Cross-national analysis of aggregate data has found a relationship between the military participation ratio and national economic growth rates and distributional inequality. This article examines one aspect of this macro-micro linkage by investigating the relationship between acculturation in the military and the attitudes and behavior of the most strategic sector of the Peruvian labor force. Military service retards the development of social consciousness among the working class, reduces their protest participation, and eases their integration into the hierarchy and discipline of the industrial work place. These findings suggest that military socialization may indeed affect growth rate by reducing worker-management and worker-state conflict. On the other hand, it would seem equally likely that the conservative effect of military acculturation contributes to increased inequality of income.

THE INFLUENCE OF MILITARY SERVICE ON SOCIAL CONSCIOUSNESS AND PROTEST BEHAVIOR
A Study of Peruvian Mine Workers

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MILITARY SERVICE, MACRO-ANALYSIS

It has been suggested that certain aspects of the military organization of society are a better predictor of economic growth and distributional inequality than such dependency relationships as vertical trade, partner

AUTHOR'S NOTE: *Heraclio Bonilla collaborated with the author on the collection of the Peruvian data. Financial assistance was provided by the Ford Foundation, the National Science Foundation (SES-8110260), and the Wenner Gren Foundation (#4171). I wish to thank Octavian Petrescu, Rachelle Trerice, and Katherine Baisden for their research assistance.*

COMPARATIVE POLITICAL STUDIES, Vol. 16 No. 4, January 1984 479-504
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concentration, state strength, and multinational corporation penetration (Weede and Tiefenbach, 1981a, 1981b). The indicator of military organization on which most of this research rests is the military participation ratio (MPR). This is the ratio between the number of active military personnel in society, including reserves and paramilitary forces, and the size of the working population per thousand (Taylor and Hudson, 1972).

The rationale for a hypothesized negative relationship between MPR and income inequality (the larger the military, the less the inequality) has not received sufficient attention, although there are general references to the leveling influence of inducting large numbers of the population into the armed forces (Garnier and Hazelrigg, 1977; Andreski, 1968). So far the relationship between MPR and income inequality has been inconsistent. Weede and Tiefenbach (1981a) find a moderate relation between high MPR and income equalization, but Bornschier (1981: 288) doubts their findings.

A more consistent linkage has been established between MPR and economic growth (Weede and Tiefenbach, 1981b; Andreski, 1968; Kahn, 1979). What is tenuous and untested is the rationale for the demonstrated relationship between MPR and growth rate.

MICRO-ANALYSIS

The relationship between MPR and economic growth is usually cast as a macro-micro linkage. There sould be better economic performance in societies with "widespread military service [because this] may enforce societal discipline and provide some incentive for productive and co-operative relations among classes instead of an impoverishing class struggle" (Weede and Tiefenbach, 1981b: 394).

If we extend this reasoning, military institutions can influence the social order in at least two ways. They can impose their policies externally on communications, market relations, and modes of participation in the larger society. There is a rich but as yet inconclusive literature on the relation between military rule, and social order and developmnent in Latin America (Einaudi and Stepan, 1971; Huntington, 1968; O'Donnell, 1973; Lowenthal, 1976; Schmitter, 1973; Stepan, 1978, 1971).

Military institutions might also affect economic growth and distribution by molding the attitudes and behavior of the increasing numbers of recruits who are included in their ranks. If military service were to dampen the attitudinal militancy of inducted workers and demonstrate

the risks of labor-management or labor-state conflict, this might encourage economic growth. By the same token, the hierarchical command system and discipline characteristic of military organizations could later ease the integration of workers into the discipline and decision structures of hierarchically organized corporate enterprises. This might also have a positive effect on growth rate. On the other hand, socialization experience that reduces workers' willingness to protest or threaten the use of violence to force government and management to meet their demands in countries that lack other mechanisms for resolving these disputes (Payne, 1965) could contribute to distributional inequality.

A macro-analysis of the presumed link between reduced labor militancy and growth rate (and distribution) requires time series data and is not the focus of this article. For the purposes of this analysis, I shall assume these links exist to some degree, as do the macro-analysts and many followers of what has been called the "military sociology approach" (Weede and Tiefenbach, 1981b).

In this article I shall address one aspect of the macro-micro linkage by examining the relationship between military service and the subsequent (1) social consciousness, [1](2) willingness to engage in labor and political conflict, and (3) integration into the hierarchy and discipline of the industrial work place among one of the most mobilized sectors of the labor force in Peru. We will see if service in the military is associated with a reduction in labor militancy.

