

PARTICIPATION AND WORKER SATISFACTION

by

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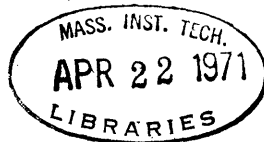
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## Abstract

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This thesis explores the effectiveness of worker participation in reducing job alienation, and the implications of participation by workers for the behavior of the firm. The study uses data from experiments with industrial and office workers in which participation was a variable, and data from other studies of participation in work environments. The evidence shows that participation increases job satisfaction, and that direct participation and participation at shopfloor level are both more effective in raising morale than indirect participation and participation at the level of the firm.

Economic models of the firm were used to compare the behavior of worker controlled firms with that of entrepreneurial capitalist firms. Only models of firms completely controlled by workers have so far been developed, but this chapter outlines some tentative hypotheses about firms with intermediate amounts of participation are developed. The assumptions made in existing theoretical models of the worker controlled firm are questioned, and alternative assumptions developed which correspond better to what we know of the effects of participation within the firm. Implications of the new assumptions for the firm's policies for quality of the work environment, location policy, and pollution policy are outlined.

On the basis of this study, some tentative suggestions are made as to how worker participation can be a useful strategy for planners of economic development in poverty areas and new communities.

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## INTRODUCTION

### The Social Productivity of Firms

The implicit criterion we use to evaluate an economy is its social productivity - the contribution it makes to human consumption. Money is used as a unit of account for measuring such social productivity. But the economy includes also other outputs besides those material goods and services which are exchanged and valued in money by the market. The enterprises which for the production sector of the economy generate costs and benefits to society which do not show up in the production process as costs or revenues to the firm. The effect on a worker\* of the job he does is one of those social products which occur in the system of production and which are not adequately dealt with in the market, so that the true costs are not borne by those who create them. A large share of the waking hours of most adults is spent at work, and in work-linked activities such as commuting. De Grazia<sup>1</sup> has shown that the share has decreased surprisingly little in the last fifty years or so. The attributes of the job, other than the wage, are thus potentially a significant com-

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\*worker is generally used in this paper to refer to all employed individuals in the labor force, rich, poor, blue collar, white collar, professional, etc., unless explicit reference to some other meaning is made.

---

ponent of the worker's total utility. The kind of difference these characteristics of a job can make is illustrated by the comparison of such autobiographical comments as, on the one hand:

"I do... find enormous enjoyment in research and in the writing of history. I am happy in it, and that is the main thing".<sup>2</sup>

And on the other hand:

"The time passes, but that's all. We spend a third of our lives in the factory, but there's no overall purpose or meaning to it other than the money. Back from the holiday, we start counting up the weeks to the next: no other dates qualify for significance except the date when we are free. There's no sense of achievement about the work, no feeling that we are creating or building something. Producing the umpteenth chemical toilet bucket will give us no more satisfaction than producing the first".<sup>3</sup>

These extreme examples show vividly how much the kind and conditions of work can affect the quality of a person's life.

This paper argues that many of the non-wage attributes of work or of jobs are not adequately dealt with by the market so that additional costs of production are borne by the workers. It is concerned with the feasibility, effectiveness and implications of a method of solving this problem. The strategy studied is participation by workers in enterprise decision-making: a number of recent studies have suggested that:

"satisfaction in work is significantly enhanced by increasing workers' decision-making powers on the job. Under a great variety of work situations and among

workers of vastly different levels of skill, work satisfaction has been shown to increase even though the technical processes of production and the workers' tasks themselves remained unchanged".<sup>4</sup>

And another paper on the participation literature concludes:

"Men will take greater pleasure and pride in their work when they can participate in the shaping of the decisions that affect their work".<sup>5</sup>

### The Problem of Social Products

The social products of production processes, (costs and sometimes benefits not borne by the producing firm), include, as well as some effects of work on workers, the effects of production processes on the community, such as pollution and some locational effects. Both of these more familiar examples have been recognised as legitimate topics for public concern. An enterprise which pollutes air or water around it affects by so doing the environment of residents in the community and elsewhere who breathe the polluted air or drink polluted water. In the absence of some form of effective regulation, the costs of that pollution are borne not by the firm which creates it but by the individuals affected, or the community which must use, for example, water purification processes to restore the status quo. Hence we find it appropriate for government to intervene, with regulation by law, or with taxes, to make the enterprise

which creates the problem to pay the cost, or refrain from imposing it on others. Government will also intervene to pay subsidies to firms to encourage them to locate where they create positive external effects for the community or other firms in the community. And government subsidizes urban renewal projects because of their supposed social productivity, which is positive, whereas the private productivity of such a project would not alone be enough to cause it to be undertaken. A similar argument should justify public policy concern with the effect of work conditions on workers. In the extreme cases of industrial injury and illness, some public intervention already occurs: legislation establishes some minimum work conditions standards and provides for workmen's compensation. This is done because the market alone does not supply what are considered by the society adequate standards, as a result of failures in the labor market: the uneven bargaining power of firm and workers given the competitive bind in which each firm finds itself which prevents each from investing in expensive safety measures unless all the others do so also, as well as the weakness of institutions in the labor market in dealing with this kind of problem, which is discussed in more detail below.

As incomes rise, the share of income people spend on non-essentials increases, and their spending on



necessities such as food and housing decreases. People then can afford to concern themselves with other items of consumption. Material consumer goods and services are one such item. Another is the social goods which affect the quality of life, such as environmental quality, the availability of public leisure goods such as parks and open spaces, and perhaps, as is argued here, the quality of work conditions.

In addition, the U.S. economy now is further than ever from the paradigm of free competition in which the market forces lead to attainment of a social optimum position. Much of the economy is run by large firms in oligopolistic or monopolistic markets. In the labor market, the growth of scale of firms is paralleled by large unions, and in them the distance between line workers and the negotiators make it less and less likely that local work condition issues, except for extreme cases, will be a major issue in contract negotiations. In industry, the nature of the job is often determined by applying the most advanced technology to the production processes. It is then assumed that the worker will adjust to the job thus created. The worker may rebel informally, occasionally a wildcat strike may occur. But in general the institutions surrounding the labor contract are such that it is impossible for workers to avoid paying many of the costs of the

external effects of work conditions.

There is thus no reason to suppose that the problem of costs of production which are not borne by the producer but by the worker, and of possible inefficient distribution of rewards to workers between money wages and work conditions, will be resolved spontaneously through "market processes", since it is a result of institutional imperfections and of market failure, rather than a 'frictional effect' in the market which will work itself out. Some form of public intervention is thus necessary to bring about a better (more efficient and more equitable) distribution of costs and benefits of this kind. But we must determine what kind of changes are needed. Moreover, the other effects of such a change must be considered: the effects other than on the impact of work on workers.

#### Urban planning and the problem of work conditions

Planners' concern with work, jobs, and the labor market, has traditionally focussed on the need to provide employment for the community in which the planner is planning. They often plan for the provision of jobs where a labor force exists and needs jobs, as in planning for undeveloped rural areas or areas where traditional industries are declining, and more recently,

for ghetto areas where unemployment rates are high. Or they plan for jobs as a way to attract population, in planning new communities or for the growth of suburban towns. Both strategies assume that policy must be made within the structure of the existing economic system. This limited viewpoint must necessarily exclude the comparison of alternatives which may have a much greater social value. A program which has been used for the economic development of ghetto areas, and which begins to explore alternative economic institutions, is the Community Development Corporation (CDC) idea, through which the economy developed for the community retains as much as possible of the wages and profits within the community and the firms can be run at least partly in the interests of local consumers and workers instead of entirely in the interests of owners who may be located elsewhere.

The traditional view of the nature of work and jobs as they are relevant to planners is paradoxical, given that planners are concerned with the quality of the non-work time of the people they plan for, that is, they develop recreational facilities and evaluate development plans in terms of the social, not private value of an 'attractive' physical environment. This paper is concerned with the extension of that concern for non-material or non-market value to institutions in

the labor market with whose material value planners already are concerned.

### Structure of the Paper

The following chapter defines more rigorously the problem of work conditions and the satisfying or alienating character of the job. It pursues the questions of the nature and causes of work satisfaction and analyses the labor market imperfections which make quality of work an effect of production processes whose cost is largely borne by the worker. Worker participation as a solution for further investigation is discussed and compared with some alternative strategies.

In chapter 2 that solution, worker participation, is described in more detail: alternative models of worker participation in the structure of the firm and its decisions are described. Using studies and examples of cases in which worker participation is a factor, the role of other factors (the level and amount of participation, for example) in modifying the impact on work satisfaction is pursued. The problem is to determine in what circumstances participation affects worker satisfaction, and how much. The effects on work satisfaction of models of participation in which workers run the firm, share control, or are hired employees without participation are compared as far as possible.

Chapter 3 examines the meaning of worker participation as it affects the behavior of the firm. It pursues the issue of other effects of worker participation, when it changes the behavior of the firm. The effect of such a change on other parameters of the firm's behavior is studied particularly with respect to external effects.

The last chapter pursues the conclusions of the previous chapters, on the effectiveness and the other effects, and on the conditions for success of such a strategy: it discusses the policy implications and political implications given the criteria for effectiveness which chapter 2 suggests. That is, how could participation, (if it is an effective means to a desired end), be introduced (by industrial management, by government, or as a result of worker pressure on firms and workplaces)? How far could we expect each alternative to alter the character of jobs and their effects? What side-effects does chapter 3 suggest would result? It compares these findings with some of the arguments which have been and are being used for and against the workers' control and worker participation models of the firm.

This paper does not pretend to present new first hand research on the problem of participation and work satisfaction. It is, rather, an attempt to use some of the many studies which have been made of this topic (by sociologists, economists, social psychologists, manpower experts, and management experts) in a novel way: to analyse the issues and extract the possible implications for planners. Some reasons why their interest in this issue can and should be expected to increase are proposed above.

The information which is presented here on the effectiveness and conditions of workers' participation may, also, be of interest to those who are interested in the development of models of citizen participation in planning. This field has been less studied than that of worker participation, and some of the facts presented here may be relevant: some of the same questions are raised such as the effect of different levels of participation, from observation to full control of decisions, on the awareness or alienation of participants.

## Chapter I

### THE QUALITY OF WORK, JOB SATISFACTION, AND ALIENATION

#### Effects of work on the worker

If, as the introduction asserted, the quality of work is for many workers lower than it could be, because the existence of market imperfections causes it to be underproduced, then it is a legitimate and necessary concern of policy to consider ways of improving the quality of work, making it more satisfying. This chapter first considers the classical theory of the labor market with respect to attributes of jobs other than wages, and then compares that with the real world working of that market. It then defines more exactly than the introduction what are the effects of work on workers which make the quality of the job environment lower than it would be in a perfect market for labor. Given the nature of those effects (work satisfaction and alienation) the alternatives which have been suggested as solutions are described and the choice of worker participation as a solution for further examination is explained.

