile attitudes towards it exhibited by leading personnel, worker participation can act as a powerful source of productivity and a basis for a new industrial order (1977a: 10-23, 241-247). Irregular patterns of implementation reflect, for Andors, periodic struggles against the dead weight of entrenched bureaucracy, political opposition, and backward consciousness—constraining factors which derive more from history than from technology (1977a: 243).

Skinner and Winckler (1969) were the first to explore in a complex and systematic fashion the relation between these crucial nonstructural factors and elite attempts at directed change. While their superb theoretical extension of the basic organizational concepts of power and involvement are intended explicitly to apply to rural social organization in China, the concepts they use are part of a perspective designed to be applicable to all complex organizations (Etzioni, 1975).⁵ For Skinner and Winckler the concrete problem that accounts for irregular implementation of organizational change is the continual contradiction between shifting elite goals, the consequently shifting types of power used by elites, and the changing basic-level responses to these types of power by individuals in organizations. Their “compliance cycle” (Skinner and Winckler, 1969: 419) for example, is set in motion when the political leadership, concerned with maximizing ideological goals (social change, for example), “radicalize” their “power mix” and emphasize normative appeals over remunerative ones. These normative appeals generate strong commitment from organizational members for a period, but the effect of such appeals eventually wears off and they become ineffective—disappointment breeds alienation. To remedy this alienative involvement, elites then must shift the emphasis in their power mix from now-ineffectual normative appeals to forms of coercion. Coercion may remedy the negative effects of alienation, but it results in “indifferent” involvement which only yet another shift in power—this time to remunerative incentives—can temporarily remedy. The cycle of attempted organizational change thus complete, China’s organizations await the next decision to radicalize—a decision itself touched off by this continual contradiction between goals, power, and basic-level involvement (Skinner and Winckler, 1969: 411-420; Etzioni, 1975: 484-494). Skinner and Winckler, in other words, succeed in both those areas where Schur-

mann and Andors are weakest. They are, unlike Schurmann, able to encompass within their perspective the relation between elite intentions and actions, on the one hand, and "concrete problems" (subordinate responses) on the other. They set their "concrete problems," further, within the systematic explanatory framework which Andors' various accounts lack. Whether this theory adequately captures the important concrete problems constraining organizational change in Chinese industry is yet another issue.

A major challenge to the adequacy of a Skinner-Winckler compliance framework for industry is posed by the more "structural" organizational perspectives. These perspectives—often directly critical of the Etzioni scheme upon which Skinner and Winckler draw—stress not human motivation or responses to elite power as a key element in the study of organizations, but rather the structures that must exist if an organization is to operate with a particular physical technology or deal with the characteristics of its immediate environment (Perrow, 1972; Thompson, 1967). The direct implication structural perspectives have for the study of organizational change in China is that relatively invariant organizational characteristics may prove to be an important barrier to change in Chinese industry.

When linked to a vision of an invariant process of modernization, such a perspective can spawn categorical claims about the inevitability of increasing specialization and bureaucratization within organizations, and hence, a priori dismissals of the Chinese attempts to create different forms of organization as inherently unworkable. Such are the approaches used by Lewis (1969) and Lowenthal (1970). These essays begin by assuming the validity of a once-popular view of the process of development and its impact upon complex organizations—that "the character of science and technology and the requirements inherent in modern methods of production and distribution" demand increasing specialization and large-scale, hierarchic organizations. This, so the argument goes, is "intrinsic in the industrialization process" and constitutes an immutable, if not unilinear, "logic of industrialism" (Kerr et al., 1960: 33).

Armed with this implicit theoretical view, Lewis and Lowenthal set out to examine the consequences of Chinese attempts to escape this inescapable "logic." Lewis argues that the periodic clash of "highly rigid and doctrinaire ideologies" with the modernization process has resulted in the disruption of the economy and of civil order, and has left the masses severely alienated from Communist elites (Lewis, 1969: 33).

Lowenthal, in a nearly identical fashion, asserts a basic contradiction between the goals of "utopia" and "modernization" (1970: 51), and concludes that in the recurrent clash of these two processes of social change—one directed and conscious and the other the spontaneous result of modernization—the utopian impulse will inevitably succumb (1970: 53-54). Organizational and other social experiments in China are not sustained, in other words, because they are simply in direct conflict with technological and other structural imperatives of modernization.

The problem with this perspective, of course, is that the resolution of the issue in question—constraints on alternative forms of organization—is assumed rather than argued. By invoking a global perspective which they must presume to be unchallengeable, the authors bother neither to develop a theoretical argument of their own, as do Schurmann and Skinner-Winckler, in a complex and rigorous way, nor to relate their arguments in a concrete manner, as does Andors, to observed patterns of organization in China. The whole exercise hinges on the acceptance of some exceedingly vague claims about social organization derived from an altogether too brief and superficial discussion of a type of developmental perspective that has, even in its more carefully stated forms, drawn considerable criticism (Black, 1966: 47-50; Nisbet, 1969; Smith, 1973; Tilly, 1975).

A structural perspective need not result in such a deterministic view of organizations in the process of modernization. When armed with a dose of skepticism about contemporary theories of development, it in fact can provide explanations for seemingly divergent patterns of organization. This is precisely the approach used by Brugger (1976: 1-3) in his study of the experience of Soviet forms of industrial organization in China. Brugger found that two structural factors, among others, inhibited the operation of Soviet "one-man management" and its attendant responsibility and control systems. The operation of such a strict hierarchical system of control required a variety of highly trained personnel that the Chinese did not possess, and such a rigid bureaucratic structure needed a stable organizational environment that post-Liberation China could not provide (Brugger, 1976: 253-263). China's leaders, searching for an organizational approach that was compatible with the nation's scarcity of resources and tenuous political and economic stability, began to turn towards the less formalized and hierarchical patterns of organization developed in the base areas. Structural factors, in other words, acted at least in the short run to push organizational forms in a direction opposite that asserted in logic of industrialism arguments.

While this wide variety of structural and nonstructural approaches has been used in studies of industrial organization in China, three theoretical issues have preoccupied researchers over the past decade. First is the question of what role human motivation plays in shaping organizational alternatives—a question, in other words, about the impact of changes in human behavior upon the structure and effectiveness of organizations. Second is the question of what relative impact technology has upon the organization of work—a question, in other words, about the limits placed by technology on the types of organizational changes attempted in China. Finally, there is the question of what demands the process of modernization will place upon the organization of Chinese industry—a question, in other words, about the possible long-run conflict between Chinese attempts at organizational change and the structural demands of industrialized society. The pursuit of these questions has led China specialists into the disciplinary literature on complex organizations.