MILITARY SERVICE IN PERU

If military service influences the attitudes or behavior of mine workers, this could have important consequences not only for the fragile Peruvian economy but also for the success of Peru's recent return to electoral politics after a long period of military rule. Peru has limited industrial development, and without the export earnings and taxes from the mining industry, the economy would collapse. Thus, miners hold a strategic position as they do in most Third World countries that depend on mineral exports (Magill, 1974; Petras and Zeitlin, 1967; Konings, 1978; Bates, 1971; Whitehead, 1981; Zapata, 1982). Work stoppages in this vital export industry have in the past forced the government to revise its budget estimates and are frequently accompanied by the mobilization of the national police and the armed forces (Kruijt, 1982;

Sulmont, 1975). Strikes are often begun with the express purpose of forcing the state to intervene in the resolution of economic and political problems (Payne, 1965).[2] Recently (March 1983), 10,000 miners began a march from the central Andes to the coastal capital of peru to press their economic and political demands on the government *(Latin American Regional Reports, Andean Group,* March 4, 1983). Conflict between the miners and the state has yet to be institutionalized and continues to alternate between periods of compromise and of confrontation (Sulmont, 1981; Kruijt, 1982; Laite, 1980).[3]

Unfortunately, we know surprisingly little about the influence of military service on workers' attitudes and behavior either in the United States or in Latin America, where the majority of the countries are ruled by military dictatorships. Most research on military socialization focuses on the policies, recruitment, or training of military elites (Wolpin, 1981; Astiz and Garcia, 1972; Hyman, 1972; Palmer, 1973; Stepan, 1971).

What has been the influence of military service in Peru[4] on the conflict behavior of workers? Under revolutionary or progressive military regimes, politicization and consciousness might be raised. Although the Peruvian military was hardly revolutionary during its last period of rule (1968-1980), it did attempt during the initial years to fit class, property, and participation into a state-corporatist mold (Cotler, 1975, 1978; Lowenthal, 1976; McClintock, 1981; Stepan, 1978). These efforts had largely foundered by 1975. There is as yet no evidence that the pursuit of these policies outside the military affected significantly the indoctrination of recruits or the relationship between the officers and the ranks within the armed forces.

Experience in the military under civilian rule during special historical periods might also affect the socialization of recruits. Many felt that service by U.S. citizens during the Vietnam war would contribute to significant changes in political attitudes. The evidence, however, does not support this view (Jennings and Markus, 1977). Another widely held belief is that exposure to the authoritarian command structure of the military reinforces the authoritarian dimensions of the members' personality. The spotty evidence that exists in the U.S. provides little comfort for this position (Campbell and McCormack, 1957; French and Ernest, 1955). A more recent study of West German recruits shows that they were no more authoritarian at the end of their service than civilian control groups (Roghmann and Sodeur, 1972). The possibility that military experience may have little impact on basic personality traits is

further buttressed by the limited time that the recruit spends in the institution. In comparison to occupational socialization that covers most of an adult's life span, the average recruit spends a short period in the military.

In Third World countries, however, the draftee is frequently a less educated worker or farm laborer who may have travelled only a few miles from his home before induction. Military service may bring him into contact with distant countrymen, expose him to new social relationships, and enhance a more cosmopolitan view of his place in a larger whole.[5] If fellow recruits are militant protagonists of the class structure, this may increase class awareness. More likely, the homogenization of the ranks and the Peruvian military's opposition to class conflict and support of corporatist integration of the classes will reduce class awareness. At the same time the patriotic, often jingoistic communication culture in the military and the hierarchical command structure extoll the virtue of the system over that of the individual. This could dampen the member's disposition to blame the system for social inequities or to espouse the participation of those at the bottom of the hierarchy (soldier and worker) in work place decision-making. By the same token, the practice of using the military in Peru to quell labor demonstrations and occupy mining camps should provide both vicarious and personal experience of the risks of confronting employers or the state.

If military socialization should reduce the tendency to participate in protests and demonstrations, it may, on the other hand, ease the integration of citizens into the industrial labor force by acculturating them to the fixed schedule and hierarchy of the work place.

THE DATA

A combination of data was collected in the study of mine workers, including historical data, survey data, and in-depth case histories. The source of the data for this analysis is three-hour interviews completed in 1979 with a random sample of 494 workers *(obreros)* from three underground mines in the central Andes of Peru. The miners were adult males between 18 and 58 years of age, of Indian or mixed white-Indian *(Mestizo)* blood, whose formal education ranged from none to secondary school. Interviews in Spanish or Quechua by trained Peruvian anthropologists and sociologists were conducted in the miners' homes. Rapport for all of these interviews was excellent. Eight percent of the

sample was not interviewed because of refusal, illness, or absence from the work place.

The mines in which the interviews were conducted were controlled by the largest Peruvian-owned mining company, one of the largest producers of silver in the country. It is a modern professionally managed corporation typical of the rationalized, late capitalist business organization. These corporate characteristics are similar to those found in the private mines to the south and the evolving control mechanisms of the state-owned mines *(Centromin)* of the former Cerro de Pasco Corporation (Kruijt, 1982).

Although a national sample of miners' attitudes has never been conducted in Peru, what might distinguish our respondents from such a sample is the higher number of those who have their roots in agriculture. One reason for selecting the mines in our study was that employment records demonstrated that they stood at the boundry between the agricultural and industrial labor force. Seventy-five percent of the miners came from rural areas where their fathers worked in agriculture.[6] As such, they represented a microcosm of the strains of social, economic and political assimilation common to the Third World.