The quality of the work environment and the  
Labor Market

In his account of the working of the labor market, Adam Smith wrote:

"the whole of the advantages and disadvantages of the different employments of labor and stock must, in the same neighborhood, be either perfectly equal or continually tending to equality... this at least would be the case in a society where things were left to follow their natural course, where there was perfect liberty, and where every man was perfectly free both to choose what occupation he thought proper, and to change it as often as he thought proper".

In Smith's system, inequalities occur in the short run, while the process of adjustment works itself out. They may also occur when things are not left at perfect liberty and men are not free to choose among alternative employments. Smith enumerated the causes of difference in wages between different employments: he did not say that wages are equal in all employments, but rather "the whole of the advantages and disadvantages". He listed the "ease or hardship", the "cleanliness or dirtiness", the "honorableness or dishonorableness" of the employment, the "easiness and cheapness or the difficulty and expense of its learning", its "constancy or inconstancy", "the small or great trust which is reposed in the worker", and "the probability or improbability of success in the employment". Occupations equal in other respects would tend to be equal in price, but occupations unequal in other respects would be unequal in price.



A further factor which would in a perfect market situation be included in the bundle of job attributes to be equalised would be the quality of the job. That is, if we abandon the assumption that labor or work activities are necessarily non-fulfilling drudgery undertaken to secure an income, and that creative activities leading to individual development must necessarily be non-work or leisure activities, then the perfect competition model of the labor market should take into account the character of a job as drudgery, or as creative or satisfying. It is this attribute which we mean here by the quality of the job.

If the labor market worked as in the classical theory, then entrepreneurs will improve work conditions instead of raising wages as long as that is the cheaper way of improving the relative attractiveness of the job. Moreover, this process would take into account any increases in productivity resulting from improvements in the quality of work.

In the real world, however, the labor market is far from perfect. Workers are not free to move between jobs and, by so doing, to express preferences for more satisfying jobs at less pay, because in the job market there are significant constraints to mobility in the

form of costs of entry, barriers to entry, and costs of moving. Alienation is not, for this reason, a cost to many workers which can be recouped through a higher supply price of labor. These workers are not able to extract higher wages as "compensation" because of the lack of meaningful satisfying alternatives available to them. Insofar as a variety of work conditions exists, the stratification of labor markets, through mobility constraints, insures that persons in alienating work environments have only similar environments as alternatives. (For example, a factory worker does not typically have the option of becoming a doctor). This stratification of labor markets means that individuals do not have equal access to jobs. Access to jobs is a function of access to education and training, since educational standards now set minimum admission criteria for many jobs.

In a perfect market economy, human capital would serve as collateral so that the individual can borrow to increase his human capital investment, thereby removing any budget constraint. In the real world, human capital is inadequate collateral. Thus an individual with few resources is unable to overcome his budget constraint and acquire the necessary resources for education.<sup>2</sup> This is one of the factors which result in a skewed distribution of education in which the

higher income group receive more education than others. The greater value of an extra dollar of consumption for individuals in lower income groups also makes it harder to forego immediate consumption for education and a higher paying job later. This also makes the risk involved in investment in education more costly to lower income groups. That risk is greater, also, because the poor are likely to have less access to information about labor markets and about the potential benefits from human capital investment. Discrimination has been a further factor discouraging investment in education on the part of those already at the bottom end of the labor market. This imperfection in the market for education means that even at the start of a career access to jobs is not equal or free.

Other factors which limit the ability of workers to move between firms, so that they will improve their work conditions, are market imperfections in the labor market itself. Costs of moving, seniority provision, deliberate union exclusionary efforts, inadequate knowledge concerning alternative employment opportunities, and an incomplete vesting of pension plans all limit labor mobility and thus make it less easy for workers through the labor market to put pressure on employers to improve the quality of work through the market. Barriers to mobility give firms oligopsonistic powers, thus permit-

ting them to offer their workers a lower quality of work environment than they would in a perfect market. Even where improved work conditions might increase workers' productivity, the industry competitive constraint on each firm may make any one firm unwilling to take that risk unless all do so. This factor explains why legislation is necessary to ensure that socially preferred safety standards are provided in industry.

In the introduction, a further factor was mentioned: the institutions which govern much of the bargaining between workers and employers are such that negotiation is much more likely to take place over issues such as wages or benefits which can be valued in money terms and which are the same for many plants or locals. The large scale at which negotiations take place between unions and employers, and the tendency of smaller unions and employers to set their terms on the basis set by these large institutions, effectively ensures that issues of work conditions which are by nature small scale, specific, local issues, will receive less attention than those which are similar for all plants and which are easily priced and compared by the employers. The institutions surrounding the labor market thus cause most of the non-wage and non-monetizable attributes of the job to be imperfectly adjusted

between employer and employee preferences. Of these attributes, one central to this study is work satisfaction and the effect of the work itself on the worker.<sup>3</sup>

The working of the labor market can, however, provide supporting evidence for the contention that the job satisfaction inherent in work is taken into account by people choosing jobs. Daniel Patrick Moynihan a few months ago was reported in the New York Times to have

exploded when asked if the work incentive provisions in the (welfare reform) bill would force people into jobs that were not "meaningful":

"Middle class aesthetes are going around saying what is meaningful, what is meaningful employment?" he declared, "Most people work for a living to earn money for themselves and their families. They don't ask whether what they are doing is meaningful. When a farmer gets up at 6.30 to milk the cows, does he stop and ask himself whether what he does is meaningful?"

Moynihan's example supports the position he is attacking: farming has non-wage (non-material) attributes that tend to offer the farmer a more meaningful involvement than his industrial counterpart, for example: farm work is varied; its pace is not constant; the farmer makes decisions for himself; it can be as meaningful to him as much blue collar industrial work is not to the laborer.

### Work Satisfaction and Alienation

While what we call "work" includes much that is drudgery, or non-fulfilling activity which is undertaken in order to secure an income, it may also be fulfilling, creative and lead to individual development. These factors do not in reality distinguish non-work ("leisure") activities from work. The historian quoted in the introduction is one who enjoys his "work". Another is "the Schoolteacher" who writes:

so for me teaching is important and valuable work which I enjoy doing most of the time. It is a job concerned with growing and developing individuals who are never predictable and so provides a variety of experience which is always stimulating. Teaching is a two-way process with a feedback from the pupils which constantly modifies a teacher's own approach; if the danger of appearing an infallible oracle is avoided, and a certain respect for the children one deals with is cultivated, the job can be rewarding and sometimes creative.<sup>5</sup>

The teacher attributes the interest of his job to its changing content and the way it "constantly modifies a teacher's own approach": it leads to individual development.

Another writer attributes his liking for his job to the fact that it is "interesting":

My trade was a good trade and I left plenty of fellows on the melting shop who think the same as I do. The same fellows are hoping that the vast change in steel production will not be cataclysmic for them, that the trade will still be interesting because it still will need their skill... As for me, the open hearth furnaces served me well and I served them well and I'm not sorry we met. They gave me a chance of a worth-

while working life in a tremendously interesting industry. That doesn't always happen to working men.<sup>6</sup>

Work can be inherently satisfying as well as a source of income. This is not the result of work alone: some jobs are more satisfying to human needs, of themselves, than others. 'Job satisfaction' refers both to the attitudes to the job which a worker reports, and to effects of the job on the worker which may be, but need not be, expressed by the worker. This aspect of the concept is close to the concept of alienation. Blumberg writes that:

there are objective alienating qualities about much labor and these are seen and felt as such by the worker, although he perhaps does not articulate them explicitly... an underlying strain of work alienation, here greater, there lesser, seems to be endemic to the world of work.<sup>7</sup>

There are good reasons to hesitate before using 'alienation' to describe the issues which concern us here. There are non-money dimensions of the job which will make it more or less satisfying but which are not sources of alienation in the worker. An example is the physical conditions of the workplace - the 'cleanliness or dirtiness' of the employment of which Adam Smith wrote. But a more detailed examination of the factors which are reported as sources of job satisfaction suggests that the problem of worker alienation is closely linked with that of job satisfaction. The attributes of jobs which are most frequently reported

in interview surveys of workers as sources of job satisfaction (other than financial rewards, hours of work and work conditions) are:<sup>8</sup>

supervision

job content, and

the work group (or relations with fellow workers)

Supervision on the job ranges from specific and authoritarian to general and permissive. The consideration which a supervisor shows of workers under him, relative to the importance he attaches to production goals, and the influence a supervisor allows to workers in decision-making are the two most important components of this factor. It is related to the problem of powerlessness at work and the feeling of objectification, or being treated as a thing, not a person, which characterize the alienated worker.

The job content is the character of the job itself. A job can be monotonous or varied, depending on the extent of specialization in the production process; on the level and responsibility of the job; the job may be such as to include a high or low degree of control over work methods and work pace; finally, it may use or neglect the skills and abilities of the unemployed self in the worker. Alvin Gouldner describes the effect of non-fulfilling jobs as 'the unemployed self'. He



explains its effect:

The useless qualities of persons are, at first, either unrewarded or actively punished should they intrude upon the employment of a useful skill. In other words the system rewards and fosters those skills deemed useful and suppresses the expression of talents and faculties deemed useless, and thereby structures and imprints itself upon the individual personality and self.

Correspondingly, the individual learns what the system requires; he learns which parts of himself ~~are~~ are unwanted and unworthy; he comes to organize his self and personality in conformity with the operating standards of utility, and thereby minimizes his costs of participating in such a system. In short, vast parts of any personality must be suppressed or repressed in the course of playing a role in industrial society.<sup>9</sup>

The Work Group and the worker's relations with his colleagues can be a source of satisfaction at work, that is, the interaction involved at the workplace, and the acceptance it offers.

The meaning of 'alienation' is far from clear, and we are not concerned here with all the meanings it has been given. As Blauner puts it:

the term, now very fashionable, is bandied about. Modern man is said to be alienated from himself, from other human beings, from political life, from work, from his intellectual and artistic productions, from religion, belief and culture... the alienation thesis has become the intellectual's shorthand interpretation of the impact of the industrial revolution on the manual worker.<sup>10</sup>

We are concerned not only with manual, industrial workers, but with all workers or employees. But the phenomenon we are concerned with as job satisfaction or as the

social productivity of work itself, refers to the alienating or non-alienating character of work, as well as to the narrower conception of job satisfaction used in industrial psychology:

the terms job satisfaction and job attitudes are typically used interchangeably. Both refer to affective orientations on the part of individuals toward work roles which they are presently occupying. Positive attitudes toward the job are conceptually equivalent to job satisfaction and negative attitudes toward the job are equivalent to job dissatisfaction.<sup>11</sup>

Our concept of job satisfaction differs from this because it includes the objective effects of the job on the worker, as well as the subjective attitudes of the worker to the job, which are sometimes, but not always, the only available measure of the former. The alienation concept also refers to the objective effects of the job on the worker. Blauner defines it as follows:

alienation exists when workers are unable to control their immediate work processes, to develop a sense of purpose and function which connects their jobs to the overall organization of production, to belong to integrated industrial communities, and when they fail to become involved in the activity of work as a mode of personal self-expression.<sup>12</sup>

The four points he mentions are basic elements of job satisfaction which concern us here.

