

Appendix

Comparative Perspective: Change and Continuity in the Zambian Mining Industry

Changes in industrial behavior are primarily rooted in changes in the organization of work. That was a major theme in parts 4 and 5. I illustrated this relative autonomy of the labor process by examining the impact of short-term fluctuations in markets (chapter 8), the impact of variations in externally derived worker consciousness (chapter 9), the dynamics of shop-floor struggles (chapter 10), and the effects of changes in class struggle and capitalist competition over the past thirty years (chapter 11). The argument developed in these chapters should be as relevant to international variations in industrial behavior as it is to changes over time within a single country. According to that argument, differences in the behavior of machine operators of different countries should be largely explained by variations in the organization of machine shops. The more conventional view regards national work traits as a function of the attitudes, ideas, orientations, and so forth, that laborers carry around in their heads and that originate outside the workplace. Individuals are the vessels and executors of a national culture. This is the basis of development theory: workers in underdeveloped

countries are "tradition"-oriented or bound to a set of primordial loyalties and are therefore ill-equipped to cope with the demands of the industrial order. A more sophisticated view argues that the national culture not only affects individual consciousness through agencies of socialization but, in addition, molds the form of the industrial enterprise.¹ This latter, eclectic, position does not attempt to comprehend the relative importance of two different theories of human behavior. Nor does it develop an understanding of the relationship of the industrial enterprise to its political and economic context.

Elsewhere I have shown how different political and economic contexts shape the organization of the machine shop and how these in turn mold the activities of workers on the shop floor.² That earlier study upholds the theory elaborated here, but a comparison of industries that produce very different forms of industrial behavior in different countries would be more useful. I therefore draw here on the history of the development of copper mining in Zambia, since this provides a vivid contrast with mining in other parts of the world. I will try to show how the organization of work emerged historically through forms of struggle shaped by a colonial political order. Only when the labor process had developed a compatibility with the colonial political economy did it become relatively autonomous. Accordingly, when the colonial order was transformed after independence, the relative autonomy of the labor process was placed in jeopardy. But even under these relatively turbulent conditions, in their activities in the mine the workers have continued to respond to the organization of work rather than to the changing political order.

Creation and Reproduction of Relative Autonomy

The distinctive features of mining organization originate in the inescapable environmental uncertainty of the underground ore bodies from which minerals are extracted. Unable to control the geological environment, work organization can adapt to uncertainty in two opposed ways. On the one hand, the work group can be constituted as its own decision-maker, independent of managerial supervision. A self-regulating group can make the necessary rapid

adjustments to the exigencies, dangers, and unpredictability of underground mining.³ On the other hand, rapid adjustments at the underground work face can also be accomplished with a strict, coercive, and well-disciplined hierarchical organization of work, in which subordinates unquestioningly respond to the instructions of superiors, who unilaterally decide how the organization shall adapt to uncertainty. Such an organization is normally associated with management's complete lack of trust in the willingness or ability of subordinates to perform the work effectively.⁴ In their study of British coal mining, Trist et al. concluded:

Long wall systems, because of their greater degree of differentiation, require much more integration than single place systems; but the conventional pattern of organization has broken up the traditional, self-regulating cycle group into a number of segregated single task groups each bound within its own concerns. These groups depend entirely on external control in order to carry out the indivisible primary task of completing the cycle. The existing pattern of management through the wages system can only partially supply this control. Full control would require either a degree of coercion which would be both impracticable and unacceptable or a degree of self-regulation which implies a different organizational pattern.⁵

Despite mechanization, the autonomous self-regulating group controlled by the wages system is still the most effective form of work organization.

By contrast, the organization of mining in southern Africa (gold and diamond mining in South Africa, coal mining in Zimbabwe, and copper mining in Zambia) would be characterized by a "degree of coercion which would be both impracticable and unacceptable" in Britain. Why does mining assume a very different form of organization in southern Africa? There is no space to go into the details of the historical development of mining in southern Africa; a brief summary will suffice.⁶

The organization of both gold and diamond mining began in South Africa in the last quarter of the nineteenth century as a system of subcontracting. Africans were brought together in gangs to work for small white "entrepreneurs," using rudimentary techniques of excavation. When such primitive operations no longer

paid dividends, mining companies were created, using foreign capital to establish large-scale industrial organizations based on wage labor from two sources. Skilled and supervisory workers were imported from Britain, while unskilled workers were recruited from the surrounding African territories. A rigid "color bar" separated the jobs reserved for Whites from those reserved for Blacks. Gangs of African labor were subordinated to the dictatorial command of a white "section boss."