THE DEPENDENT VARIABLES

SOCIAL CONSCIOUSNESS

Each of the workers' beliefs discussed above (class awareness, self-system blame, support of worker involvement in work place decisions) that may be subject to military socialization was distilled from the literature on social consciousness. Space does not permit an examination of all the concepts of consciousness in the literature. Nor did I attempt to measure each construct. Instead, I confined myself to those social constructs that link the worker to his class, the system, and his role as a participant in that system.[7] For example, group or class identification has been a central theme in the literature on consciousness. One's self-location within a particular social stratum, however, is just the first step in a cumulative process through which social consciousness is formed. The miner who identifies with the working class may not recognize the place of his class in the social hierarchy, the differences between the lower and the higher classes, or the political parties, leaders,

and movements that these classes support. Class awareness helps the worker to translate class identification into a useful aid for understanding the social and political meaning of stratification (Leggett, 1968; Ossowski, 1966). This awareness may not lead to dissatisfaction with the group's share of resources and power, however. Those workers who are aware of class relations but blame themselves or the poor for the skewed distribution of resources (rich-poor) in the society will be less disposed to direct their demands for social change toward the system (Aberbach, 1977; Feldman, 1982, Miller et al., 1981; Portes, 1971) than those who blame the social and political structure for the inequities. But system blame may not be translated into increased activity if workers do not believe that their group should be involved in decisions affecting both the nature of the economic system and their own work place (Handleman, 1976; McClintock, 1981). Two types of involvement are at issue here. One is the type in which the worker shares economic decision-making with owners, union leaders, the military, the state, technicians, and so forth. The other type is closer to Marx and Engels' conception of proletarian consciousness in which the worker wants exclusive control over economic decisions, particularly in the work place. Workers who believe that they alone should make these decisions are unlikely to feel that these views are welcome in an electoral system in which the agenda and viable candidates have traditionally been controlled by the wealthy or the military. They will turn, therefore, to nonelectoral strategies to express their demands. In summary, workers who identify with their class, who recognize its relation to the social hierarchy, who blame the system for the maldistribution of resources, and who believe their group should be exclusively involved in decisions affecting their economic status will be considered for the purposes of this article to have the highest social consciousness. They are also most likely to engage in labor and political conflict.

1. Class Identification: The subjective perception that one belongs to or is a member of an objective social strata. This was measured by asking each worker whether he belonged to the working class or to the middle class. Based on their occupations, all miners in the sample were objectively members of the working class (obreros). Thus working-class identification meant identifying subjectively with the working class.

2. Class Awareness: Awareness of the characteristics of social classes and the articulation of these differences. Workers who identified with

the working class were asked which political parties, candidates, and political movements does the working class support? Workers who could cite parties, candidates, or movements that they believed the working class supported were scored highest on this index (working class aware, working class not aware).

3. System versus Self-Blame: The belief that the economic and political systems are responsible for resource distribution to the rich and poor in Peru, rather than the individual failings of the poor or the positive personal characteristics of the rich. This was measured in a three-point index (system, mixed, self) derived from responses to an open-ended question in which workers were asked the reasons that there are rich and poor in Peru.

4. Group Involvement: The belief that workers should be exclusively involved in the decisions determining both the wage levels and rate of work in the mines. A three-point index (workers only, mixed, others) was derived from two survey questions that asked who the worker felt should (1) set wages and (2) determine how fast a miner should work in the mine.

PROTEST PARTICIPATION

Strikes, protests, and demonstrations against employers and the state seem more appropriate measures of the disorder eschewed by the military participation-economic growth model than the more conventional types of participation such as voting and campaign activity. This is also the type of political participation most available to workers in those Third World countries dominated by despotic or military governments, or, countries in which the electoral process is seen as an ineffective channel for their political and economic demands.[8]

In this analysis, six types of participation were examined. They included: (1) stopping work to influence the government to grant a cost-of-living wage raise, (2) striking to force the state to intervene in support of unpaid workers in a distant mine, (3) participating in a political demonstration in Lima, (4) joining a national strike to force the state to support miners who were dismissed in a legal strike in southern Peru, (5) demonstrating in front of mine administration offices in support of greater worker participation in decisions affecting work conditions in the mines, and (6) stopping work to force mine administra-

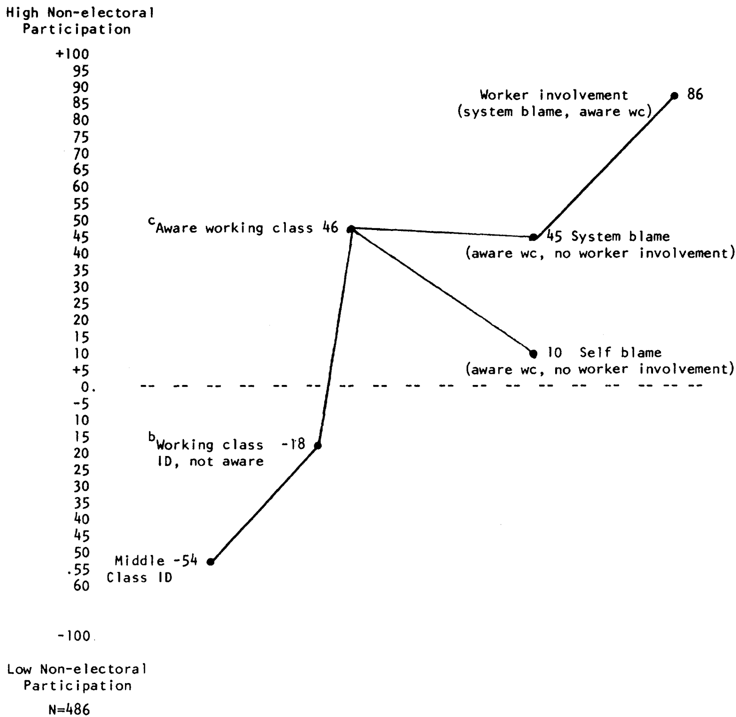
tors to negotiate a wage increase. The Different types of participation were combined into a cumulative index in which those who participated the most were scored highest (see Appendix).