We can compare this with Marx's description of how it comes about:

What then constitutes the alienation of labor? First, the fact that labor is external to the worker, i.e. it does not belong to his essential being; that in his work, therefore, he does not affirm himself but denies himself, does not feel content but unhappy, does

not develop freely his physical and mental energy but mortifies his body and ruins his mind. The worker therefore only feels himself outside his work, and in his work feels outside himself... His labor is therefore not voluntary, but coerced; it is forced labor. It is therefore not the satisfaction of a need; it is merely a means to satisfy needs external to it... Lastly, the external character of labor for the worker appears in the fact that it is not his own, but someone else's, that it does not belong to him, that in it he belongs, not to himself, but to another.<sup>13</sup>

The dimensions of alienation which are distinguished by these two writers are very similar: Blauner refers to the inability to control immediate work purposes; Marx writes "his labor is therefore not voluntary, but coerced; it is forced labor... (his labor) does not belong to him". Powerlessness in the workplace exists where the worker cannot control his job or his working conditions. The worker in jobs which are alienating typically has no say in what is produced, he cannot influence firm policies, and he does not help to decide how the firm's income is to be divided. A work task is alienating if the technology is such that the worker cannot control the pace of the job, or his own movement, or choose among techniques. To the extent that the opposite conditions hold, a job will be less alienating.

The sense of purpose or meaningfulness which Blauner talks about corresponds to Marx's "the relation of the worker to the product of labor as an alien object exercising power over him". This arises because

the worker may have a sense of the valuelessness of the product produced, or he may be isolated from other workers. Meaninglessness can result from the nature of a job in which the worker does one small task, with no visible product, if he doesn't understand the production process; if the product of his work is standardised; or if the task is monotonous or unchanging.

Social isolation, or the inability to belong to an intergrated industrial community results from the impersonality of bureaucracies and production processes whose form is purely technologically determined. Work which is organized only around efficiency criteria, and in which the commitment to work is purely derived from extrinsic (e.g.) wage incentives is most likely to produce this form of alienation (c.f. Marx's mention of alienation in work which "is therefore not the satisfaction of a need... merely a means to satisfy needs external to it".)

Self estrangement, or the inability to "become involved in the activity of work as a mode of personal self expression", ~~or~~ results from jobs in which "labor ... does not belong to... (the worker's) essential being;... in his work, therefore, he does not affirm himself but denies himself, does not feel content but

unhappy, does not develop freely his physical and mental energy but mortifies his body and ruins his mind". Self estrangement will exist where work does not satisfy any personal needs, or is separated from the rest of the worker's life.

The basis of Marx's analysis is that in industrial society the separation of the worker from ownership and control of the means of production produces alienation. Alienation results from the growth of capitalism and the fact that in capitalist society a worker's product is controlled by, and goes to the profit of the capitalist who owns the means of production. A second stream of thought on alienation has developed which attributes it to technical rather than economic causes. Alienation of industrial workers is attributed to the technology which the industrial revolution introduced. Machines set the pace of work and division of labor while increasing efficiency, reduces the scope and content of each job. The two explanations are not mutually exclusive: the development of a new technology was basic to the development of large scale firms and the growing distance between the worker and his product which resulted. The two explanations have a similar view of how the change in job content affected workers: Blauner summarised them as:

fragmentations in man's experience... (which have) resulted from basic changes in social organization brought about by the industrial revolution.

The Marxian theory of work alienation differs from the liberal analysis more in the origin to which it is attributed than in the symptoms which are identified. For Marx, the origin is the capitalist ownership of the means of production and control of output: the worker is alienated because his labor

is not his own, but someone else's.... it does not belong to him.... in it he belongs, not to himself, but to another.... the worker's activity (is) not his spontaneous activity. It belongs to another; it is the loss of his self.<sup>14</sup>

The analysis presented by Blauner and others explains alienation as the result of technological change which produces hierarchy, specialization, and the nature of the decision-making process which necessarily follows from that technology if the benefits of increased efficiency which it makes possible are to be enjoyed.<sup>15</sup> Marxian analysis also refers to the locus of decision-making: in the nationalized industries of Great Britain, for example, ownership is vested in the state, but the decision-making is as far from the workers as it was when those industries were privately owned: state ownership has not made workers in them any less alienated from their work.

Thus we have three independently variable factors:

technology, ownership and decision-making. While decision-making is usually vested in the owners of an enterprise, that connection is not necessary. In Yugoslavia, for example, it is the state which owns the means of production, and the workers or their elected representatives who have much of the power of decision-making. Thus there are three possible approaches to solving the problem of alienation: changing technology, if alienation is the necessary consequence of industrialization, in which case either a new, non-alienating technology must be developed if that is possible, or else the choice must be made between alienation as a part of many people's lives, and foregoing the benefits of industrialization, is one alternative. Another is changing the locus of decision-making in the production process, if that is feasible. A third is both changing the locus of decision-making and of ownership, if private ownership as well as private decision-making is the root of work alienation.

#### Solutions to the problem

Increasing the share of workers in decision-making in the firm, or worker participation, is not the only 'solution' which has been proposed to the problem of work alienation. It is, however, the only one which derives principally from the view of alienation

which sees it as derived from factors besides the technology of production. The alternatives which have been proposed most frequently assume that alienation can only be overcome within work by altering the technology. These alternatives are:<sup>16</sup> job enlargement, anti-industrialism, automation and leisure. Job enlargement would reverse the trend towards increasing division of labor by creating a technology in which each worker in industry - and presumably this is a theory which is applicable also to workers in a bureaucracy - is responsible for more stages in production, and performs more tasks rather than less. This is intended to make work less monotonous and to make his product more identifiable.

Job enlargement counteracts the minuteness and repetitiveness of industrial occupations by giving the worker a more extended and elaborate series of operations to perform which enhance his skill and versatility, and enable him to make a more significant contribution to the entire manufacturing process. Successfully introduced, it lengthens the work cycle, introduces variety, allows the worker to set his own work pace, offers him greater independence in deciding on work methods, and gives him responsibility and recognition for the quality of his work.<sup>17</sup>

Georges Friedmann has described one such experiment, at an IBM plant during world war II, in which the jobs of semi-skilled workers were enlarged to include new skills and more operations.<sup>18</sup> In spite of the success of several such experimental programs, the movement has not spread in U.S. industry; moreover, it



is applicable only to a limited number of jobs and to some kinds of work. The fact that such programs have not spread, although studies suggest that the new jobs are found more satisfying than the old, and often that productivity at least does not fall, is a supporting piece of evidence for the assertion that companies on their own will not try to improve the quality of work: this is not in their interest: workers cannot express the level of their demand for better quality of work on the market, and improving it will not alter their profits. However, in a context in which the cost of bad work conditions is internal to the firms' decisions and not external, job enlargement might be more realistically expected to be applied to improve work satisfaction.

Automation is seen as a solution to work alienation by some, because, it is argued, it can alter the nature of the most alienating manual work, in which the worker is tied to a machine, paced by it, and performs a few motions with it. These tasks can be performed by new, automated machines.

Blumberg describes this alternative as follows:

In the automated factories of the future, workers will not be tied to their machines but will have much greater freedom than operatives of today - freedom to control work pace, freedom of physical movement, etc.

The rhythm of the automated factory - what has been called a calm and crisis rhythm - will be much more conducive to work interest than the unrelieved tedium of the unending unvarying assembly-line.<sup>19</sup>

Blauner compared the workers in four industries and found less alienation among the workers in the most automated industry, chemical processing, than in the mechanized plants in the textile and auto industries.

He argues that

with automated industry there is a counter trend, one that we can fortunately expect to become even more important in the future... the alienation curve begins to decline from its previous height as employees in automated industries gain a new dignity from responsibility and a sense of individual function.<sup>20</sup>

This solution, like the first one discussed, is limited by the number of jobs to which it is immediately applicable. Labor is still cheaper than automation in most industries, in many jobs. Moreover its applicability is limited primarily to blue-collar jobs; relatively few clerical and service jobs are likely to be automated to the extent Blauner has in mind in the near future. And automation will not necessarily increase work satisfaction when it arrives: Blumberg cites several studies of automation which resulted in reducing the skill content of jobs, not increasing it.<sup>21</sup>

A third solution sometimes proposed is the rejection of technology and return to pre-industrial production methods. If the industrial revolution

resulted in alienation and meant that work is no longer satisfying, we could solve those problems by returning to the status quo ante and rejecting technology.

The main problem with this is feasibility: the incentives are so heavily loaded against it that other criticisms, such as analysis of the cost of such a policy in terms of improvements in living standards which would have to be foregone, are irrelevant.

The minimization of work time and maximization of leisure which can be a source of satisfaction is the fourth alternative. This is the only solution, if work is rejected as a source of satisfaction in itself at least for many jobs. But the amount of time men now spend at work is far from negligible; De Grazia has shown how little the time people spend at work has decreased in this century.<sup>22</sup> It is not likely to start suddenly declining at a rapid rate, as it must if this "solution" is to be meaningful for people alive today. Moreover, if work can have positive functions in people's lives, to abandon it would be costly and risky.

A much fuller analysis of each of these alternatives and of the advocates of each and their arguments is given by Blumberg, who deserves credit for many of

the arguments given above. His analysis of the effects of participation<sup>23</sup> as a solution to the problems of work satisfaction and conditions of work is, together with F.J. Stendenbach's paper<sup>24</sup> on participation and manpower policy, a starting point for the discussion in the following chapter of the conditions under which participation can affect worker satisfaction and the factors which affect it. Blumberg analyzes the evidence on alienation and worker participation to show that increasing workers' share in the operation of their workplace will increase their work satisfaction and reduce their alienation. He manages to show that within a given technology worker participation can cause the extent of worker alienation to vary. He concludes from his review of the literature that

there is hardly a study in the entire literature which fails to demonstrate that satisfaction in work is enhanced or that other generally acknowledged beneficial consequences accrue from a genuine increase in workers' decision-making power. Such consistency of findings, I submit, is rare in social research.<sup>25</sup>

Stendenbach, in his study of the contributions which participation can make a) to the objective of an economically more productive utilisation of the labor force; and b) to the objective of increasing satisfaction of basic human needs and of personal development and actualisation through work, concludes that it contributes effectively to both goals.<sup>26</sup>

Participation of workers in decisions in an enterprise potentially affects the job satisfaction of workers in two ways. Worker participation may affect job satisfaction through the change that participation produces in workers' role at work: job satisfaction may increase even where the decisions made by workers bring about no other changes in their work situation.