The unrestrained coercion (often involving arbitrary physical brutality and verbal abuse) within the industrial organization was a continuation of the coercive mechanisms used to drive labor off the land. In South Africa a combination of expropriation of African land and taxation forced Africans into the cash economy. The compound—a total institution, erected to control a worker's activities outside work while employed in the mines—secured the final subordination to the untrammelled power of a colonial political economy. When not employed in the mining industry, African workers would be forced back to the diminishing areas known as "reserves" through the enforcement of a series of pass laws, which regulated (and still regulate) their movement. Whereas in Britain the enclosure movement permanently ejected laborers from the land, in South Africa expropriation of land stopped short of the creation of a completely landless proletariat. Instead, the areas known as "reserves" were established as a means of externalizing and absorbing problems of urban social control and reducing the costs to the mining companies of reproducing labor power. The political and economic subordination of Blacks stands in marked contrast to the strength of the white workers, who consistently made gains at the expense of the Africans. Against this setting, the origins of a coercive bureaucratic organization of work are clear. Colonialism in southern Africa implied particular types of external labor markets and a particular form of political and economic domination. In combination, these stamped their character onto the organization of work.

The South African gold mines have provided a model for the colonial organization of work in other territories of southern Africa. The widespread adoption of this coercive form of mining casts grave doubts on any theory of technological determinism. It suggests that

the form of the labor process reflects the requirements of and the possibilities open to the colonial order. Evidence from Zambia suggests that the organization of work, and possibly even the technology itself, may be quite consciously adopted for purposes of coercively controlling and disciplining the labor force.⁷

For illustrative purposes, I will summarize a study conducted in 1971, five years after independence, of one particular job known as "lashing."⁸ All Zambians entering the mining industry in a productive capacity had to spend an initial period lashing. This involved shoveling ore, blasted on the previous shift from the ore face, into a wheelbarrow and carrying it to a tip. It is one of the toughest and most exhausting jobs in the industry. It received the minimum pay grade, even though the job-evaluation scheme placed it at a higher pay grade. Apart from removing ore, hand lashing serves two other functions. First, as an internal labor reservoir, it provides workers for vacancies that open up elsewhere in the organization. Second, as an initiation ceremony, it prepares and disciplines the labor force, weeding out the "weak" and "irresolute" and preparing the remainder for the harsh realities of a colonial labor process. That it was seen in these terms became apparent to me from the comments of management and from the fact that expatriate (white) shift bosses were not subjected to lashing but black shift bosses were. However, it is more difficult to uncover evidence that would suggest that the mining operation was deliberately organized to create ore faces, inaccessible to mechanical ore-removers and therefore requiring hand lashing. Nevertheless, following independence, one of the two mining companies successfully abandoned hand lashing, but the other company did not. Even if it is not clear whether the choice of mining technology and the manner of excavation were shaped by the colonial political order, there is little doubt that, once technology had been chosen, it was then harnessed to a colonial organization of work.

Response to Political Change

What happens when the external relations in which an organization is created, and to which it has adapted, are transformed, as when colonialism gives way to a "democratic" political order? Arthur

Stinchcombe has examined the tendencies of organizational forms to persist despite changes in the environment in which they were originally shaped. Although he does not actually discuss it, one condition for such persistence is the capacity of the organization to insulate itself from changes in the environment.⁹ But this is not always possible, particularly when the change is as dramatic as a political revolution. I noted, above, the elimination of hand lashing in some mines, and this may have reflected changes in the political order.

A more significant change concerns the patterns of mobility within industry and the resulting organizational changes and conflicts. Again, I can only briefly summarize what I have discussed in greater detail elsewhere.¹⁰ As long as Africans had few if any rights, either within industry or in the political system, and white workers possessed both economic and political rights, the dual wage structure, together with the color bar, was impregnable. When African trade unions emerged and gained strength in the fifties and the importance of migrant labor diminished, the color bar came under continuous attack, and white workers were forced to relinquish their monopoly over certain jobs. But the principle of the color bar—that no White should ever have to take instructions from a black worker—was never itself undermined, even after independence; instead, it was displaced into higher reaches of the organizational hierarchy.