HUMAN BEHAVIOR AND ORGANIZATION

Perhaps the most frequently read argument about Chinese industrial management is that the increased worker participation in decision-making it ideally embodies can act as a powerful source of motivation—motivation that is transformed into industrial productivity (Andors, 1977b: xxiii-xxxi; Hoffmann, 1974: 110-122; Riskin, 1975a, 1975b). Citing a well-known portion of the literature in industrial psychology and management, proponents of this view draw striking parallels between Chinese participative approaches to management and the measures advocated by Western social scientists for building worker motivation and effective industrial organization (Lawler, 1973; Vroom, 1964).

Riskin (1975a) has forwarded by far the most cogent presentation of this argument. Criticizing authors who assume that excess “ideological extremism” in the form of worker participation in decisions and non-material incentives will damage productivity (Richman, 1969: xi), he argues that there is a large body of theory and research pointing to the effectiveness of the approach used in China. Not only is there evidence that workers can be powerfully motivated by considerations other than pay, but there are economists who have argued that such motivational

inputs, a dimension often ignored in conventional microeconomic analysis, can move levels of productive efficiency to entirely new planes (Leibenstein, 1966). Riskin, in short, bases his rebuttal of critics of the Chinese approach on the sheer weight of accumulated scholarly literature: "it has been almost axiomatic in literature on management that providing workers with greater understanding of the significance of their work and greater influence over its design and purpose would stimulate productivity" (Riskin, 1975a: 446-447).

While for years this has indeed been almost axiomatic, a more critical examination of recent organizational literature provides ample evidence that this relationship between participative management and heightened worker productivity must be carefully qualified—and in ways directly relevant to the study of Chinese attempts at organizational change. The position about motivation and productivity referred to by students of Chinese industry can be broken down into a logical chain: participative work activity leads to satisfaction and heightened morale; this morale creates additional motivation to work; and this added motivation contributes, in turn, to rising productivity. Upon closer scrutiny, each of the three links in this tight chain of logic are loosened by several crucial qualifications or conditions.

The link between participation and morale, for example, is modified by the recurring finding that individuals vary greatly in the way that they respond to these more varied and demanding tasks (Hulin and Blood, 1968). In one study this variation was attributed to the influence of community background: workers from urban communities derived far less satisfaction from such varied tasks than did those from small rural towns (Turner and Lawrence, 1965). Indeed, the distinct possibility arises, as many researchers have found, that the demands of a varied task may overwhelm the capabilities of some workers, just as repetitive, fragmented tasks can frustrate others (Lawler, 1973: 158-170).

The link between high morale and motivation to work, further, must be similarly qualified. Workers satisfied with their job or with the network of personal relations connected with it are not necessarily those who are highly motivated to produce. Except for absenteeism and turnover, job satisfaction has been found to have, at best, a weak relation to work motivation (Perrow, 1972: 107; Lawler, 1973: 84-87). While it makes consummate sense that participation and satisfaction are closely related to work motivation, their precise relations are exceedingly complex, mediated as they are by a variety of individual and societal factors (Perrow, 1972: 97-115; 119-143).⁶

More importantly, even if we can assume, for the moment, that Chinese efforts to involve workers in managerial decisions do lead straightforwardly to heightened motivation, there is a strong tradition within the field of complex organizations which argues that such motivation can be translated into productivity only under certain conditions. According to this view, a group of workers—no matter how highly motivated—cannot perform effectively unless their efforts are organized in a manner that fits the type of tasks in which they are engaged. The types of participative measures employed in Chinese industry, therefore, imply a specific organizational structure, and this structure, in turn, would have to be fitted to varying concrete features of enterprises before heightened motivation could lead to organizational effectiveness. Evaluation of the claims made about participation, motivation, and productivity, in other words, must lead directly from an abstract discussion of human motivation to an examination of the concrete setting in which these measures must be carried out. Workers, in short, may indeed derive motivation under certain conditions from participative management, but organizing this motivated activity in a productive way may be quite another task.⁷

TECHNOLOGY AND ORGANIZATION

The problem that arises at this point is, in a broad sense, that of the relation between “technology,” or the actions that individuals perform upon an object with the help of a whole variety of tools and machines, and “organizational structure,” or the social relationships that exist between individuals while engaged in this activity (Perrow, 1967: 195). The relevant issue is what impact a pattern of productive actions, shaped by existing technology, has upon the nature of managerial power or worker discretion—and more specifically, what constraining influence technology so defined will have upon an organization’s structure. If the types of changes in structure advocated in China will conflict with specific features of a given technology, a concrete problem may exist no matter how much motivation workers may derive from these structures.

The relation between the nature of the physical task of an organization, whether this be labelled in its various aspects technology or “environment,” and the structure of power, control, and authority in an organization, has been a major preoccupation of recent organizational

sociology. Stinchcombe (1959: 176-186) found, for example, that specific features of Weber's ideal type of bureaucracy were markedly absent in the construction industry, whereas they were present in mass production firms. This deviation from the classic bureaucratic type—a type, incidentally, which conflicts with prescribed Chinese forms of organization in crucial ways (Whyte, 1973: 157)—was due to specific types of uncontrollable variability in the various stages of the construction task and in the natural environment in which construction takes place (Stinchcombe, 1959: 179-180). Relatedly, Blauner (1964) described the widely varying impact that technologies in craft, machine tending, assembly-line, and automated industries have on worker control over their own activity and on their relations with others.

These basic insights stimulated a wide variety of approaches to understanding the impact of an organization's concrete task upon the structures of activities within it. Burns and Stalker (1966) provide a valuable, if over-simplified dichotomy of types of organizational structures that will greatly facilitate a brief navigation of this literature. The contrast between the two "ideal types" of structures they investigated correspond in a broad way with the contrasts often made between features of Chinese industrial management and less participative forms (Whyte, 1973; 1974a). The type of structure they termed "organic" is reminiscent of the Chinese experiments. In such a form of organization

Individuals have to perform their special tasks in the light of their knowledge of the tasks of the firm as a whole. Jobs lose much of their formal definition in terms of methods, duties, and powers, which have to be redefined continually by interaction with others participating in a task. Interaction runs laterally as much as vertically. Communication between people of different ranks tends to resemble lateral consultation rather than vertical command. Omniscience can no longer be imputed to the head of the concern. [Burns and Stalker, 1966: 506]

This type of organizational structure, characteristic of participative management, contrasts sharply with a structure tagged "mechanistic," where

the problems and tasks facing the concern as a whole are broken down into specialisms. Each individual pursues his task as something distinct from the real tasks of the concern as a whole. . . .