Participation of workers in decisions at work also can influence job satisfaction through the objective changes in work situation which can result from workers' influence on decisions. If work satisfaction is an externality borne by workers and not usually taken into account by the firm, worker participation will make it possible for the workers to alter their objective conditions in those areas in which they influence decisions, and thus to improve work conditions.

In the next chapter, some variables in the kind of participation which can be introduced into a work situation are considered. Blumberg, Stendenbach, Vroom, Verba and others<sup>27</sup> have shown that participation will have a positive effect on the work situation. But, how much influence on decisions, or how much participation is needed to produce such an effect? In other words, how strong is the relationship between parti-

icipation and job satisfaction? What difference does it make at what level in the enterprise or at what scale the participation occurs (on the shopfloor or in the boardroom, for example?). In theory, at least, worker participation can occur at any level in the firm. In chapter 3 the effects on the behavior of the firm of worker participation are examined.

The two sets of questions which are pursued in the next two chapters arise from the focus of this paper on the relevance of the problem of work satisfaction to planners. If some form of social innovation seems necessary, the next questions which arise are what form will it take; how will it work; and what other implications does it have.

## Chapter 2

### INFLUENCES ON THE IMPACT OF PARTICIPATION ON JOB SATISFACTION

#### Introduction

Several mediating factors will affect the extent of impact of workers' participation on their job satisfaction. Some are individual, personal factors, which do not concern us here.<sup>1</sup> Situational factors are discussed here which might be expected to play a role in determining the impact of participation on job satisfaction and work alienation. They derive generally from the descriptions given above of job satisfaction and worker alienation. The variables we examine for their effects are:

the amount of control workers have in a self-management situation;

the scale or level of the firm at which workers participate in management;

the directness or immediacy of participation - that is, whether workers participate through elected representatives or directly;

how and by whom participation is introduced.

### Evidence

The evidence which is available to examine the effects of participation on worker satisfaction and influences on it is far from abundant. But, as a first step, data from a number of different types of study can be assembled which has some bearing on these issues. The most detailed data will be presented from work-related research; relevant evidence from other studies of participation in non-work environments will also be used.

Some evidence is available from studies of the effects of work environments where participation has been introduced on a long term basis - but these are rare. A second source is experiments in work environments in which participation has been a factor, either designed as an experimental variable, or occurring in practice though not planned by the experimenters, as with the Hawthorne experiment. Other sources are cases in which participation by workers in decision-making has emerged spontaneously as a result of the disruption of normal procedures; or in response to other changes in the work situation or to demands with which normal procedures were unable to cope. A good many examples exist of instances in which workers have taken over their workplaces: Spain, for a while, in the 1930's;



Russia in 1918; Algeria in 1962; and Italy in 1969 and 1970, for example. These documented examples, however, are of smaller scale spontaneous worker control. Other sources which attempt to explain the way different kinds of participation affect participants' satisfaction include surveys of workers and studies of job satisfaction, and comparisons of different forms of work situation.

Studies of foreign (non-american) experience with worker participation or control will be used for information on the impact of participation on the individual, and are the only source of information on the impact on participation's effects in alternative forms of economy - for example the self-management economy of Yugoslavia, and the state managed economy of Poland; and the partially planned economies of Western Europe. The foreign examples include instances of both great and small amounts of control at many levels of the firm, not all of which exist in the U.S. or have been documented.

#### Measures of work satisfaction

This study is concerned with the impact of worker control on workers' attitudes to their jobs. In this section some of the measures which can be identified as

indicators of those attitudes are described. These variables - indicators of the impacts of participation - relate to the amount of satisfaction or alienation - which workers experience.

These behavior variables are characterized by varying degrees of objectivity or subjectivity: both in their measurement and in the facility with which they can be connected with alienation or work satisfaction. The more objectively measured variables include:

Absenteeism - the regularity with which workers come to work, measured as the proportion of work-days missed.

Labor turnover - the proportion of the number of employees in the firm over a year relative to the number of job slots. High labor turnover may be the result of a high quit rate, or of a large number of workers being discharged by management. Either one can indicate low labor satisfaction with the job, directly, or as reflected in poor job performance.

Productivity - the amount of output attributable to each labor input. Workers producing output well below norms (for example, the industry) may itself be an indicator of dissatisfied workers. People who are dissatisfied with their work appear to be less efficient than others, and thus to have

lower productivity. One reason may be that where work is not an intrinsic source of satisfaction, the need is greater to spend time at work on alternative satisfaction-producing activities such as interaction with other workers.

The more 'subjective' variables may be derived from interviews, questionnaires, or psychological testing. They include hostility to management, reported satisfaction from work, happiness, identification with the enterprise, morale, commitment to work, cooperativeness, "ego involvement". All these are variables with which workers' satisfaction with the job, or alienation from work, can be estimated.

The last set of measures are indicators of the worker's mental health, usually derived from testing and interviews - for example: creativity, and learning ability; integration and individual development.

The next section describes a model of participation to clarify the meaning of participation in the context of work environments. Each of the subsequent sections relates the most relevant of the available evidence on the impact of one variable on job satisfaction where participation has been introduced. Each variable (amount, scale, and directness of participa-

tion) is first described in more detail and then evidence is introduced. The final section draws together the conclusions to be drawn from the chapter.

#### Definition of participation

In this paper "worker participation" has been used to refer to any situation in which workers have the power to make or influence any decisions in the enterprise in which they work. Participation then exists in any situation in which some of the traditional concerns of owners and management, that is, responsibility for the way in which the firm is operated, and the power to operate it, are shared with workers. A range of possible distributions of power in the enterprise exists, from that in which workers have no share in any of the decisions which are made, at any level of the firm (from shopfloor or office to boardroom), to that in which workers exercise all the prerogatives of ownership, and the firm is completely run and controlled by its workers.

It is conceivable that any of the variables we are considering which are listed above could appear in any combination, although some combinations occur in practice more frequently than others: for example, a small amount of participation introduced at shopfloor

level by workers' initiative, or a moderate amount of participative power through elected representatives in high level policy making, which is introduced by government action (like Mitbestimmung in Germany),<sup>2</sup> are both examples which exist.

Table 2.1 presents one possible typology of forms of participative organization for the enterprise: in it level and amount of participation are varied: it should clarify the meaning of participation in the context of the firm. The types are not mutually exclusive: in one firm participation may exist at more than one level and in a different amount at each level.

King and Van de Vall<sup>3</sup> provide an analysis of participation which they relate to existing institutions: they distinguish three levels of managerial decision-making:

direction or initiation of policy

administration or preparation of policy

execution or implementation of policy

At each level they find two steps: exploration and decision. They also examine the timing of worker participation in each system. Table 2.2 presents their model of the timing of workers' participation.

Table 2.1

Workers' Power and the Level of Participation

Level of Participation:	Shopfloor	Firm
Amount of Power		
Control (most)	Workers set their own pace, control work environment with little or no direct supervision	Workers run the firm, make all decisions, own all profits, control choice of technology
	Complete control of work physical environment some control of timing some freedom from supervision; standards set by work group	Workers are free to run the firm, make most decisions; all or most profits go to owners who retain ultimate control
Codetermination	As above; production norms set by management	Equal responsibility: Workers have equal representation on boards with management and owners
	Control of some aspects of work speed, and of environment Close supervision	Shared responsibility: worker have a veto or a say in some decisions and have representatives on boards of management
Minimal Participation	Piecework: timing of jobs done by management but some control of work speed and method by workers	Routes open for ideas from workers: they get compensated for them  Workers are entitled to information on the firm's operations
No Participation:	Close supervision, pace set by machines or supervisors and enforced.	Workers work for a wage and work conditions bundle set by management unilaterally

Table 2.2

The Timing of Worker Participation

Systems of Participation

		Britain (Joint Consultation)	Yugoslavia (Workers' Management)	Germany (Mitbestimmung)
Level of Direction	Explore	NO	Qualified YES	Qualified YES
	Choose	NO	YES	YES
Level of Administration	Explore	Qualified YES	YES	Qualified YES
	Choose	NO	YES	YES
Level of Execution	Explore	Qualified YES	NO	Qualified YES
	Choose	NO	Qualified YES	YES

Source: King and Van de Vall<sup>3</sup>

### Amount of participation

The amount of participation means the extent of the power which workers have to influence decisions in the firm. The amount of power workers have as participants in decisions at a given level depends on the role they can play in decision-making. Workers as participants may play a positive, negative, or passive role in decisions at any level of the firm. While the amount of power workers have can vary, a passive role is the most limiting of the three, and a positive role potentially the most powerful; while a negative role could be powerful, less can be done with it.

Schuchman<sup>4</sup> in his study of Mitbestimmung in Germany has developed a typology of participation based on these modes, ranking the power of workers from most to least. A modified version of his table is given as table 2.3. It ranks the power of workers from most to least and classes workers' role as positive, negative or passive.

A negative role in the firm is a blocking or veto role: one in which workers can protest decisions and cause delays or veto them permanently. If workers have relatively little power, they can use their role to influence decisions, but ultimately they have no



Table 2.3

Workers' Role and Amount of Control.

	Workers' Role	Passive	Negative	Positive
Amount of Control				
Most				Workers have the right of decision on all issues, exclusively
				Workers have the right of co-decision
			Workers have a veto over decisions	Workers have a temporary veto after which management has to negotiate
		Temporary Veto	Workers can protest decisions	
				Workers must be consulted but their suggestions do not bind the management
Least		Workers have access to information on the firm's decisions and plans		Workers can make suggestions

direct responsibility for them: they can cause managerial decisions to be reconsidered, but cannot determine the ultimate form of those decisions. A veto on the other hand gives workers responsibility for the decisions they are concerned with. They can ensure that it does not take certain forms. The power exercised by unions is largely negative - for example they can declare certain working conditions unsafe and refuse either permanently or until it has been checked to operate with those conditions.

A positive role is one in which workers make suggestions, introduce innovations, and evaluate alternatives in the operation of the firm. If this is a right of consultation without binding the final decision, or of minority representation on decision-making bodies, then the power it implies is indeterminate. However, where workers have an 'equal or total share' in operating the enterprise, the positive role implies responsibility for the decisions which are made. Workers then have the power to control the operation of the enterprise and to exercise in practice some or all of the rights which conventionally belong to the owners of a firm.