The evolution from slow "African advancement" before independence to the more rapid government-surveyed "Zambianization" after independence has posed serious organizational problems. Here I will confine myself to three. First, discriminatory pay scales (associated with the dual wage structure) and the heritage of colonial industrial relations could no longer be sustained. Africans performing jobs hitherto monopolized by Whites would have to receive similar levels of pay. This in turn led to demands for general wage increases among the entire mine labor force—increases that cut into profits and forced up wages in other sectors of the Zambian economy. Second, the continued vesting of power and authority in expatriate personnel led to organizational distortions designed to accommodate Zambianization programs, the preservation of a color bar, and the creation of new jobs for some of the displaced white

employees. Third, Zambians promoted into supervisory positions did not command the same unquestioned authority as their white predecessors, nor could they draw on the same support from their supervisors. Furthermore, the arbitrary, coercive sanctions, characteristic of the colonial era, could no longer be imposed by either white or black supervisors. As a result, the coercive apparatus and total subordination of the labor force so necessary for the bureaucratic organization of mining were no longer feasible. Changes in work behavior reflected changes in the political order mediated by the organization of industry. Inefficiencies and conflicts within the organization, stemming from the incongruity of organizational form and the demands of the prevailing political order, were concealed by the ideological castigation and exhortation of the black mineworker. It is to the changing response of miners themselves that I now wish to turn.

The Myth of the Traditional Worker

I have explained the characteristic features of mining in southern Africa in terms of a reaction to colonialism. Management and colonial ideology justified the tyranny to which African workers were subjected by reference to their "traditional," "tribal," etc., background. The African worker is "lazy," "has to be taught industrial discipline," "has to be coerced into work," is a "target" worker, not interested in providing more than a bare minimum (the backward-bending labor-supply curve), etc., because of his "premodern" attachments. The resemblance to early British entrepreneurial ideology is clear.¹¹

Much of the development literature, dominated by a Weberian tradition, is concerned with the impact of "traditional" values on economic behavior. Ideology and reality are only too frequently confused. Studies such as Bendix's *Work and Authority in Industry* provide little evidence for what they assume to be true, namely, that industrial behavior is modified by external social relations such as village kinship ties and work patterns.¹² Migration and the target worker (who is largely a mythical figure anyway) are usually explained as hangovers from tribal commitments, which lead workers

back to their rural habitat ("natural environment"). African workers supposedly have higher absenteeism records than "modern" workers because they have not developed a "work ethic" or are unable to free themselves from "primordial loyalties." The reality is more austere. Colonial governments, and the South African government to this day, created a coercive state apparatus to drive laborers back and forth between rural and urban areas. Moreover, with the relaxation of such extraeconomic compulsion, turnover in the Zambian mining industry has fallen rapidly and is now very low by any standard.

Even before the myths of development theory had gained widespread currency, there was ample evidence for a more realistic assessment. As Max Gluckman wrote:

An African townsman is a townsman, an African miner is a miner. . . . The urbanized African is outside the tribe but not beyond the influence of the tribe. Correspondingly when a man returns from the town into the political area of his tribe he is tribalized again—de-urbanized—though not beyond the influence of the towns.¹³

Gluckman's insistence on a "situational" analysis laid the basis for the seminal work of the Manchester School of social anthropology. Thus, Epstein's study of African mineworkers shows that "tribe" becomes irrelevant when laborers organize on the basis of their common interest as miners.¹⁴ It is as miners, not as tribesmen, that Africans strike against the company. Where "tribalism" is significant—namely, in the compounds—it is so only as the result of management's deliberate reconstruction of "tribalism" as a mode of social control. Moreover, as Clyde Mitchell demonstrates, "tribalism" in towns is a very different phenomenon from "tribalism" in the village.¹⁵ In other words, Africans, like machine operators at Geer Company and Allied Corporation, respond to the structures in which they are immediately enmeshed and in which they carry out particular sets of activities. "But the switch of action patterns from rural to urban set of objectives is as rapid as the migrant's journey to town."¹⁶ The impact of different and "irrelevant" structures is of only secondary importance. Workers' actions do not spring from cultural lags between one system of relations and another. The

values and norms of the village derive from the organization of life in the village and are not the basis for activities on the shop floor, though these activities may be couched in the *idiom* of village life.