“Somebody at the top” is responsible for seeing to its relevance. The technical methods, duties, and powers attached to each functional role are precisely defined. . . . Operations and working behavior are governed by instructions and decisions issued by superiors. . . . Management, often visualized as the complex hierarchy familiar in organizational charts, operates a simple control system, with information flowing up . . . and decisions and instructions flowing downward. [Burns and Stalker, 1966: 5]

The crucial question, directly relevant to Chinese attempts at organizational change, is under what sets of conditions these two structures, or variations thereof, are effective. Burns and Stalker themselves found that organic or participative structures predominated where technological innovation was rapid and the market for products unstable—and under opposite conditions, mechanistic structures predominated. Other attempts to explore this problem have focused upon different concrete conditions—environmental stability (Lawrence and Lorsch, 1967; Thompson, 1967), the routineness or nonroutineness of the task (Perrow, 1967), the rate of technological change (Harvey, 1968), and different features of the technological work process (Thompson, 1967; Woodward, 1965). In each case, the predominance and effectiveness of different aspects of organic and mechanistic structures varied according to concrete technological and environmental conditions. Participatory structures proved effective, generally speaking, in nonroutine or nonpredictable situations, while more mechanistic structures fared better in routine and predictable technological and environmental conditions (Lawrence and Lorsch, 1967; Woodward, 1965).

The direct implication for any attempt at large-scale organizational change is that

to call for decentralization, representative bureaucracy, collegial authority, or employee-centered, innovative or organic organizations—to mention only a few of the highly normative prescriptions that are being offered by social scientists today—is to call for a type of structure that can be realized only within a certain type of technology, unless we are willing to pay a high cost in terms of output. . . . It is increasingly recognized that there is no “one best” theory (any more than there is “one best” organizational structure, form of leadership, or whatever). [Perrow, 1967: 204]

Since proponents of this view are careful to point out that this should not be interpreted as a form of technological determinism,⁸ this perspective does nothing more than set forth some useful technological distinctions that have demonstrated applicability in analyzing the effectiveness of different forms of organization. Specific approaches to industrial management, in brief, have exhibited varying levels of success under different concrete conditions.

In light of this evidence, the emphasis placed on changes in worker motivation in so many studies of Chinese industry appears to be misplaced, just as the common disregard for concrete enterprise conditions glosses over a potentially serious problem. Even if we assume that participation motivates workers in the most powerful of ways, we are still faced with the distinct possibility that highly motivated workers will be organized, under certain conditions, in highly ineffective ways. If one were to derive a useful insight from the specialist literature on complex organizations, therefore, it would not be the unqualified assertion that participation can lead to heightened motivation and productivity. On the contrary, this literature suggests a potential problem in the Chinese approach—a large-scale administrative problem of tailoring participative schemes to widely varying enterprise conditions. Such a process of adjustment would have to be successfully carried out to reap the potential benefits of participatory management, on the one hand, and to avoid the costs of misapplication on the other.

This potential administrative problem, however, would not be merely a mechanical one of achieving the optimum technical “fit” between enterprise conditions and the degree and type of worker participation. The actual process of administrative adjustment would be a source of considerable conflict. At precisely which point “adjustments” in participatory management do away with the very essence of the scheme has been a source of intense political contention in China (Andors, 1974b). For managerial and basic-level Party personnel, “tailoring” worker participation to meet conditions in their enterprise is a task fraught with dangers: excessive alterations may bring later political censure. For workers, it has been a central political issue in successive mass campaigns whether such actions by administrators represent an unjustified intrusion on their prerogatives. This administrative perspective, therefore, would encompass within a single framework the problems created by varying enterprise conditions, the process of adjustment that must occur to remedy them, and the political conflicts that would necessarily occur throughout the system—from top to bottom—in the course of making needed

adjustments. The outcome of these conflicts, in turn, would have an impact on the effectiveness of participatory management in China. An approach based on only one slice of this complex reality—Skinner and Winckler's cycles of power and involvement, for example—would abstract completely from these concrete organizational factors and would thus possibly miss an important problem and inherent source of conflict in the Chinese approach.

ORGANIZATION AND MODERNIZATION

If technology, broadly conceived, has this variable impact upon the types of managerial changes attempted in China, a logical next question is what the implications of industrial development and technological change will be for these attempted organizational changes. Underlying this question is the conceptual problem of what modern technology is, how it changes during the process of industrialization, and what characteristics it might increasingly demand of the social relations of work.

According to broadly influential functionalist schemes, the very essence of modernization is the movement toward greater specialization and differentiation (Levy, 1966; Parsons, 1971: 18-28; Smelser, 1968)—trends in direct conflict with Chinese attempts to despecialize tasks and to diffuse the power and authority of management. Differentiation of the various aspects of social structure into more specialized units and social roles, in this view, is a general adaptive process of all successfully evolving societies. The increasingly complex, densely integrated structures that result are features necessary for the maintenance of societal equilibrium and cohesion (Parsons, 1966: 18-24; Smelser, 1959: 7-47). Kerr and his associates (1960: 33) formulate this general scheme as the logic of industrialism and extend it to "technology and the requirements inherent in modern methods of production," implying that technology, as part of this general process of differentiation, itself becomes more "complex," and that industrial work thus must become more specialized and power in industrial organizations more differentiated. These tenets form the central premise for the scenario sketched out by Lewis (1969) and Lowenthal (1970)—the inevitable clash between Chinese attempts at change and the inherent characteristics of modernization, with the consequent abandonment of irrational attempts to change the unchangeable.⁹

This view hinges in no small measure on the assertion that increasing technological complexity dictates greater specialization and diminished worker authority in industrial enterprises. The same assertion, in somewhat modified form, is also an integral part of a major attempt to sort out the competing claims made in the ongoing debate over the compatibility of Maoism with modernization. In a careful effort to evaluate the merits of what he sees as two extreme positions, Baum (1975) concludes that, while the organizational forms prescribed by the Chinese are by no means unambiguously irrational, the heightened motivation claimed for Chinese approaches to management is not a general solution to the problem of organization. Baum asserts that the proper perspective lies somewhere between these two poles (Baum, 1975: 186-191).