A passive role is one in which workers are recipients of information about the operation of the

enterprise, and able to know what decisions are being made, what the true costs of alternative policies to the firm would be, for example. But with a passive role, workers have no direct influence on decisions. However, information about a firm's operations can be very useful to workers in conjunction with a relatively small formal role in decision-making: hence the union pressure on firms in England to 'open the books'.<sup>6</sup>

The significance of the variable "amount" of participation is mostly derived from the "powerlessness" aspect of alienation and from supervision as a source of job satisfaction or dissatisfaction. Increasing the amount of participation also can result in changing relations within the work group, if it results in the need to make decisions as a group in running the production process, thus perhaps reducing the social isolation of the worker. Influence over decisions also could improve job content, both directly (because decision-making in the firm widens the scope of work-activities) and indirectly (through changes in production techniques brought about as a result of workers participation which are made in order to make job content less monotonous or to use more of the worker's skills).

As worker participation is increased, the

alienating content of labor which derives from submission to external control is reduced. Moreover, the amount of decision-making which is shared appears from comparisons of supervisory techniques to be a component in morale, with more sharing of decision-making producing higher morale. This is a further reason for pursuing amount of participation as a variable. On the other hand, it is possible that a very great amount of worker participation could result in greater individual powerlessness as the worker is then subject to even closer control by the collectivity of his fellow-workers. We therefore examine the evidence to see what the effects of various amounts of participation are on worker satisfaction.

The experiments and studies which can be expected to have most bearing on this aspect of participation are those in which the amount of participation is varied while other conditions remain the same. Typically, in experimental studies of this kind, matched work units receive either participatory or non-participatory leadership in performing a task or instituting some change. The study which appears at first to come closest to our need is Coch and French's:<sup>7</sup> they reported that the rate of recovery of job efficiency (in learning new tasks) "is directly proportional to the amount of participation", and that

"... rates of turnover and aggression are inversely proportional to the amount of participation". Their study, of workers in a garment factory, compared a group with directive leadership, a group which participated through elected representatives, and two groups in which all members participated in deciding how a change was to be carried out.

The results of the experiment show consistent increases in the work satisfaction variables (at no cost in productivity). However, the 'participation' by workers was relatively trivial: in Coch and French's study management had already decided on the changes which were to be made; the group without participation was merely told what the new work arrangements would be. In the participatory groups the new work arrangements were "dramatically" presented and discussed. The group (or representatives) then "approved the plans". Although the mode of communication differed, in both techniques the workers were informed of a decision made by management.

It is not known whether the good effects would have continued in the absence of any real power to alter things contained in participation. This example belongs at the extreme low end of the participation scale of power or control. It is not a strongly

persuasive piece of evidence for the effect of amount of power on participants' satisfaction with work. In another experiment in which participation meant some real control, Bavelas<sup>8</sup> found that a group (also of workers in a garment factory) which was allowed to discuss and set production norms was more productive than another which discussed but had no power to set the norms. And in a replication of Bavelas' study, Lawrence and Smith<sup>9</sup> found that morale rose both in a group discussing work-related issues and in another which both discussed similar issues and also set production goals. Efficiency rose in both groups, but significantly more in the latter group than in the former. Both studies suggest that the greater amount of participation involved in deciding on goals as well as discussing work-related issues or production goals, made the participant group more satisfied and productive.

The results of the research on work incentives done in the 1930s at the Hawthorne factory by Roethlisberger and Dickson<sup>10</sup> have more recently been reinterpreted by a number of writers. They have shown that the changes in both work satisfaction and productivity of workers in the Relay Assembly Test Room experiment correspond to changes made by the experimenters in the amount of freedom and of parti-

cipation characterizing the workers' job conditions. This explanation emerges as far more convincing than the experimenters' explanations which attributed changes in productivity to: (a) the "Hawthorne effect" of participating in an experiment; (b) to the development of a group which "will... (perform) in harmony with the aims of management" as a result of the care and "regard to the actual sentiments of the workers" with which innovations were introduced.

Later students of the Hawthorne experiments point out that productivity and the workers' satisfaction rose as long as their ability to participate in setting experiments continued and increased; when the experimenters lost interest in the experiment and reduced freedom to participate, productivity and satisfaction fell. The amount of participation which the girls were allowed is described as follows by the experimenters:

the test room observer was chiefly concerned with creating a friendly relation with the operators which would ensure their cooperation and he discussed their work and attitudes to the test with them.<sup>11</sup>

The 'rules of the game', as they applied to the shop, were changed... The girls were allowed to talk more freely in the test room than in the regular department.<sup>12</sup>

in order that the experiment would not be spoiled by varying attitudes on the part of the operators toward the experimental changes introduced, it was thought necessary to make certain that to every change each girl gave wholehearted cooperation... the

operators were advised of and consulted about changes to be made, and several plans suggested by the experimenters were not introduced because they met with the disapproval of the operators.<sup>13</sup>

(the girls) frequently commented on the freedom from constraint and excessive supervision. In their eyes their first-line supervisor ceased to be one who 'bawled them out' in case things went wrong; instead he came to be regarded as a friendly representative of management. This was what Operator 2 meant when she said, referring to the observer, 'say, he's no boss. We don't have any boss.'

The progress of the Hawthorne Relay Assembly Test Room experiment thus provides evidence that the relationship between amount of participation and job satisfaction is a positive one.

An experiment which involves a slightly higher amount of participation again is Morse and Reimer's<sup>14</sup> study of clerical workers. They found that a group whose participation in their jobs was increased showed greater satisfaction than a group whose participation was decreased. Several measures of morale were used, more sophisticated than those available for reevaluation of the Hawthorne study: "self-actualization" possible; attitudes to supervisors; satisfaction with the company and "intrinsic job satisfaction". All these measures showed increased satisfaction in the group whose amount of participation was increased and reduced satisfaction in the group whose amount of participation was reduced. Again, this is a more convincing linking of amount of satisfaction



and participation than Coch and French.

All the experiments cited above are at a low level of decisions, although the later examples were addressed to changes in amount of participation which gave workers more additional power than did the earlier examples. But the power was at the shopfloor or office organization level in all cases. From the studies which were found of effects of varying the amount of participation, holding other variables constant as far as possible, we can conclude that increasing the amount of participation, at least in issues immediately related to the job, appears to raise job satisfaction and reduce alienation consistently. No studies were found at this level of participation in which the reverse effect occurred.

There is a lack of studies in which participant groups with differing amounts of power are compared with respect to job satisfaction. The Hawthorne experiment cited suggests that successive increases in worker satisfaction and productivity over the years of the experiment could be explained by successive increases in the participation allowed to the workers, but the data are qualitative and far from rigorous. The experiments with more rigorous data concern smaller magnitudes of change in amount of participation, over

a shorter period, but point in the same direction.

### Level of participation

Worker participation will vary not only in amount, but also in the level of the enterprise at which it occurs: a high level of worker participation in overall policy-making in a firm may, but need not, coincide with a high level of participation on the shopfloor or individual job level. Participation in overall policy-making means that workers have a say in decisions such as levels of production and employment; how much the firm is prepared to spend on wages and work conditions; what is to be produced. Participation on the shopfloor or individual job level means that individual workers or groups or teams of workers have power to make decisions affecting their immediate work conditions: the pace at which they work, the organization of the environment and distribution of work in an office, for example.

There are levels of control at a scale intermediate between these two: decisions on the technology to be adopted for production, for example, have implications for individual work conditions at the shopfloor: for example, how many tasks are to be performed by each person on a production line; or

whether highly or only moderately automated techniques are to be adopted. Decisions on work conditions sometimes also fall in this intermediate range. These are decisions which often cannot be made by individuals or by work groups independently: they have repercussions for the rest of the firm

King and Van de Vall<sup>15</sup> compare the levels at which participation occurs - they distinguish the level of the worker or shopfloor level participation, the plant level, and that of the industry and government:

workers participation may occur... as consultation in a shop or department, in a plant, in a multiplant corporation, in a committee of steel or mining industries or in a National Economic Council. Although the primary focus of workers participation traditionally has been the plant, it can be extended from that level in upward and downward directions.

They argue that extension upwards to plant and industry level is 'more important' because

crucial decisions are increasingly being made by managing boards of large holding companies, e.g. on automation, relocation, agglomeration, integration and discontinuance; by employers' associations, e.g. on eliminating labor costs from competition between firms in the industrial sector and by government agencies, e.g. on safety and quality standards, antitrust legislation, taxation and investment regulations.

If we argue that the effects of worker participation on workers' job satisfaction arise mainly from concrete and largely material changes in work condi-

tions, this conclusion follows. But if we conclude that participation affects job satisfaction also or largely through inherent changes in relationship between the worker and his job, then the opposite is true: participation at the lower levels, the shop or office, will affect job satisfaction more. That participation in itself is important with respect to job satisfaction is suggested by the results of the Coch and French experiment reported above: participation which changed material conditions not at all, still caused an increase in job satisfaction.

Participation at the office or workshop level is most likely to affect the nature of supervision and the job content, and hence job satisfaction: the changes which could eventually result from higher level participation with power to change things, are longer run alternatives, if potentially more far-reaching. Hence in the short run, participation at intermediate or shop levels again seems most likely to increase job satisfaction. Moreover, by bringing about more immediate changes in job content and relations with fellow workers, participation at lower levels will affect the meaningfulness of the job, the ability of the worker to be involved in his work, and hence his level of alienation.

There is no one study comparing groups of workers participating (with similar amounts of power in the work situation) at different levels in the same organization. (Some participation experiments, similar to ones described above, were made with supervisors<sup>17</sup> but these were of low level participation although the workers involved were higher in the job hierarchy: it involved their participation in situations where their job content and not higher level policy was involved).

However, we can report on the effects of increases in participation at other levels than the shop-floor, and compare the effect on work satisfaction with the results of participation in the experiments cited earlier, all of which dealt with very low level participation at the workplace.

The Yugoslav system<sup>18</sup> of worker self management is worker participation at the firm level: in all but the smallest enterprises the firm is run by an elected workers council. It should thus be a fruitful source of data on the effects of participation at a high level in the firm. But because worker self management is universal and has existed for some time, no obvious control group for comparisons exists. (The environment - economic, social and so on - is too different from

the U.S., of course, to make any direct comparison of job satisfaction in the two countries meaningful).

Kavcic, Rus and Tannenbaum<sup>19</sup> and Obradovic<sup>20</sup> have made studies of workers' attitudes and satisfaction in Yugoslavia. They have compared, however, those workers who are elected representatives on workers' and management councils, with 'non-participants' - i.e. those workers who are collective members in the firm, but who participate mainly as voters. Thus the evidence from Yugoslavia confuses our "directness" variable with the variable "level" of participation. Keeping that in mind, we find that the "participants" at the firm level in Yugoslav industry show "greater job satisfaction" but also more alienation than the non-participants (Obradovic). Obradovic attributes this to frustration from attempting to act in a bureaucracy. While that is a plausible explanation, the results of this study suggest that the value of participation in improving the quality of job conditions is more vulnerable to other factors at higher levels in the firm. That is confirmed by Obradovic's further finding that in Yugoslavia even the 'participants' ranked participation only fifth on their list of desired job characteristics. The difference from the results of American studies is so striking that it suggests at least that firm level participation, when it is indirect, is greatly diluted

in value. Kavcic, Rus and Tannenbaum's finding that workers council members in Yugoslavia "do not differ in their perceptions of aspects of the firm" (control, communication, and decision-making) from other workers and that "the councils do not provide the workers in these organizations with the substantial sense of control that councils are designed to provide."<sup>21</sup>

However, they also found that workers council members were more "highly involved" in their work. Thus the Yugoslav evidence is not clearcut about the effect of participation at this level.