RELATIONSHIP BETWEEN SOCIAL CONSCIOUSNESS AND PROTEST PARTICIPATION

The MPR-economic growth model suggests that service in the military may influence the militancy of its members' attitudes. These attitudes, in turn, should be associated with the level of economic and political disorder in the society. Before investigating the effects of military service on consciousness and protest, I shall briefly examine the relationship between consciousness and protest participation.

To simplify the presentation of the data, the level of protest participation associated with each facet of consciousness or different combinations of consciousness was converted to a percentage difference index (PDI). That is, an index of the percentage of highest participators minus the percentage of those participating less. If, for example, 73% of the workers who were class aware were high in participation, while 27% were lower, the participation PDI for aware working class would be +46 (73 – 27 = 46, Figure 1). Theoretically, the PDI could range from +100 to –100, with negative values indicating the degree to which workers do not participate.

Each component of social consciousness has some influence on worker's engagement in strikes, work stoppages, or political demonstrations, and the effect is cumulative. The small group of workers who identify with the middle class (N = 22) are least likely to engage in conflict activity, as they score –54 on the PDI index (Figure 1). If workers identify with their class, participation rises to –18. Those workers who are able to translate class identification into an understanding of the political meaning of stratification are even more likely to participate (+46). Class awareness, however, does not necessarily lead workers to blame the system for the inequitable distribution of wealth in the country. Those who were aware of class relations but blamed themselves for the skewed distribution of resources were less disposed to participate in these nonconventional acts (+10) than those who blamed the system (+45). Nor is system blame translated into increase activity if workers do not believe that their group should be exclusively involved in decision-making in the work place. When workers identify with their class, recognize its relation to the social and political hierarchy, blame



a. High participation - (Medium + Low) participation = Percentage Difference Index.
b. No system blame nor belief in worker-only involvement.
c. No system blame nor belief in worker-only involvement.

Figure 1: Variation in Percentage Difference[a] in Protest Participation Associated with Class Identification, Class Awareness, System Self-Blame, and Belief in Worker Involvement.

the system for the maldistribution of resources, and believe that only workers should make work place decisions, they participate (+86). If, on the other hand, they lack all facets of social consciousness, their protest behavior plumments to –54.

As SES is often associated with participation, I examined miner's demographic characteristics. Not surprisingly, Peruvian mine workers are a much more homogeneous population then the more heterogeneous samples of national populations. All miners were blue collar workers (obreros). Eighty-five percent had not gone beyond elementary

school. Because of the rigors of mining, 80% were less than 40 years old, and 70% had worked in the mine less than 11 years. Seventy-four percent came from families in which the father worked in agriculture.

Homogeneity notwithstanding, I constructed a four-point social consciousness index. This was introduced into an ordinary least squares multiple regression along with measures of the respondent's age, education, origin (father's occupation: agriculture or nonagriculture), and, as a reflection of occupational socialization, the number of years the respondent had worked in the mine. The partial correlation between social consciousness and protest behavior was .38 (Significance = .00). Age, education, origins, and years in mine were not significantly related to participation. Of course, there are many other factors that could influence protest behavior that space does not permit us to examine here.[9] For example, a more detailed analysis of the respondents' partisan ties or occupational history after leaving home and before entering the mine might be rewarding. By the same token, years worked in the mine is a relatively gross measure of the rich data we have on miners' occupational history within the mine, attitudes towards work, and so forth. This will also be examined separately. It seems safe to say, however, that the four demographic measures are not significantly related to protest participation.

INFLUENCE OF MILITARY SERVICE

Twenty-three percent of the miners (N = 112) served in the military, all except two in the army. Ten percent were volunteers, 22% were drafted, and 68% were caught up in local levies—literally "pressed" into military service. Seventy-eight percent of those who entered the military completed their servaice before beginning their work in the mines. The fact that most workers were either drafted or levied testifies to the nonvoluntary nature of the Peruvian army. This reduces the possibility that the relationships reported below could be due to selection. This was supported further by the lack of significant correlations between military service (yes or no) and education (.05) and origin (.04).[10]

Most research finds little difference between veterans and nonveterans except on military issues, and even these differences are small (Bachman, 1974; Jennings and Markus, 1977). Nor is military service as a general category (yes or no) useful in understanding the social con-

sciousness or nonelectoral participation of Peruvian miners. However, a finer examination of the effects of rank, years served, and individual change while in the service suggests the deleterious effects of these experiences on workers' social consciousness. Although the N is relatively small [11] in the following analysis, the consistency of the relationships serves as an example of the institutional socialization of one of the most politicized and economically significant sectors of the Peruvian labor force.