Baum's alternative, however, is in essence a judicious restatement, in light of the literature on motivation cited by Riskin and others, of some of the central premises of Kerr, Lewis, and Lowenthal. Where previously, however, musings about the fate of participatory management with rising levels of technology were stated in a vague, unsystematic manner, Baum carefully outlines a "Maoist ideo-logic" and a contrasting "industrial techno-logic" which conflict at certain crucial points. Central to this industrial techno-logic are the assertions that

- (1) The larger, more capital-intensive and technologically complex the enterprise, the more numerous and clearcut will be the lines of (vertical) occupational stratification and (horizontal) job specialization;
- (2) The larger, more capital-intensive and technologically complex the enterprise, the less meaningful input rank-and-file workers will have in overall enterprise management. [Baum, 1975: 158-159]

Baum thus sees a linear, inverse relationship between technological complexity and opportunities for worker participation in workplace decisions. His conclusions are entirely consistent with these premises: the prescribed changes in industrial organization may prove effective at China's present stage of industrial growth, but as growth proceeds, increasing technological complexity gradually will create pressures to restrict opportunities for participative management (Baum, 1975: 158-186). While Baum sensibly refuses to assert an eventual outcome of this contradiction, the central elements of the Lewis-Lowenthal view—the conflict between complex technologies and participative management, and thus, the sharpening long-run conflict between modernization and attempted organizational changes—are accepted as central organiza-

tional issues. Unlike his predecessors, however, Baum makes a careful argument for his position, and his more flexible approach to the issues is informed by an evidently careful weighing of arguments from a number of different perspectives.

While this approach might seem to be an entirely reasonable generalization from recent literature on technology and organizations, and while the logical link between technological and organizational complexity is intuitively appealing, Baum's proposal is weakened by the premise that increasing technological complexity creates pressures to restrict participatory organizational forms.¹⁰ Without this premise, the commonly heard arguments about the long-run conflict of Chinese approaches to organization and the technological requirements of modernization are untenable.

The relations between technological complexity and organizational structure are by no means straightforward. Woodward (1965), in fact, found that the type of structure that Burns and Stalker (1966) termed "organic," and which parallels many features of the Chinese approach, is more prevalent and more successful at the *highest* ranges of technological complexity—in the continuous process industries characterized by modern chemical and petroleum plants. "Mechanistic" structures, the type most often identified with the presumed dictates of modernization, were found to be prevalent and effective only at the middle ranges of technology—mass production. The crucial distinction between the two is that in the middle ranges of technology worker activity is primarily that of machine tending, with very little, if any, opportunity to regulate the speed and quality of work or make a number of job-related decisions. At the higher ranges of technological complexity, however, workers perform a whole variety of relatively autonomous and skilled tasks in support of what is essentially a self-contained, automatic production process. Technology, in other words, influences structure not through its complexity but through specific features of a variety of technological work processes (Woodward, 1965: 64-72). The result, seemingly paradoxical, is that organizational structures at the highest levels of technological complexity most resemble those at the lowest levels—in traditional craft production. The initial discovery of this phenomenon, in fact, led some to the rather utopian conclusion that, quite the opposite from "logic of industrialism" arguments, mechanistic organizational forms will soon be obsolete in industrial societies (Bennis, 1966; Burns and Stalker, 1966).

The central premise of these approaches to the problem of modernization in China, as a consequence, must be seriously qualified, if not completely discounted. Despite its logical and intuitive attractiveness, an attempt to draw parallels between the technological complexity that accompanies modernization and increasing specialization and hierarchy does not withstand close empirical examination. Continued adherence to such a perspective carries the very real danger that any retreat from these organizational changes in China can appear to confirm a theory for which no firm logical basis has been offered, and for which no set of clear concepts linking technological change with organizational structure has been formulated. The process of modernization logically and empirically does, to be sure, have a powerful impact on forms of organization in industry. The technological factor relied on in so many treatments of China, however, has proven to be too complex to assert with any degree of confidence that its operation in the process of modernization sets specific dictates that increasingly restrict possible forms of organization in any given direction.

ORGANIZATIONS AND SOCIAL STRUCTURE

The perspectives we have evaluated to this point represent only one thin slice of the complex reality that comprises organized social life. The motivations of individuals and the characteristics of technology discussed above are concepts completely abstracted from concrete social settings. The links between these motivated individuals and their occupational groups, political community, and social class are obscured. The links between technology and the network of economic and social relations through which it must make its impact felt, further, are decisively severed. To restrict our vision to the physical characteristics of individual organizations and the psychology of individuals within them would be to handicap severely our efforts to understand this aspect of society.

Fortunately, there is a rich tradition within sociology that stresses the relations between an organization and the social structure which envelops it. "Social structure" means here any stable characteristic of the surrounding society (Stinchcombe, 1965). For Marx the most relevant aspect of social structure was the pattern of relations between social groups in the productive process, and the forms of class

domination and conflict to which they gave rise. For Weber, the decisive aspect of social structure was the historical development of money economies, expropriated labor, and production based on rational calculation. More recent writers have stressed the level of group conflict taking place within a society's organizations (Dahrendorf, 1959; Litwak, 1961), and the institutionalization of political, economic, and community interests which freeze organizations into set patterns (Selznick, 1957, 1966; Gouldner, 1954). Organizations, in short, must be understood not only through examining what goes on inside of them, but also through examining their concrete relationships with the many aspects of the societies that surround and permeate them.

Viewed from this broader perspective, the process of specialization that accompanied the Industrial Revolution in England appears less the product of inherent dictates of technology than of the broader social structure in which industrialization took place. This was a rapid process of social change that was accompanied by intense social conflict (Foster, 1974; Thompson, 1966). It was also a period of unrestrained competition between enterprises: competition that compelled early industrialists to extend and consolidate their still-tenuous control over the production process. This protracted process of conflict and consolidation was one where authority relations were transformed into patterns that are popularly associated with industrialism today (Pollard, 1965).