India is an environment still more different from the U.S. or Western Europe, but A.K. Rice's<sup>22</sup> study of reorganization in a textile plant does throw some light on the effects of participation at a level between plant and individual workplace. The "level" was the reorganization of a large workspace in a textile factory. When workers and supervisors were consulted in the event, "the supervisors and workers immediately took control of the system"<sup>23</sup> and resulted in rising productivity and satisfaction. It produced a "flood of technological suggestions... as permissive and collaborative relationships were established".<sup>24</sup> At this intermediate level of decision-making, direct participation came close to repeating the results which were found in low level U.S.

experiments.

The production of suggestions by workers can imply participation in the level of choice of techniques, not necessarily only at shopfloor level. The Scanlon Plan<sup>25</sup> makes suggestions from workers a central part in their participation: the participation of workers' representatives in the committees which evaluate and select suggestions for use in the firm is a further intermediate level which operates concurrently. The Scanlon Plan has had a somewhat different experience, in those firms which have adopted it, from other bonus and profit sharing schemes. Its effects on productivity are claimed to be significantly better, as are its effects on workers' morale. The role of suggestion schemes is important enough in the plan that it may explain its greater success. A study which investigated this would be of great value: it should also distinguish the significance of the mode of introduction, since Scanlon and his followers put great emphasis on this. The care taken in introducing the Scanlon Plan, as well as the participation at an intermediate level through suggestions, appears to deserve credit for the successes which are claimed for the plan.

From the jumble of evidence on the level of



participation we find that it is apparently a factor of some importance, since Coch and French's low level participants with representation showed some changes in alienation, but the Yugoslav evidence suggests that possibly there are no such effects at the level of the firm or that they are not major, at least where participation is through representatives.

#### Immediacy or directness of participation

The previous section on the level of participation raised the issue of the immediacy of participation: that is, whether the worker makes decisions himself, or in conjunction with groups of his fellow workers, or whether he elects a representative or representatives to make decisions on his behalf. Participation through a representative who is subject to recall by his constituency at any time may, but need not, result in something between direct and indirect participation: because the delegate is subject to recall, there are stronger pressures to represent his electors' interests.

The studies of Yugoslavia by Kavcic, Rus and Tannenbaum and by Obradovic do not show a high degree of satisfaction in the firms with indirect participation. The fact that in Yugoslavia the smallest firms,

with under 30 workers, are run by a scheme of direct participation, the workers' council being made up of all workers, suggests the possibility of a study to determine the comparative job satisfaction, alienation, and so on, in matched pairs of firms differing only in that one is just larger than 30 workers and has indirect participation, and the other is just smaller and has direct participation by workers as its workers council.<sup>26</sup> In the absence of such a study, Coch and French's study findings again are relevant, but all the criticisms made above, of the study, still hold, and not too much can be built on its finding that the direct participants were more satisfied than the others, who participated through representatives.

The Coch and French finding, however, does correspond to what we would expect: that powerlessness, and loss of self involvement in work (to take just two of the elements of alienation) are more reduced by direct involvement in decisions at the workplace, and less by indirect involvement. Stendenbach<sup>27</sup> has attempted to compare representative systems of participation in employment with direct participation; he failed to draw conclusions from the two, mainly because of the shortage of adequate studies. But he describes the wholesale failure of works councils, a form of indirect worker participation at higher levels

of the firm, and attributes their failure to lack of power and to unrepresentativity of delegates, because they were in general so indirectly chosen.

The powerlessness and failure to acquire power which typifies the works councils movement in Europe is in marked contrast to the outbursting of energy and will to acquire more powers which are typical of accounts of participation by people, directly and at lower levels: for example, Rice's comment "the supervisors and workers immediately took possession of the system... spontaneously chosen work groups..."<sup>28</sup> No such energy is as obviously released in a more representative system.

#### How and by whom participation is introduced

The way in which worker control is introduced is the last of the variables we consider. By "way it is introduced" is meant who introduces the element of worker control into the work situation, and how. The extreme alternatives are a scheme introduced by management with no prior consultation with or informing of the workers; and worker participation or worker control which results from workers' choice and planning, without the prior consent or encouragement of management. We could refer to one extreme as participation

from above and the other as participation from below. Either such change could occur suddenly or gradually, as a result of a decision or an unhalted trend. The permanence of a participation scheme, or its impermanence, could affect success. The motives underlying the introduction of a participation scheme may cause attitudes or expectations in the other participants which bring about success or produce failure. The success of a profit sharing plan in a firm in which the alternative was closing the plant, if productivity did not rise, is not surprising: Whyte<sup>29</sup> describes one such case and contrasts it with another in which workers were ill-informed about the working of a plan and had no reason for commitment to it. The former prospered and the latter failed, not surprisingly.

A participation scheme introduced at workers' initiative and organized by them should, given the nature of job satisfaction as we have described it, be more satisfying than one introduced by management. Trist's<sup>30</sup> studies of longwall mining in Durham bears this out: where miners had developed a teamwork system, which they organized and ran themselves, their work was more efficient and the workers had lower absenteeism, sickness and accident rates. Miners reported that the work gave more variety and meant that

difficulties were shared; it was preferred to the alternative mining techniques available. But when a team was put together by management to work in the same way, the effect was the opposite. The management established group quickly broke up and miners preferred to return to the old, less 'participative' work-style, rather than have the participative one imposed on them.

The examples which have been documented of spontaneous participative schemes point in the same direction: Babchuk and Goode<sup>31</sup> found a polling system for salesmen's pay which substituted cooperation for competition between salesmen which not only raised morale and job satisfaction, as expressed by the men; it also led them to take over more and more management functions (compare the discussion above of direct versus indirect participation). Spontaneous participation schemes appear to have a greater effect than ones introduced from outside on workers' job satisfaction; but spontaneous schemes may fail for another reason: they may threaten the rest of the system too much, because of the great release of energy which we found in many such instances. Strauss's<sup>32</sup> report of spontaneous participation (by workers in a toy factory who got control of the speed of their production line and of their physical

environment) bears this out: they raised their productivity, and hence their incomes since they were paid a group bonus, resulted in abolition of the participation scheme very quickly: it resulted in too many threats to other parts of the system which had not undergone any such organizational change.

The inherent greater effectiveness of spontaneous participation in raising job satisfaction seems obvious from these studies. But schemes introduced by others than workers can be successful; the effectiveness of the Scanlon Plan shows this. And worker introduced schemes which raise satisfaction effectively, will return it to a lower level than ever if they fail when they come into conflict with the system within which they are generated. When that occurs the fundamental feelings of job dissatisfaction and alienation are confirmed: the workers are indeed powerless and unable to control their lives; workers' involvement in their work then appears as ephemeral and perhaps a sham, since it was so vulnerable to the forces which can end it, as the supervisor did in Strauss's example of the toy firm when he returned the speed of the production line to a constant speed, which was less productive, and more unpleasant for the workers, but which restored his role.

### Conclusions

Surveying the results of studies of the effect of participation on workers' job satisfaction suggests some tentative hypotheses about the conditions which will affect job satisfaction most. We find that the amount of participation is a significant variable: where workers' share in decisions is increased, they report more satisfaction, or behave in ways that suggest that conclusion. Where some workers' share in decisions is more, and others' less, the first group reports greater job satisfaction, or better quality of job environment. This finding is supported by Blauner's<sup>33</sup> findings from his comparison of work alienation in different technologies: the workers were more alienated, and enjoyed their work less in the technology which restricted most their decision-making on the job, the assembly line auto building. The workers in textile production (which again restricted the choices open to workers) were also more alienated than those in printing and in the continuous process chemical factory: these last two very different technologies both gave workers more freedom and more decisions to make.

The studies also suggest that it is the real amount of power or participation which workers have

which affects job satisfaction: a scheme which apparently increases participation, but which gives workers no ability to affect the circumstances of their work, will fail. Whyte's example of the firm in which a profit-sharing scheme failed because the bonuses for productivity paid out had no apparent relation to the workers' industry that week is one example. Another is described by one of the contributors to 'Work':

faced with a sullen uncooperative work-staff, the management decided on a bonus scheme. The details were explained to representatives from each department ... there was to be a bonus on all production above a certain norm... After the representatives had reported back, workmen stood about in groups discussing what to do about the laggards, how to eliminate the bottle-necks... resentment, tension vanished overnight... (but) the bonus never seemed to have much relation to what one's particular section or department had produced... the men looked for an explanation... the manager explained that the scheme was an informal one freely granted by the management and he did not wish to 'formalize' it by posting explanatory notices... he said that the scheme could be revised or wound up at any time, without notice.

We told the men, 'the bonus had been fixed by the manager?' 'Yes'. It could be so fixed, or ended, again by the manager. The whole thing, they judged, was a 'fiddle'.

From that time on, the bonus scheme, as an incentive, was dead.

And he goes on to describe the lower quality of work environment which returned.<sup>35</sup>

The effect of the level of participation also appears to be significant. Participation at low and intermediate levels of decision-making appeared to be the most effective. But the meaning of this finding



is not clear, because the factor of directness is combined in the available sources with level. No examples were found of direct participation at high levels. If the Yugoslav "participants" or workers council members are seen as higher level direct participants, then that evidence suggests that the level is very important and that participation in decisions much above individual job level alone will not increase job satisfaction much if at all. But alternative explanations can be found: that the success of participation depends on the ability to produce visible results, for example, in which case a combination of high with lower level participation would be successful where high level participation alone is not. The evidence then suggests that participation in the policy-making of the firm by representatives alone does little for job satisfaction, but that does not exclude the possibility that it could increase job satisfaction in conjunction with lower level participation, by increasing the number of changes which low level participants can bring about. The success of the Scanlon Plan with its participation at several levels supports this contention.

The evidence on directness of participation all points to the fact that indirect participation is much less significant in its impact on individual workers

than direct participation. This raises the question of what meaningful participation there can be if large scale is a technological necessity: and what kind of direct participation could exist in a large scale organization. Is worker participation only possible in small organizations where direct participation is possible. A factor which has not been studied but which suggests a possible direction is the effect of representation with representatives subject to immediate recall at any time. Andre Gorz<sup>36</sup> has described this as the organization of the workers' representatives in some Italian wildcat strikes of 1969 and 1970. If it reduces the distance between representatives and represented, it might present a way out of the dilemma which otherwise exists.