SELF-REPORTS OF MILITARY SOCIALIZATION

Veterans were asked in an open-ended question if their views or lives had changed significantly while they were in the military. Twenty-five percent said that their experience in the military had changed them. Responses varied as some mentioned new skills they had learned or the impact of face-to-face encounters with violence. The most frequent response (56%) was that the military taught them discipline and brought order to their lives. Because of the reduced N, the answers to the change question were dichotomized between those who did and those who did not change. The likely effect of this simplification was to reduce the strength of the relationships between military service and consciousness. Not surprisingly, there was a positive relationship between the perceived changes and the number of years in the military. Change was spread widely, however, across the different modes of entry. Twenty-two percent of the changees were volunteers, 22% levies, and 56% draftees.

If this self-awareness of change reflects social learning in the military, then it is a form of adult socialization that reduces social consciousness and the propensity to engage in strikes and demonstrations (Table 1, column 1). Even the weakest association (working-class awareness) is consistent with this view. For example, although change has little affect on the proportion of those who are aware of their working-class ties, it is associated with the movement of 11% of those who identify with the working class (and lack awareness of it) into a middle-class identification.

Military socialization is more strongly related to a decrease in system blame (–.41) and a belief in worker involvement (–.91). Evidently, the inculcation of the values of discipline, obedience, and order for which the military is justly famous is antithetical to the notion that the ranks—whether soldiers or workers—should participate in decisions that affect their work life. Belief in worker-only involvement in decisions drops by 51% among those socialized by the military, while the proportion of

TABLE 1
Association Between Military Service and Protest Participation, Worker Involvement, System Blame, and Working-Class Awareness

	Life Changed: Yes - No (N=110)	Years in Military: 2+,2,1 year (N=110)	Rank: Sergeant Corporal, Private (N=97)
Non-electoral Participation	-.57[a]	-.32	-.42
Worker-only Involvement	-.91	-.47	-.47
System Blame	-.41	-.23	
Working Class Awareness	-.10	-.31	-.54

a. All cells in which a Gamma correlation is entered reflect relationships that are significant (χ^2) at .05 or less.

those who believe workers should not be involved in decisions increases by a similar amount.

Men who were socialized in the military are much less likely to have engaged in strikes and demonstrations after their military service (–.57). They also seem less disposed to engage in conflict behavior in the future. All workers were asked if they believed that each of the 6 types of participation that were included in the protest participation index would affect the authorities to whom the action was directed (Langton and Petrescu, 1982). The 6 measures of effectiveness were aggregated into a cumulative militancy index. Militancy declines sharply (–.49) with military socialization.

DURATION

In his essay on adult socialization, Wheeler (Brim and Wheeler, 1966) emphasizes the length of the stay in the organization as an important variable in the institutional socialization of adults. If the military propagates norms that discourage social consciousness and nonconventional participation, they should be internalized more by long-timers than by short-timers.[12]

No worker served more than 8 years, and the majority (58%) served less than 2. Although there is a positive association between years of

service and rank, being a long-timer (3-8 years) does not insure higher rank. Of the long-timers, 50% remained privates, while 12% were corporals and 38% sergeants.

The emphasis on discipline and order, and on learning about the risks entailed in strikes and demonstrations, appears to be internalized as length of service increases.[13] Long-timers have lower social consciousness and are less likely to engage in conflict after their discharge from the military. Although the overall association between duration of service and system-self blame is modest (–.23), those recruits who were in the service for more than 2 years are 25% less likely to blame the system for social inequities than are those who served for 1 year or less.

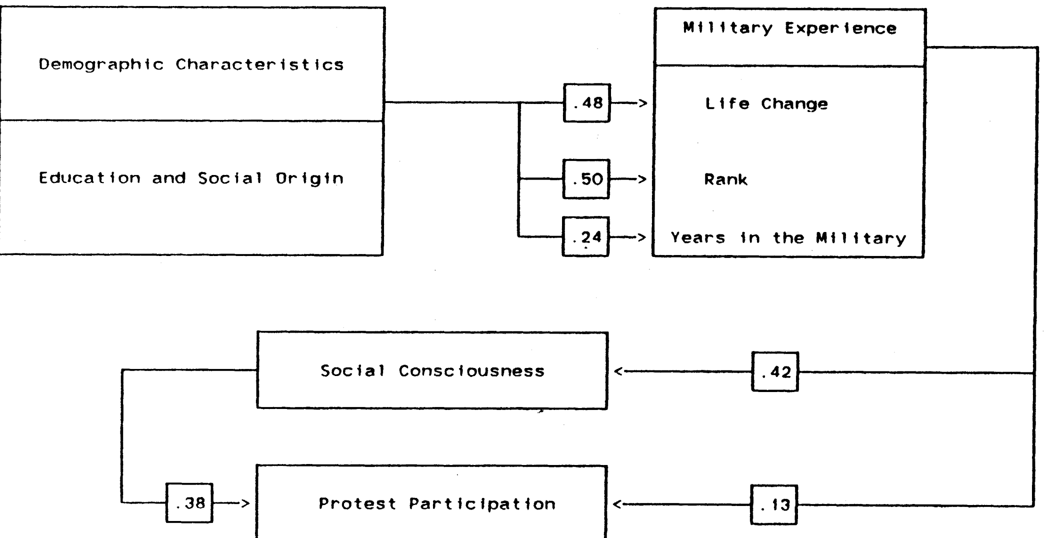
RANK

Another dimension of military experience is being assigned the status and responsibility of rank. Half of those who felt that their lives changed significantly in the military were sergeants—the highest rank obtained by members of the sample. These noncommissioned officers were drawn equally from volunteers (36%) and levies (36%), while 29% were draftees. Most served 2 years (71%) before their discharge. Rank is negatively associated with working-class awareness, belief in worker involvement in decision-making, and protest behavior. The thought of worker participation remains an anathema for former noncommissioned officers. They are 8 times more likely than discharged privates to reject the notion that workers have any role (exclusive or in cooperation with other social groups) in work place decisions.