The myth of the "traditional" and "indolent" worker continues into the era of Zambian independence. This is not surprising, since the class structure, upon which managerial ideology is founded, has remained largely unchanged, despite the transformation of the political system.¹⁷ Moreover, management is no longer alone in justifying the imposition of punitive sanctions and harsh discipline. The Zambian government, in the pursuit of development and its class objectives, has taken over the ideological whip, admonishing the labor force for its "absenteeism," "lack of patriotism," and so on; it has also outlawed strikes and has coopted and, where necessary, forced the compliance of once-militant union leaders. The transformation from a colonial state, based on white supremacy, to a "nation" state, based on universal suffrage, represents a consolidation of the apparatus subordinating the worker to the dominant class. In the fifteen years before independence, union-led strikes occurred with some frequency in the copper mines; since independence, they have become increasingly rare. Those that have occurred have tended to be wildcat strikes, easily ended by the intervention of the ruling party.

Writing in the tradition of development theory, Robert Bates presents a different view.¹⁸ He argues that the Zambian government failed to exact subservience from Zambian miners after independence. Elsewhere I have shown in detail that Bates adopts government ideology as a definition of reality; that he fails to critically examine the publicly available statistics he uses to document the "failure" thesis; and that other statistics, collected by the mining companies, do not uphold his conclusions.¹⁹ A careful analysis of the available information shows that the government and the ruling party have been able to exercise even greater control than the colonial government and that Zambian mineworkers are more "disciplined," have better attendance records, lower turnover, fewer strikes, etc., than miners in other parts of the world. As the result of confusing ideology with reality, Bates gives uncritical credence to the myth of the "indolent" black worker—a myth that the government has created (or, rather has borrowed from its colonial

predecessors) and used as an ideological weapon to justify its authoritarian regulation and ritual punishment of Zambian mineworkers.

This does not mean that mining is now more efficient than it was before independence. For reasons outlined in the previous section, greater friction and conflict at the workplace have been created by the incongruities between the work organization and the political system: the expansion of the organizational structure and increased pay for workers to accommodate the repercussions of Zambianization. Workers are caught between the contradictory demands of an organization that requires a coercive bureaucracy but, for political reasons, can no longer exercise that coercion. What creates inefficiency is not the "primordial" commitments of African mineworkers but the structural dilemmas facing a colonial organization in a postcolonial era.

What can we say about the importance of ethnic, racial, and other external allegiances within the structure of work? I have already suggested that a racially divided labor market shaped an organization of work based on the color-bar principle. Once allocated to a position within the labor process, relations and activities are governed by the structure of that labor process. It was not a worker's race that shaped the relations in production; rather, these relations recreated and reproduced racism at the point of production. My own study of four work situations in the mines and Bruce Kapferer's study of a garment factory in Kabwe both suggest that relations among Zambian workers, though frequently couched in the idiom of other allegiances, such as ethnicity, are dictated by the organization of work.²⁰ Kapferer was mainly concerned with the basis of group formation and the ability of leaders to mobilize support on the shop floor. His conclusions suggest that seniority and position in the process of production are the most important factors determining the outcome of factionalism among workers and conflict between workers and management.

Conclusion

Managerial ideology, political exhortation, and development theory all converge to create distorted portraits of the Zambian mineworker

as unable or unwilling to adapt to the industrial order because of his primordial attachments and traditional values. In fact, mineworkers demonstrated their absorption into capitalism as long ago as 1935, when they successfully organized the first major peaceful strike on the copperbelt. No less than the machine operators at Geer and Allied, lashers were adept at goldbricking and quota restriction. Instead of being less disciplined, Zambian mineworkers prove to be more disciplined than their comrades in other parts of the world, but again only as a consequence of the organization of the mining industry. In short, activities of Zambian workers on the shop floor, in the mines, and in the office were determined within narrow limits by the relations in production. As we discovered at Allied Corporation, ethnic and racial categories are usually important only when reproduced by the labor process itself. Otherwise, they live on as prejudices, attitudes, and, above all, as an idiom in which to couch production relations. At the same time, these relations in production were the product of a colonial order. By recreating within its own structure conditions reflecting the existing political and market arrangements, the mining industry managed to preserve the relative autonomy of the labor process. With the transformation of the political order, changes did occur, but only through the mediation of existing relations in production.