Participation which is a result of spontaneous worker action, or which is suggested by the workers and approved by management (e.g. the Trist case of longwall mining techniques) is much more effective in our terms than participation which is introduced by management without consultation with the workers, is at best much less successful. The example from 'Work' quoted above describes such a situation. A scheme which is revocable by management again is likely to be less successful than one which management shows more commitment to. These factors can be interpreted as

proxies, for the amount of participation, or the power which participation brings: a scheme in which workers participate in the introductory stages does, ceteris paribus, give workers more power than the same scheme introduced unilaterally by management; and a scheme which can be revoked at any time by management limits severely the scope of workers at whatever level it is introduced.

The most effective participation schemes, in terms of reducing workers' alienation and improving the quality of the work environment, thus appear to be those which

- a) give workers more power, that is make it possible for them to bring about concrete changes in the work environment and process;
- b) are direct, or incorporate an element of direct participation by workers, rather than being exclusively indirect, through delegates elected for a term of office;
- c) are at the level of the firm closest to the individual job, the shopfloor or office, or at least include this as a factor; and
- d) are introduced for reasons which are clear and

not suspect: either because they are the workers' goals and they introduce the scheme, or because management's reasons are known.

### Chapter 3

## THE BEHAVIOR OF THE FIRM WITH WORKER PARTICIPATION

### Introduction

Introducing a greater amount of participation by workers into the operation of an enterprise implies changing the firm from an entrepreneurial or managerial capitalist firm to one which operates with a mixed form of joint control, or, in the extreme case, one which is worker controlled. Such a change in the structure of decision-making of the firm could be described as changing from one 'model' of the firm to another. A business organization which is run jointly by workers and by managers, or by workers alone, will not use (necessarily) the same criteria in making decisions. As a result, the decisions made by the firm will not be identical. The previous chapter suggested that it is possible to raise the quality of the job environment for workers, and that worker participation in management can do that, at least when certain conditions are met. This chapter investigates some implications for the behavior of the firm of increasing the participation of workers in management.

The aspects of the behavior of participative

firms which are considered most fully are: the behavior of the firm with respect to the quality of the work environment, or working conditions; the locational policy of the firm; and the 'pollution' policy of the firm, or the decisions which it makes about the imposition of one kind of external cost on its environment. The latter two aspects of the behavior of the firm will affect individuals living in the vicinity of the enterprise, its 'community'. If worker participation is to be considered as a component of community development planning, such possible changes in the firm's impact on its community, which participation would bring, need to be examined and evaluated.

Although we have found no examples of theoretical models of intermediate cases of shared worker and management control, some literature exists on the extreme case of workers control or worker self-management, (based largely on the Yugoslav model of self-management). The next part of this chapter looks at these models, examines and questions some of the assumptions made in them, and reports the conclusions from those assumptions. Alternative assumptions are proposed as substitutes for some of those used, and some implications of the adoption of those alternative assumptions are described. Implications of models based on the extreme case of worker control for firms

with mixed control are discussed.

The following section pursues the alternative assumptions suggested. Evidence is presented to show that they are more plausible and to justify substituting them in our discussion of the implications of worker participation (for workers, and for the community) of the more conventional assumptions.

In the final sections the implications of models of worker participation for the behavior of the firm with respect to work conditions, pollution, and location are discussed; and finally conclusions about the viability and implications of firms with worker participation in different economic environments, and as a community development strategy, are presented.

#### Models of the participative firm

Much of the discussion in chapter two was of forms of worker participation in which the workers shared the control of decisions with management. 'Intermediate models' are models of firms in which control is shared by management and workers. Ultimately many of the conclusions which can be drawn about the behavior of such intermediate forms are based on the behavior of the polar cases in which all decisions

are made by workers. This reflects the nature of economic models: it is easier to describe the behavior of a pure monopoly or of a purely competitive firm than any intermediate case. Similarly it is easier to describe behavior resulting from the maximization of either profits or workers' incomes, than it is to describe how a firm whose behavior results from a combination of those two goals would act. What this chapter will do is describe how the extreme cases will behave, and refer to types of intermediate, shared control suggesting how their behavior can be expected to be analogous to that of worker- or to management-controlled firms.

Models of the firm of the sort which are discussed here do not give definitive answers enabling us to predict how even the extreme case of worker management will work in reality. At best, they enable us to pursue the logical implications of assumptions about the firm and the criteria which will be used in it to make decisions. Benjamin Ward has argued the case for the usefulness of such models as follows:

Models of socialist economic organization are likely to play a role in understanding economic activity similar to that which the models of competition and monopoly have played. The usual level of abstraction at which such models are constructed generally precludes serious testing of the hypotheses which are formally generated by the models. Rather they serve as sensitizers, in that they make economists aware in some systematic way of the problems that alternative



organizations are likely to face. Out of this awareness it may be possible to generate lower level hypotheses with some empirical content.<sup>1</sup>

The models which have hitherto been developed of the behavior of firms with worker participation in management all deal with cases of worker control in which all decisions are made by workers. The articles, papers, and books<sup>2</sup> by Benjamin Ward, Evsey Domar, Joan Robinson, Jaroslav Vanek and Charles Rockwell which make up the literature on this subject share a number of assumptions, which this section will consider in more detail below. They are concerned above all with questions, not all of which are directly relevant here, about the firm under worker management; with the price and output decisions of the firm, "microeconomic aspects of resource allocation which are derived from a model of the enterprise".<sup>3</sup> Domar is interested in "how would Soviet agriculture, or for that matter any economic sector so organized, fare in such a wonderland?"<sup>4</sup> Vanek<sup>5</sup> has developed a "General Theory of Labor Managed Market Economies" and Rockwell<sup>6</sup> is concerned more specifically with growth and efficiency. Here we are ultimately interested in some more specific aspects of the firm's behavior: the effect on the quality of work and on the locational and pollution behavior of the firm. First, however, the worker-controlled firm is described below - the assumptions which define its

behavior are presented. Then they will be discussed and some contested.

Ownership and control: all the models assume that workers control decision-making, but that the government retains ownership of the productive assets and charges a fixed rate for its use.

"The means of production are nationalized and the factories turned over to the general management of elected committees of workers who are free to set price and output policy in their own interest".<sup>7</sup>

The environment is a perfectly competitive market in the more fully developed models, although Ward and Vanek also examine the implications of worker control under imperfectly competitive conditions.

The labor supply is assumed to be such that either the co-op is actually able to employ the optimum number of labor units maximizing the dividend rate (Ward, 1958 and Domar, 1966) or that it is faced with a supply schedule of labor - a complication introduced by Domar in his 1966 article.

The decision-rule by which the firm operates is that worker-managers are interested in maximizing their individual incomes over a given period of time. The income of each worker is his (or her) share of the income of the firm after other inputs have been paid for. Profits of the firm

are distributed to the workers as part of the income of labor. The objective of the firm is the maximization of income per worker.\* Wages per worker are maximized if the competitive worker-controlled firm chooses the output and employment level at which marginal revenue per worker equals marginal cost per worker.

The production function of the worker-controlled firm is assumed to be the same as that of what Domar calls the "capitalist twin", (which has the same market environment and prices as the worker-controlled firm, and a wage rate equal to the wage or dividend rate of the worker-controlled firm, but which maximizes profits).

Prices of inputs and product are the same for the worker-controlled firm as for its "capitalist twin". What constitutes inputs and product is also assumed the same as for the "capitalist twin".

The assumptions, as Vanek says:

can be summed up as implying a perfect, competitive and smooth neoclassical work in which the moving force, contrary to the capitalist situation, is maximization of income per laborer.<sup>8</sup>

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\*income per unit of labor input can be substituted for "income per worker" if the assumption that labor inputs are homogeneous is abandoned, or, in other words, if it is not assumed that workers are identical and contribute necessarily identical amounts of work or time to the firm.

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Using these assumptions, it is possible to show that

When all firms of an industry use the same technology and free entry is guaranteed, the labor-managed economy will be Pareto-optimal. In other words, just like its ideal capitalistic counterpart, the labor-managed economy will be producing the maximum producible output from given resources and the maximum social satisfaction for a prescribed distribution of income. These conclusions follow from the fact that competitive labor-managed firms equalize factor marginal products to factor returns for all factors including labor, from competition in non-labor factor markets, free entry of firms and identical technologies.<sup>9</sup>

If the assumptions are relaxed, the worker-controlled firm no longer behaves in the same way as its "capitalist twin". The writers cited above have pursued the implications of worker management for employment, output, growth, stability, etc. They suggest that such a firm can be viable, if certain conditions are met or if it is subject to countervailing government policy. If we accept the assumptions about the firm (i.e. that there is no major difference in kind between the two types of firm) under worker management which were reported above, then it is plausible to pursue as a source for models of firms with less than full participation by workers, in which they share control with managers, the parallels between the worker-controlled extreme case and its capitalist twin. We can then pursue the possibility that there is a spectrum of participative firms in which the share of workers gradually increases.

The behavior of such a firm would lie between that of the worker-controlled firm and that of the capitalist twin, its position depending on the relative sizes of the shares of workers and management.

The data presented in the previous chapter, and other evidence which I will cite in the next section, indicates that not all of the assumptions are plausible. Moreover, the questionable assumptions are ones which have bearing on the feasibility and method of developing models of participative firms with less than complete worker control, i.e. on whether the two types of firm differ in kind.

The studies assume that workers participate by electing representatives to a workers council. But chapter two showed that participation through elected representatives is only one form of worker participation; moreover, other forms in which the workers participate more directly in the operation of the firm are much more effective in reducing work alienation and increasing job satisfaction. The Yugoslav system of worker self management which most of<sup>10</sup> the studies use as the basis of their assumptions, is not the only possible form of worker participation, nor the most effective possible. An alternative assumption is that all workers participate directly, (i.e. not only

through election of representatives) in the operation of the firm. If we make that assumption, then the consequences which follow from participation, should also be assumed. That is, job satisfaction will increase, but also, productivity of the firm, given the same factor inputs, output will rise. The studies cited in chapter two and others show that participation which raises job satisfaction also tends to increase productivity. The evidence for this is presented below.

An assumption, therefore, which is questionable is that the production function of a participative firm should be taken to be the same as that of its "capitalist twin". If participation increases workers' productivity, then the outputs which are available with a given set of inputs are no longer the same. More can be produced with the same set of inputs as before.