The impulse for increased technological specialization found its source in the intense competition between firms. Given the social conditions of early British capitalism, however, such technological changes were advantageous to the industrialist for at least two distinct reasons unrelated to economies of scale. First, technological innovations, as Braverman (1974) has argued, usually implied a specialization that degraded skill levels, thus widening the potential labor supply and forcing down the cost of labor. Second, such technological change usually eliminated the cohesive and strike-prone skilled workers who presented a formidable barrier to the consolidation of the industrialists' authority in the work process (Hammond and Hammond, 1920). Sometimes these processes were the result of conscious strategies by owners of capital. Spurred by a long series of strikes during the 1830s, the local textile manufacturers of the districts of Hyde and Dukinfield, for example, banded together and commissioned a local machine works to develop an automatic mule that would reduce their reliance upon such unruly labor (Engels, 1973: 259-260). Andrew Ure, a prominent political economist of the period (and

a source of profound irritation to Marx and Engels), praised the resulting machine as "a creation destined to restore order among the industrious classes" (Engels, 1973: 260).

The historical process in which workers' authority over themselves and their own work was decisively eroded, then, was spurred at least in part by the specific features of the early capitalist social system and the forms of conflict to which they gave rise. It is tantalizing to speculate on the variety of shapes authority relations could take in an industrial enterprise where those sociohistorical factors most salient to capitalist industrialization in Britain were absent or greatly altered. In what direction could workplace authority relations conceivably develop in a situation where such intense interfirm competition and such direct conflict between the interests of capital and labor are absent?

Reflections on this historical pattern have led many observers of China to the conviction that a socialist economy creates conditions that make possible radically different forms of workplace organization. Andors, the most active proponent of this view, argues that the underlying issue in China's development is a leadership choice between two different approaches to modernization. The first approach, similar in important ways to that adopted in the Soviet Union, is to implement careful central planning, strict economic accounting at all levels, rationally stratified material work incentives, and tight labor discipline. The second approach—the one favored during China's heretofore periodic mass campaigns—is to decentralize economic planning, deemphasize enterprise level accounting and profit criteria in favor of fulfilling output targets for local needs, and emphasize participative work incentives and cooperative decision-making in production. Andors sees the first approach as leading inevitably to forms of industrial organization similar to those of Western capitalism, while the second will create economic conditions making possible the transcendence of these earlier social forms (Andors, 1969, 1974a). As the second approach is gradually implemented—thus creating forms of economic life compatible with participative forms of organization—constraints on experimental organizational forms will no longer be systemic in nature. Instead, they will primarily be the persistent political opposition presented at various levels of State and Party administration and the short-term complexities inherent in carrying out such ambitious experiments (Andors, 1977a).

Here we return to the central issues enumerated at the outset of this essay, albeit with a slight twist of emphasis. Are there aspects of the

economic system and social structure of Chinese socialism that act systematically to prevent the desired transformation of workplace authority relations? The answer to this is by no means clear, despite the fact that many writers seem comfortable with the assumption that Chinese economic and organizational innovations can successfully avoid the Soviet direction of development. While the Chinese have indeed distanced themselves from many Soviet practices, it is entirely possible that the patterns of social and economic life embodied in their alternative approaches may present their own distinctive barriers to participative management. A centrally relevant, yet relatively neglected avenue of research on industrial organization in China, therefore, is the country's form of economic organization, the social groups characteristic of the economy, and the related patterns of group interests and conflict. In the following two sections of this essay we will briefly sketch the broad outlines of one aspect of China's form of economic organization, and suggest its relations to patterns of conflict that may conceivably have acted to undermine participatory organizational forms.

LABOR ALLOCATION IN CHINA'S MODE OF INDUSTRIAL DEVELOPMENT

The central objective of development planning in China—a premise universally shared despite the obviously different approaches to development forwarded in China at various times—is the effective mobilization of all material and human resources for the purpose of rapid, planned capital accumulation. The considerable political conflict generated in disputes over development policy in China have not been over this shared objective, but have been over the political implications of various methods of planning and mobilization and the types of resources to be maximized (Rawski, 1975).

The aspect of this objective most directly relevant to industrial organization is the problem of establishing, in the absence of market mechanisms, a system of wages and welfare for industrial workers and rational patterns of allocating these workers to firms when and where needed. While the forms of economic organization established to achieve these ends serve as a means to attain rapid industrial growth,

they simultaneously form the basis of social groupings and group interests among the workers experiencing these economic patterns. The specific nature of the developmental problem faced, then, can lead to distinctive approaches to economic organization, and these distinctive approaches have an impact on the shape of social conflict.

Few scholars have done more to trace the interconnections between the specific problems of labor organization facing China's development and the unique forms of economic organization applied to these problems than the economist Howe (1971a, 1971b, 1973, 1974). Even into the late 1950s, Howe argues, China's wage and employment structure was riddled with problems that hindered any sort of planned economic growth, much less a rapid and equitable one. The periodic expansions and contractions that characterized China's economic development from 1951-1956 not only left a considerable proportion of the labor force without a means of livelihood during periods of contraction, but also left China's industry with acute short-run labor shortages during periods of expansion (Howe, 1971a: 74-83). Uncontrolled migration into the cities, further, almost doubled the unemployment problem by 1958. Dependents of migrating workers formed a large percentage of this population influx (Howe, 1971a: 41-73). China's wage and employment structure, in short, had failed not only to maintain a stable livelihood for a significant part of the population and provide flexibly for the labor needs of industry—the whole structure encouraged a relative urban overpopulation of poor, underemployed laborers. China needed a reformed wage and employment system that could efficiently allocate the labor supply, alleviate under- and unemployment, and discourage rural-urban migration, while at the same time gradually eliminating the material inequities of life in the city and countryside (Howe, 1973: 107-144).

A series of planning decisions after 1958 gradually altered China's wage and employment system to meet these needs. Labor would henceforth be allocated through a decentralized system of local contracts, increases in urban industrial wages would be restricted—in part to remove incentives for rural-urban migration—and, perhaps most significantly, industry would come increasingly to rely upon a nonpermanent sector of the labor force as part of a more flexible and efficient labor system (Howe, 1971: 144, 1973: 107-108; 127-129). This nonpermanent labor would come from two sources: "contract laborers" would be procured through an agreement with local communes specifying duration of work and levels of pay, and "temporary labor"

would be recruited on a more casual basis at neighborhood labor stations from among the underemployed recent rural migrants (Hoffmann, 1974: 64-73; White, 1976: 99-101).