In summary, prior experience in the military, whether by perceived socialization, duration, or rank, seems to act as a consistent retardant to the development of workers' social consciousness and their participation in strikes, work stoppages, and demonstrations.

Although education and origin were not associated with workers' induction into the military, the subsample that underwent military training does vary on these two dimensions.[14] Conceivably, these background differences could affect their military experiences. For example, rank might come easier for a soldier who had more than an elementary education.

Figure 2 shows a path diagram of the relationships between demographic characteristics, military service (rank, years, change), social consciousness, and protest participation. Because the three measures of military life are nonrecursively related, I used a block



All the path coefficients are significant at the .005 level except for the path between demographic characteristics and years in the military, which is significant at the .06 probability level.

Figure 2: Path Diagram of the Relationship Between Demographic Characteristics, Military Service, Social Consciousness, and Protest Participation

recursive structural equation model to identify the equation for the paths between military experience, consciousness, and participation (Duncan, 1975: Chapter 6; Kamenta, 1971: Chapter 13).[15]

Demographic factors do not have an independent effect of either consciousness or protest behavior in either the military or the nonmilitary subsamples. However, the recruit's background does structure his experience while he is in the military. Educated soldiers from nonagricultural families are more likely to achieve rank, undergo change, and spend a longer time in the service. Military socialization, in turn, influences participation both through its impact on social consciousness and directly.[16]

INTEGRATION INTO THE INDUSTRIAL ECONOMY

It has been argued that the chief function of secondary and higher education in the United States is to integrate workers into the market economy (Bowles and Gintis, 1976). Certainly institutions such as schools and the military, while not exercising total control, have considerable potential for acculturating their members into the hierarchical command structure and the fixed schedules of the industrial work place.

We asked workers in 3 open-ended questions about their first impressions when they began to work in the mine. What were their reactions to the hierarchy of the work place, the fixed schedules, and the machines and technology? Responses varied as 54% of the workers had little difficulty adjusting to the work place hierarchy. The modal response was that they were already accustomed to taking orders before entering the mines. Some liked hierarchy and thought it provided an incentive to rise in the organization. Others saw bosses and receiving orders as a natural part of the social order. Those who had difficulty adjusting frequently mentioned the harshness, rigidity, or unfairness of their foreman.

Sixty-one percent of the workers did not find it difficult to adjust to the fixed work schedules of the mines. One worker said that "a schedule is part of the education of work," another felt it was easier than the farm. Others said they adjusted rapidly (22%), while 23% mentioned that they had become accustomed to schedules in the schools or in the other occupations they held prior to entering the mines.

Even more workers adjusted readily (68%) to the machines and technology of modern mining. A few responded that they had had

experience with this type of machinery in other occupations (8%), but 49% said that they learned quickly and it was not difficult. Some were curious about the machines, others said the machinery made their work easier.

Conceivably, the less educated or the workers who had entered the mines in earlier years might have had more difficulties with mine labor. Or those from agricultural backgrounds might have been troubled by the hierarchy and enforced discipline of the industrial enterprise. None of these factors, however, were significantly related to the workers' adjustment to the mine.

Other institutions besides the military could ease the respondents into the hierarchy and discipline of the work place. For example, we collected data on the authoritarian character of the worker's family of origin, peer groups, and school. The effect of these factors on military experience and adaption to industrial work will be examined elsewhere. Even though these other socialization experiences may dilute the impact of the military, its influence on worker integration into the mines is still apparent.

Those who felt that their life had changed significantly in the military were 21% more likely to make an easy transition to the hierarchy of the mine than those who experienced no change (Table 2). They also found the rigid work schedule more acceptable. A similar association exists for the number of years served in the military. Rank and military service by itself (yes or no) had no effect on the worker's absorption into the schedule and hierarchy of the mines. Nor were any of the indicators of military experience associated with adjustment to mine technology.

CONCLUSION

Studies based on the cross-national analysis of aggregate data have found a relationship between the military participation ratio and national economic growth rates. One possible explanation for this association in Third World countries is the dampening effect that military life has on the attitude militancy and conflict behavior of those members of the labor force who are inducted into the armed forces. In this article, I examined one aspect of this macro-micro linkage by investigating the relationship between prior acculturation in the military and the subsequent social consciousness, protest behavior, and integra-

TABLE 2
Association Between Military Service and Adjustment to the Hierarchy and Fixed Work Schedule of the Mine

a. HIERARCHY

Life changed in Military:	Transition Easy	Transition Difficult	N
Yes	69%	31	26
No	48	52	83

b. FIXED SCHEDULE

Life changed in Military:	Transition Easy	Transition Difficult	N
Yes	69%	31	26
No	52	48	82

c. HIERARCHY

Years in Military:	Transition Easy	Transition Difficult	N
2+	78%	22	9
2	54	46	37
1	49	51	63

d. FIXED SCHEDULE

Years in Military:	Transition Easy	Transition Difficult	N
2+	75	25	9
2	61	39	36
1	50	50	64

tion into the industrial enterprise of mine workers, the most mobilized sector of the labor force in Peru.