This alternative employment structure eased in at least three major areas the problems that chaotic labor organization had presented to China's planned and equitable development. First, labor could be allocated in a way that met the shifting short-run needs of industry while at the same time cushioning the effects of fluctuating employment on the population and easing excess rural-urban migration. The pool of nonpermanent labor could be tapped at varying rates according to the labor needs of the economy, thus alleviating the periodic shortages that faced industry in periods of expanded production. Once released from employment, contract laborers would return to their home commune, where their welfare would be provided for—and not to a reserve army of underemployed laborers. This employment system helped simultaneously to ease the rural-urban migration problem that had so plagued China's cities. Marginally employed laborers from the countryside no longer permanently relocated their families in poorer, urban neighborhoods, but now travelled alone to urban areas for a fixed, temporary period, leaving their families in their local communes where they would continue to be supported by their commune work-point income (Hoffmann, 1974: 64-73; Howe, 1971a: 144-150, 1974: 239-241).

This labor system, secondly, allowed for a more efficient use of wage, welfare, and urban social overhead expenditures, releasing a larger proportion of the national surplus product for capital accumulation. Wages paid to nonpermanent laborers were not only considerably lower than those paid to permanent ones, but they were paid only when such labor was actually needed, thus reducing the costs due to employment of a redundant permanent labor force during slack periods. Since this growing nonpermanent proportion of the labor force did not receive full union and plant benefits and since their families did not move with them to urban areas but continued to rely on commune welfare systems, further savings accrued to the national welfare fund of state-owned industry (Howe, 1973: 127-129).

This emerging labor system, finally, helped remove those differentials in income and status between urban and rural areas whose eradication was a major objective of Maoist development policy. Contract laborers not only received a higher cash wage than they would on normal commune work but a proportion of this wage was paid to the production brigade for collective distribution at the end of the year. In an aggregate

sense, an increasing proportion of industrial cash income was thus being diverted to the rural population surrounding metropolitan centers. Permanent workers who were being slowly transferred to inland and rural areas as part of the increasing implementation of this labor system contributed skills that were scarce but in great demand in less developed areas of China. Former contract workers would similarly aid this geographical diffusion of industrial skills by putting their rudimentary mechanical abilities to use in their home commune (Hoffmann, 1974: 74-87; White, 1976).

There were, therefore, compelling reasons—both political and pragmatic—to further extend this new wage and employment structure. This dual impetus was responsible for the rapid extension of the system to the point where, by the mid-1960s, according to Howe's estimates, nonpermanent laborers constituted 30% to 40% of the total nonagricultural labor force (Howe, 1974: 235). Several studies have stressed this shifting wage and employment structure as a source of political conflict in China (Oksenberg, 1968; Walder, 1978; White, 1976; Wylie, 1977). The possible constraining effects that the conflict accompanying this shift in employment patterns might have had on attempts at organizational change in industry, however, have been relatively unexplored.

FORMS OF GROUP CONFLICT IN CHINESE INDUSTRY

While conflict has figured importantly in some accounts of organizational change in Chinese industry, these patterns of conflict have rarely been tied to an enduring, systematic set of causes in China's economy and social structure. Andors, who treats conflict in considerably more detail than others in the field, links factory strife to the varying political experiences of workers in previous campaigns, and to the varying class backgrounds, skill levels, and political orientations of workers, technicians, and managers. For Andors, these factors help explain differences in political consciousness. Conflict, when it appears, is the result of workers' class-conscious resentment of authoritarian methods of decision-making and the "officiousness and snobbery" of factory leadership (Andors, 1976: 39-42, 1977a: 167-171). Factory strife is thus the result largely of a basic-level impulse by workers to change the patterns of authority and power in which they live and work.¹¹

The point at issue is whether or not these recurrent conflicts surrounding organizational change reflect underlying tensions due to

specific characteristics of China's wage and employment structure, particularly as it has evolved since 1958. This issue is of no small importance. If Andors' emphasis on workers' presumed political impulses is correct, such conflict would appear to be absolutely essential to efforts to push through organizational change, and would at worst be a temporary barrier to the effectiveness of participatory forms of organization. If, however, such conflict were tied to underlying characteristics of China's employment structure, it would continually threaten to assume directions of its own. This conflict would be quite distinct from the directed conflict employed to effect organizational changes, and would tend to persist, despite the implementation of participatory management. Participatory organizational forms, which would allow relatively free expression of such grievances and antagonisms, are precisely those types of arrangements rendered most vulnerable to the effects of such continuing conflict.

There is considerable evidence that the violent industrial conflict that broke out during the Cultural Revolution was shaped by precisely these sorts of underlying characteristics of China's wage and employment structure. The practice of employing temporary and contract labor itself may have been, as Andors (1976: 40) has argued, a relatively minor political issue, but the broader wage and employment patterns of which nonpermanent labor was only a part had tangible economic impact on most sectors of the working population. This broad impact helped create social pressures that temporarily steered the direction of the Cultural Revolution towards economic issues and shaped both the form and intensity of industrial conflict.

Three major laboring groups, all with dissatisfactions directly attributable to the changing wage and employment structure, emerged during the Cultural Revolution to gain political redress for their grievances. Contract and temporary laborers had perhaps the most serious complaints. They received lower wages than their permanent counterparts (only part of which they were allowed to keep), were at best partly covered by union benefits or by the plant welfare fund, were not eligible for bonuses or awards in emulation competitions, and were not allowed to sit on factory committees or take time off from work for political study classes (Hoffmann, 1974: 69-73; White, 1976: 108-114). Apprentices also worked at levels of pay below the lowest wage grade, were ineligible for bonuses or piece rates, and were similarly denied welfare and other fringe benefits equal to those of permanent workers. They saw opportunities for permanent employment drying up in the

mid-1960s with the extension of the nonpermanent labor system. The result was intensified competition for available positions, leading to an extension of the apprenticeship period and the institution of further, more rigorous placement exams (Chao, 1960: 103-107; Emerson, 1967: 407-424; Hoffmann, 1974: 68-69).¹² Permanent urban workers who had been replaced by nonpermanent laborers and transferred either to small-scale rural industry or to agricultural production—often involuntarily—had suffered a marked cut in pay, lost their union health and welfare benefits, and were separated from their homes on a long-term basis (Hoffmann, 1974: 74, 86-87). Each of these groups were among those most active in political organizing in the initial rebellions against workplace leadership and in the forwarding of economic demands (Walder, 1978: 39-46).