Military organizations are generally considered important because of their impacts on foreign and domestic policy. But they are also significant because they directly affect the lives of so many adults who become a part of their ranks. The military is nearly a total institution and, in most Third World countries, nonvoluntary. It is a formal organization that attempts to inculcate acceptance of and belief in obedience, order, and discipline among adults. It also mandates specific behavior by its members that sometimes includes the putting down of strikes and demonstrations, and the occupation of mines and factories—experiences that are a rich source of vicarious and operant learning for the recruits. The military, then, is a potentially important but little understood source of adult socialization.

Almost one-quarter of the workers had been in the military prior to entering their current work in the mines. Most had been drafted or were

part of a levy. Although the N is not large, the relationships between perceived military socialization, duration of service, and rank, on one hand, and social consciousness and nonelectoral participation, on the other, are consistent. Military service retards the development of class awareness, system blame, and the belief among workers that they should participate in decision-making in the industrial enterprise. It also reduces their participation in strikes and political demonstrations, and eases their insertion into the hierarchy and discipline of the work place. Background factors such as education and origin have no independent effect on consciousness or participation, but they do structure the experiences of the recruit while he is in the military.

These findings suggest that recruitment into the military may indeed affect the national growth rate by reducing worker-management and worker-state conflict while easing labor into hierarchically organized corporate enterprises. On the other hand, the reduction in class awareness, system blame, belief in worker participation in decision-making, and strikes and political protests would seem to contribute to income equality. This may be particularly true in countries similar to Peru that have yet to institutionalize an acceptable system of collective bargaining. Thus labor protests and threats of violence are still a necessary part of worker's political bargaining strategy to force the state to intervene in labor-management disputes and impose settlements that meet at least some of the workers' demands.

For those elites interested in political order and labor discipline, these data must be reassuring and the policy implication obvious—draft greater numbers of workers into the military. Even if the attitudes of some recruits cannot be changed, vicarious or direct exposure to the costs of labor conflict and disobedience should have a chilling effect on their subsequent behavior. The tripling of the size of the Peruvian Armed Forces between 1965 and 1983 may have had some of these consequences.

There may be unanticipated consequences of such a policy, however. The patterns found in this study merely skim the surface of institutional socialization. We know little about the interactions between the mix of recruits, timing, form of entry, duration, and military occupation, and their influence on politically relevant attitudes and behavior. Under certain conditions, radical recruits may have more influence on their less militant peers than the military has on both—and, in addition, they learn how to use arms and explosives.

While this may give pause to more conservative leaders, the findings carry a disquieting message for those workers who want exclusive

control over work place decisions. Most do not see an electoral process in which the agenda and viable candidates have traditionally been controlled by the upper and middle classes or the military as an effective channel for expressing their demands (Langton and Petrescu, 1982). Like workers in most other Third World countries controlled by despotic governments or intrenched economic elites, miners consider withholding support and labor as the most effective means for forcing the state to intervene and resolve their economic problems.

Service in the military reduces social consciousness generally. But it is particularly destructive of the belief that the ranks should involve themselves in the decisions that affect their work life. Not only are these workers' numbers depleted ideologically by military service, but their willingness to suffer the potential costs of nonconventional participation also declines. While some may be quick to blame the military as the handmaiden of capitalism for these findings, it is not clear that the influence of the military would be significantly different in the state-controlled economies of the Soviet Union or Eastern Europe, although the latitude for strikes and demonstrations is clearly more limited than in Peru. One wonders, however, if the military is as important a socialization institution in postindustrial societies as it may be in the Third World. Particularly, this is a question in those societies with highly developed communications systems that permit maximum competition for the allegiance of their citizens and whose military recruits are less likely to be little-educated peasants and workers. The answers to these questions must await comparative research designed specifically to study the military socialization of workers.

APPENDIX

PROTEST PARTICIPATION INDEX

A central objective of this study was to measure the influence of the external settings in which workers made their participation decisions. This could have been done by randomly assigning subjects to different experimental settings, at the expense of realism. A better test would have been to follow the same people across many real life situations, cataloging the variety or constancy of the situational characteristics, and measuring their cognitions and participation in each situation.

Then the investigator could determine the degree to which the behaviors are explained by an individuals' cognitions and/or situational characteristics. One problem with following the same workers across different natural settings is that this reduces severely the number of workers who can be included in a study and limits the systematic control of variables if the model to be tested is complex. The laboratory, on the other hand, permits careful control of setting, but at the expense of realism.

One method of presenting situational stimuli is to use a pictorial, verbal, or written description of a realistic situation. The subject is presented with a number of such situations in which cues (e.g., support of union officials for the political act) that are realistic for the culture are varied across the situations. In each situation, the participation decision and perceptions of the external situation are recorded. Situational inventories permit a controlled presentation of the situational stimuli and of related variables to large numbers of people; they are somewhere between the laboratory and the natural setting in experimental control and realism. Their use in political analysis is rare.

The research reported in this article used situational inventories in a modified survey format to examine the effects of situations and cognitions on the decisions of Peruvian miners to participate. These were verbal descriptions of eleven different situations that, we had learned in the pretest, miners had directly encountered themselves or had heard of others experiencing. Each situation was realistic for the culture and included numerous characteristics (risk, government involvement, economic condition of the individual or group, group versus solitary situation, presence of union officials, and so forth). Bowers (1973) found that using situational inventories rather than observations in natural settings did not significantly enhance or diminish situational or psychological effects beyond the extent to which this would occur in real life.

After the miner was exposed to each situation, his perceptions of the most salient features of the objective situation were measured as well as his perceptions of the effectiveness of the intended act in that setting. The miner was also asked if he would participate in this situation (strike, demonstrate, and so forth). This measure of behavioral intention, which followed exposure to each situation, formed the individual indicators that were cumulated in the Political Participation Index. The miners' past participation in similar situations was also measured and was significantly correlated with their participation decisions in current situations. There are three common methods used to measure political

participation: behavioral intention (as in the current design), recall of past political participation (which is the method used in most survey research and is also measured in this study), and observations of behavior in natural settings. Liska (1974) reviewed a number of studies using these different behavioral measures to see how each affected the strength of attitude-behavior relationships. He found that, although the magnitude of the relationships differed somewhat, no systematic differences were associated with the three measures of behavior (for further discussion of the design of the Peru study, see Langton and Petrescu, 1982).

NOTES

1. Social consciousness is an index of workers attitudes' that includes class awareness, system-self blame, and belief in worker control over decisions in the work place. The construct and measures will be discussed below.

2. Payne (1965) describes a pattern of political bargaining in Peru in which strikes, demonstrations, and threats of violence are used by worker organizations to force civilian governments to intervene in labor disputes and impose settlements on employers that meet at least the minimum worker demands. If the civilian executive does not intervene before the confrontation and disorder escalates, it risks a military coup.

3. Becker (1982b) argues that the miners' militancy declined between 1967 and 1979, while Kruijt (1982), taking a longer historical view (1962-1974), describes a cycle of strikes—repression—relative quiet—and strikes—as characterizing state-mine labor relations in Peru.

4. In 1965, the number of personnel in the Peruvian military, including reserve and paramilitary forces, was 55,000 (Taylor and Hudson, 1972). Peru was ranked 55 among 121 countries in the size of its military forces. By 1983 the size of the armed forces had more than tripled (*The Military Balance,* 1982-1983: 107). Although the population also increased, the ratio of military personnel to the working age population (those between 15 and 64 years) per 1000 increased from 8.1 in 1965 (Taylor and Hudson, 1972) to 12.2 in 1980. The calculations are based on data from the *UN Demographic Yearbook,* 1981: 220-221 and *The Military Balance,* 1979-1980: 81-82).

5. Jennings and Markus (1977) make a similar argument when they hypothesize that the military service should halt the life cycle decline in cosmopolitan over local political orientations. They find modest support for this thesis in the United States. Also see Taylor and Hudson (1972: 19-20).

6. Not all of the miners whose fathers worked in agriculture worked in agriculture themselves before entering the mines. Thirty-five percent did, but 14% began their working lives in sales and service, and 22% in industrial jobs other than mining. Twenty-six percent of the sample went directly from their parents' homes into the mines. Their work history is similar to that of the mining enclaves that have sent generations of young men into the mines. In a separate article, I shall examine the effects of family and work history on social consciousness and participation.

7. These and other indicators of "social consciousness" are discussed at length elsewhere (Langton, 1983).

8. Community activities are another form of participation particularly relevant to Third World populations (Cornelius, 1975; Dietz, 1980).

9. Readers interested more specifically in the macro and micro determinants of strikes in the United States and Europe should consult the *Industrial and Labor Relations Review* (1982). What often distinguishes strikes in the United States and Europe, however, from those in Peru and many Third World countries, is that in the latter, strikes are often initiated with the express purpose of involving the state in the resolution of the conflict.

10. Neither the respondents' current age nor the years they have worked in the mine is significantly associated with whether they were in the military or not.

11. The careful study by Jennings and Markus (1977) is the most ambitious recent attempt to examine the impact of military service on the political attitudes of a generation of U.S. citizens. As with the current study of Peruvian miners, their limited N (raw N = 328) and the fact that the influence of military service was not the central concern of their data collection limited the scope and complexity of the analysis.

12. The length of stay in Vietnam by U.S. veterans was modestly associated with increased political cynicism (Jennings and Markus, 1977).

13. The effects of military socialization can be expected to decay after discharge from the military. Unfortunately, we do not have a direct measure of recency of military service.

14. We do not know the age of respondents when they entered the military. It is reasonably safe to assume, however, that most were quite young.

15. The paths between background and military experience cannot be identified because the relationships between military experiences are nonrecursive. Because the analysis shows, however, that the totality of military experience is dependent on background, we have reported the paths between background and military life as if the military experiences are unrelated.

16. The error term for the paths from military and consciousness to participation is .68.

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