While there was a social basis during the 1960s for conflict around economic issues, there was a similar basis for the destructive factionalism that beset the workers' movement. Permanent workers, who were perhaps already resentful of the threat of encroachment by nonpermanent labor upon their industrial positions, lost wage income when agitation by these disaffected groups disrupted normal work routines. Their wage rates and bonuses were closely tied to the continuing productivity of their enterprise (Hoffmann, 1967b: 474-477; Oksenberg, 1968: 8-12). It is perhaps not surprising that the subsequently emergent labor groups who opposed the disaffected "rebels" among the workers were constantly accused of being tied with the labor unions of permanent workers (Walder, 1978: 33-36, 45-46). Thus, two factors that temporarily halted economic life in key industrial areas of China—the occurrence of violent factionalism among worker groups and the tendency to forward economic demands—both had observable roots in China's shifting wage and employment structure. These developments, hastily denounced by the Cultural Revolution leadership, necessitated considerable organizational efforts to redirect and defuse such counterproductive conflict (Walder, 1978: 47-60).

Neglect of such developments in wage and employment structure can leave one unequipped to explain the recurring patterns of industrial conflict in China. Andors' (1977a: 234-235) argument that the widespread strikes of 1974-1975 were the result of "perceived inequalities" due to the deterioration of participatory management is, for this reason, singularly unconvincing. Hoffmann, who has paid much closer attention to wage and employment patterns (Hoffmann, 1967a, 1967b, 1964), forwards a more plausible analysis. Persistent strike activity,

he argues, is due not to worker desire for greater participation but to two other possible sources, both related to Maoist wage and employment structures as they evolved in the 1970s. First is the continued reliance upon the relatively disadvantaged temporary laborers, whose condition was unaffected by the reform of the contract system (Hoffmann, 1977: 314; Howe, 1974: 246-248). The second, and perhaps most important factor, stems from the desire to keep the urban-rural wage gap from widening and the impulse to restrict urban wage differentials. There had been, as of 1976, no general wage increase since 1956, while the reforms of 1963 and 1971 yielded only small increases through automatic wage grade promotion among the lowest paid (Hoffmann, 1977: 314-315; Howe, 1974: 237-241). Widespread strikes, therefore, could be at least in part due to the dissatisfactions of the majority of permanent workers who had not enjoyed a wage increase, except through promotion, for two decades—dissatisfactions for which some observers find indications as early as the mid-1960s (Howe, 1974: 241).

This hypothesis is partially reinforced by the central theme of study materials distributed to workers and others during the campaign to study the "dictatorship of the proletariat," started in the midst of this period of persistent strike activity. These materials stressed the necessity to restrict gradually remaining wage differentials in China's eight-grade system and warned against the emergence of new "bourgeois" groups among workers at the favorable end of this system of distribution (Yao, 1975; Zhang, 1975). While explaining the continuing necessity for the wage freeze at the top half of the grade scale, these materials could provide an explanation for and ideological condemnation of workers expressing wage dissatisfactions—as well as a rationale for exercising the dictatorship of the proletariat over this sector of the working class.

Such patterns of conflict in Chinese industry, tied to specific characteristics of China's socioeconomic structure, can affect the motivation of large blocs of the labor force and disrupt systems of organization that depend on the committed participation of workers. Given the potentially crucial importance of the nature and level of conflict in China's industrial system, it would be particularly short-sighted to continue to exclude it from the study of organizational change in industry.

SUMMARY

Theoretical efforts in studies of Chinese industrial organization have been directed primarily towards a debate, on the one hand, over competing abstract notions of the motivation and productivity of individual workers and, on the other hand, over some rather global assertions about the dictates of modernization and their impact on industrial organization. This preoccupation with debating theoretical assumptions has benefited the field by exposing the inadequacy of some of the more categorical rejections of Chinese approaches as inherently irrational. But it has at the same time limited the field to a rather narrow, and sometimes oversimplified understanding of the theoretical issues at hand. A recognition of the fact that participatory management can lead to heightened worker motivation in no way assures either individual productivity or organizational effectiveness. A rejection, further, of some of the more simplistic notions of the impact of modernization does not rule out the possibility that more complex social structural processes may act to restrict directed organizational change in Chinese industry.

Evaluating the competing positions put forward about the Chinese experience has required us to work our way through a labyrinth of issues about worker motivation, the impact of technology, and the process of modernization. Claims made about the positive effects of participation on worker motivation and productivity must be qualified by an understanding that these participatory forms of organization are carried out under widely varying enterprise conditions. A specific type and degree of worker input would have a different level of effectiveness, for example, in a small handicraft enterprise than it would in a large steel complex. The degree to which the Chinese are successful in making the necessary adjustments in their overall policy so that it fits varying enterprise conditions would be an important determinant of the overall success of the scheme. Recognizing this relationship between technological conditions and the effectiveness of specific forms of organization, however, in no way locks us into a vision of technological imperatives. Claims that increasing technological complexity demands decreased worker authority have not been supported by a detailed examination of the specialist literature. Technology poses an essentially short-run administrative problem for the Chinese: one of innovation and adjustment. This is quite a different problem than the oft-asserted global dictates of technology.

Any understanding of these aspects internal to an enterprise must be tempered with a view of the larger social structure within which this organized activity takes place. Two major positions on the broader social process of development in China have been forwarded. The first is the blanket assertion that modernization is an inherent process of differentiation and specialization that rules out the types of changes attempted by the Chinese. The second is a counterassertion that the form of socialist development pursued in China is compatible with radically different forms of authority relations in industry. We have proposed an alternative perspective: there are no dictates placed upon workplace authority by the process of development except those traceable to the specific features of the social and economic system in which industrialization takes place. It thus becomes an open question whether China's socioeconomic system is compatible with different forms of workplace authority. Investigating the distinctive features of China's contemporary socioeconomic system becomes, in this perspective, a prime area of interest.

One such characteristic of China's broader social structure in the process of development that might have a decisive long-run impact on the success of participatory industrial organization is the pattern of social groupings and conflict spawned by China's wage and employment structure. This is, in a sense, a view of worker motivation from an entirely different perspective. Here motivation is not a theoretical issue of the asserted needs of abstract individuals, but a concrete problem of demonstrable grievances of groups of individuals tied into particular positions in a changing social structure. The persistence and strength of such social groups, grievances, and conflicts can conceivably act to undermine participatory forms of organization. Such conflict would create pressures for forms of industrial organization designed to control the effects of conflict by moving decision-making progressively out of the hands of conflicting or dissatisfied groups.

The ultimate resolution of the complex of theoretical issues surrounding Chinese attempts at organizational change, if ever forthcoming, is not yet in sight, because these issues are basic ones in contemporary social science. Among those of us gnawing at the edges of these issues in our study of attempts at directed change in contemporary Chinese society, care must be taken that we do not, *en route*, become satisfied merely with rebutting some of the more oversimplified propositions offered as peremptory solutions to these difficult problems. It is indispensable to come to ever more precise formulations of the prob-

lem, progressively more complex ways of asking questions about these issues, and more systematic and concrete ways of garnering plausible evidence for our propositions from the scanty and crude sorts of information available to us. Only through such a difficult process can we derive insight from social processes in China that might help us better understand the structure of human society.

NOTES

1. It should be evident from the foregoing discussion that any attempt to undermine the Weberian position by criticizing its allegedly implicit Hobbesian conception of human nature misses the points most essential to Weber's critique of Marx (Andors, 1974a). Weber's arguments are founded not on a conception of self-seeking human nature but on his interpretation of the historical rise of markets, money economies, and rational economic calculation and their impact on social relations. The centrality of the problem powerfully highlighted by Weber is evidenced in the attempt by Charles Bettelheim (1975) to resolve within a Marxian framework the problem posed by economic coordination in a socialist economy. Bettelheim's is a fascinating, if incomplete, attempt to effect a theoretical reconciliation between rational economic calculation and the authority relations prescribed by many Marxian socialists.

2. This correlation between social theory and political sentiments is, of course, far easier to detect and far less controversial in historical periods other than our own, where specific ideas can be seen to rise, evolve, and fall with particular civilizations or social classes. Few today would have difficulty recognizing the element of ideology in the various theories of divine delegation of a natural social hierarchy among classes in feudal European society (Huizinga, 1954: 56-67). Nor would many fail to grasp corresponding elements in theories of race relations forwarded while the American South harbored a slave plantation economy (Genovese, 1967: 28-36). For the present or recent past, however, this distinction becomes much more difficult to specify and infinitely more controversial. Harvey (1974) has sensitively portrayed this difficulty in his analysis of the theories of the nineteenth-century political economists Ricardo and Malthus and their implications for modern population theory. MacPherson (1964), in a like manner, has penetratingly traced the interrelations between the development of the liberal political theories of Hobbes, Harrington, and Locke and the development of the market economy of early capitalism in their corner of Europe.

3. The fact that an idea has clearly observable social or political roots does not necessarily mean that it is completely wrong. Sorting out these claims is a separate, and no less important task.

4. This account aims to summarize only that stream of theory within Chinese Marxist discourse responsible for the organizational experiments at issue here. There are at least two distinct theoretical positions about the organization of production in a socialist economy—both with attendant practical policies—that have competed continuously with one another since 1958. A review article in an edition of *Jingji yanjiu* from the early 1960s, when these issues were thoroughly and openly debated (Zheng, 1963), serves as an invaluable summary and introduction to these competing views.

5. Skinner and Winckler might possibly feel that in modern industry such structural factors as technology and environment of an organization might loom more important than they do in agriculture—despite the fact that Etzioni (1975: 484-494) himself views their work as having general applicability. While aware of this possibility, we will for illustrative purposes discuss their theory as a general approach to the study of organizational change applicable to Chinese industry.

6. These relationships are further complicated by the finding that the degree of fragmentation of job tasks influences the way people perceive their relations with others participating in the task and thus can indirectly be a crucial factor in motivation towards group goals (Breer and Locke, 1965). While individuals may vary in needs and abilities, and while they may respond differently to a specific task, a person does in some sense create these attitudes and needs in the midst of performing the task itself. The concept of motivation itself is as elusive as attempts to motivate workers are complex.

7. This line of argument has been anticipated by Whyte (1974b: 224-225), who, in criticizing the tendency of many China specialists to see issues of social and organizational change in terms of human motivation, asserted that structural problems require structural, not merely motivational solutions.

8. Perrow, for example, states that when one abstracts from “a highly interdependent and complex social system,” “strategies of analysis” often appear to be assertions about reality. Technology is the starting point, or “independent variable” in his analysis, however, only because it helps him to analyze a specific problem—technology, he notes, is itself shaped by the social system (Perrow, 1967: 195).

9. The assumptions made by Lewis and Lowenthal about the inherent characteristics of modernization have a lineage which can be traced directly back to Parsonian functionalism through the subfield of “political development.” The direct link of this subfield with functionalist theory was clearest in its earliest seminal writings (Almond, 1960; Apter, 1965). Later, explicit references to its functionalist forebears became rare as these generalizations about the process of industrialization became part of the groundwork of unstated assumptions on which research was based. This accounts for the fact that Lewis and Lowenthal, who were writing within this subtradition, found it unnecessary even to defend their theoretical perspective, much less explicitly articulate it.

The link between functionalist propositions and the type of technological perspective forwarded by Kerr is found in Hoselitz (1963). While outside the political development field, Kerr's analysis supports its presuppositions.

10. Compare Baum's attempt to sort out these issues to that of Whyte (1974a), who consciously avoids an argument based on the presumed imperatives of technology.

11. Andors' approach to conflict bears a striking similarity to that of Dahrendorf (1959), who similarly stresses the differential distribution of authority in the abstract as a prime mover of conflicting social groups. Dahrendorf is often criticized for obscuring the links between conflict and concrete notions of class and material interest (Giddens, 1975: 53-59).

12. There appears to have been an intensified competition for available positions in the mid-1960s not only for apprentices but also for graduating middle school students, who were inundating colleges with applications for admission as well. This dynamic of competition and conflict surrounding labor allocation in China thus has an important demographic aspect—the size of successive birth cohorts entering the labor force. These developments were also the impetus for the initial campaigns to relocate this surplus of

middle school graduates in frontier and rural areas. A recent ground-breaking article by Ivory and Lavelly (1977) reflects the potential power of an analysis that links demographic change with labor allocation and development policies.

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