The models all assume that the firm with worker participation pays the same price for inputs and that what are defined as inputs are the same. In other words what are costs to the capitalist firm are also costs to the participative firm, and vice versa. Similarly, what constitutes 'products' and 'wages' will be defined, it is assumed, in the same way by the participative firm and by the capitalist firm. It is not clear, however, that this is a reasonable supposi-

tion. Even if it is true in the hypothetical world in which all markets are perfect, it may not be so when that is no longer the economic environment. Chapter one described the costs of production which are borne by workers because the labor market is not perfect. If workers make decisions in the firm, the costs of work conditions which in an imperfect labor market are borne by them will be 'internalized' into the firm's decision-making. They will be taken into account by 'the firm' when it includes workers; they would not be taken into account by its "capitalist twin". The "capitalist twin" will not include the quality of the work environment in measuring its products, but the worker-run firm might logically be expected to do so. It is a product which is not sold, but rather consumed by the workers as a part of their income. Externalities which the capitalist firm ignores in making decisions will not in all cases be externalities for the participative firm. Polluted air in the workplace which causes sickness among workers will be a cost to the worker-run firm, although not always to the capitalist firm. Pollution of the air outside, at least when it affects workers as community residents, will not be an externality, to the extent that it is workers who suffer the effects. The costs to the workers of a decision to relocate will be internal and not external to the firm.

## The Evidence for Alternative Assumptions

### Productivity and participation:

Several of the experiments which were used in chapter 2 to discover the effects of participation on job satisfaction also supply evidence on the effects of participation on productivity. In many cases the studies were designed and carried out primarily to discover ways of increasing productivity. Other experiments and what we know of existing participative enterprises supply additional evidence. Almost all of them indicate that participation increases productivity, or in a minority of cases, that it at least does not reduce it.

Bavelas<sup>11</sup> and Lawrence and Smith<sup>12</sup> both found that the groups which set production goals as well as discussed production or work-related issues were more efficient than the control groups which discussed but had no power to make decisions. Coch and French found that the recovery of job efficiency after a change in job content "is directly proportional to the amount of production".<sup>13</sup> An improvement in workers' ability to adapt to a change in job content will significantly increase efficiency in firms where such changes occur relatively frequently; in others that ability would be used infrequently and affect efficiency less.



Kurt Lewin<sup>14</sup> found in a comparison of authoritarian and democratic ('participative') leadership that the production of the two types of group was superficially the same, but that when the leaders were absent, production in the authoritarian groups dropped significantly more than in the democratic groups (the proportion of time spent working fell from 52% to 16% in one authoritarian group and from 74% to 29% in the other; in the democratic group it dropped only from 50% to 46%).

Morse and Reimer<sup>15</sup> found in their study of office workers that productivity rose less fast in the group in which the level of decision-making was reduced than it did in the group in which it was raised. In the directive sections of the company the increase in productivity came in response to a decision by the supervisor to assign fewer workers to a particular job. In the participative divisions the increase came about through a group decision that when workers left the division they would not be replaced but the remaining workers would fill the jobs. It was as a result of this that productivity rose more slowly in the participative division. This suggests that "productivity" in the worker-controlled firm will in some cases be lower because other things are valued more than output of material goods. The job satis-

fraction of the workers in the participative group was significantly higher than in the authoritarian group. If job satisfaction is counted as a product, the lower efficiency of the participative group is no longer proven: the decision not to exclude group members, but to wait till some left and not replace them may have been one reason for the greater job satisfaction which was felt. Verba<sup>16</sup> summarises the point:

the fact that productivity can be raised without a concomitant rise in satisfaction ought not to obscure the fact that productivity and satisfaction are mutually dependent.

Participation and job satisfaction are, we have seen, related and we now find a link between participation and productivity. The latter link is weaker because workers use their power to make decisions in ways which raise the quality of the work environment, sometimes at the expense of their other, material outputs.

The studies of real work situations do not contradict the conclusion that where worker participation is increased, productivity of the firm is likely to increase. In Strauss's study<sup>17</sup> of the toy factory, the introduction of participation in one part of the factory alone raised its productivity so much the rest of the plant was disrupted. Trist<sup>18</sup> describes a plan for longwall mining which increased

decision-making by workers at the coal face and thereby raised productivity. In Rice's<sup>19</sup> Indian textile mill participation raised productivity to a long term level higher than before. During an initial period damage rose sharply, but it later fell, while the increased output remained.

The result in Rice's study suggests that cooperative decision-making will be less efficient than managerial decision-making, particularly at higher levels in the firm. This lesser efficiency in firm-level decisions could be enough to outweigh the greater efficiency of floor-level decision-making by workers, in a firm with participation at both firm and shopfloor levels. Seymour Melman<sup>20</sup> has compared the efficiency of managerial and cooperative decision-making, using a paired sample of enterprises in Israel, half of them under managerial control in the private enterprise sector of the economy and half under cooperative control as part of Kibbutzim. The cooperative firms showed equal or greater efficiency. None of them was very large, however: the median capital investment was £1 1,847 (Israeli pounds) for the managerial firms and £1 1,866 for the Kibbutz factories.

One explanation for the increased productivity

which accompanies participation is the greater job satisfaction which accompanies it: this acts as a motivating factor producing greater effort. Another is that in participating, workers exercise entrepreneurial functions. They do so more efficiently than management can do, and hence increase productivity. An example of this is described in the early stages of a profit sharing scheme which eventually failed:

...workmen stood about in groups - discussing what to do about the laggards, how to eliminate the bottlenecks, ways in which production might be speeded up... The loading gang, between lorries, would move back into production. Men sent to another department for material and finding none ready, would join in and help to get it ready. If there was a bottleneck in assembly, someone would temporarily transfer himself to the section concerned. If a man was late or absent through sickness, the situation would be 'remedied' often before the foreman could do so himself. The division between sections and between departments began to blur... Decisions formerly referred to foremen would be taken by chargehands; decisions normally taken by chargehands would be taken by workers, or, more often, taken by workers in consultation with chargehands... the pattern of authority had begun to change. Here and there in the new atmosphere a man would make a decision and take some action he would not have done before; and it was not simply that they worked harder; they began cutting out unnecessary movement and unnecessary work.<sup>21</sup>

The workers in this description were using a skill they always possessed; but in the past they had had no incentive to use that entrepreneurial, managerial skill; to increase output. Previously, there were disincentives to using them to increase production for the firm, and incentives to using them to beat the system. By opening ways to use these skills, which

are part of the 'unemployed self' of the world of work which Gouldner<sup>22</sup> discusses, participation changes the inputs and productivity of the firm. A managerial firm cannot do that, because substituting managerial skills of the workers for managerial skills of managers makes the managers redundant. Hence the foreman's demand for repeal of the participation scheme in the toy factory which had made him unnecessary.

The inclusion of greater productivity as an attribute of participative firms further complicates the modelling of intermediate models of mixed control: moreover, if productivity increases depend both on level and amount of participation (as does job satisfaction) the typology of intermediate models must account also for this.

#### The Definition of Costs and Returns in a Participative Firm

The theoretical models of the participative firm developed by Ward, Domar, and Vanek all assume that the inputs and the products of the firm are the same as those of its 'capitalist twin'. But the empirical studies do not support this hypothesis. In Morse and Reimer's<sup>23</sup> experiment, the workers in the participative section reorganized their work in more efficient ways when they gained more power over their work. But

they refrained from reducing the size of the staff in the section, to increase productivity. Instead they allowed the group to shrink through normal attrition. This limited the rate of growth of productivity in that section. The workers' decision can be interpreted as a decision to 'produce' more job satisfaction at the expense of the rate of growth of productivity, provided job satisfaction was increased by the decision not to lay off any group members.

The decision-rule in the models of the participative firm is to maximize the average income of workers in the firm. In Chapter I it was argued that for workers there are costs and returns associated with each type of job, in addition to the wage associated with it. In a perfect labor market those non-wage attributes of the job, and wages, would be taken into account by workers who, by moving between jobs, would make the returns to all jobs the same. But in an imperfect labor market, this will not happen. Instead the imperfections in the labor market will tend to result in some of the costs of production being shifted to workers. Moreover, the imperfections in the labor market will tend to cause workers to consume more of their 'income' in wages or close substitutes for wages, and to consume less of their income in improvements in the quality of the work environment

than they would if they were free to choose in a perfect market. It follows that a worker-controlled firm, if it is operating in a situation where there are market imperfections, will define costs and products differently from a capitalist firm in the same market.

For a worker-controlled firm operating in a perfectly competitive system, or in a Lange-Lerner<sup>24</sup> type of perfect socialist system, this argument will not hold. In the case of an economic environment of perfect competition in all markets, the labor market would then operate like Adam Smith's ideal labor market. Workers would then be bearing none of the costs of production, and consuming exactly their preferred share of income as quality of the work environment. The costs and outputs of the worker-controlled firm would be identical to its 'capitalist twin's' costs and output. With perfect competition, the models of the firm with shared control would presumably also all behave in the same way as the polar cases..

In the real world, the labor market is very far from being perfect. A worker-controlled firm will in the real world make its decisions on the basis of costs which include the cost burdens which for a

capitalist 'twin' would be borne by workers. Workers will maximize their income from the firm, including both the 'wage' or money part of their income and the quality of the workplace in their decisions. Moreover, in a firm which is worker controlled, the proportion of income consumed as quality of the work environment should be that which maximizes workers' utility, even in an imperfect labor market. In the 'capitalist twin' firm, imperfections in the labor market will produce their real-world consequence: less than optimal consumption of quality-of-the-work-environment by workers.

With imperfect competition, there is no certainty how the models of the firm with shared control will behave. One plausible hypothesis is that in the intermediate cases, an increase in the share of power of workers will be reflected in an increased share of revenues paid to workers, relative to that paid to managers and owners. At least some of that increased share will be paid out as improved work conditions, if the increase in worker participation reduces the imperfection of the labor market for workers in that firm.

In Yugoslavia, the quality of work conditions, and the provision of welfare facilities for workers,



is a function of the undertaking which "is tending more and more to be emphasised"<sup>25</sup> (I.I.O. report on Workers Management in Yugoslavia). The same source continues:

Although this is not formally laid down in any legislation, it can be said that the welfare function of the undertaking has come to be one of its features... a decision on the amount to be allocated to welfare activities indeed often causes the most protracted discussions within the undertaking.<sup>26</sup>

In Sweden, workers participation in management has led to the development of an elaborate system of safety committees and representatives.<sup>27</sup>

In a worker managed firm, operating in a product market in which it competes only with other worker managed firms, the costs of all firms will be similarly redefined, and the increased costs will be shifted to consumers of the product. (The consumers previously received a hidden subsidy, in the form of costs borne by the workers). The same will be true of a worker-controlled firm which is a pure or near monopolist in its product market: the increased costs will be paid by the consumers of the product. A worker-controlled firm, in a perfect or near perfect product market, competing with firms which are not worker controlled, will not be able to shift the cost to consumers in this way: if it did so it would price itself out of the market.

It has been shown above to be realistic to relax the assumption that the efficiency of the worker-controlled firm is the same as that of the capitalist firm. If we simultaneously assume the greater efficiency of the worker-controlled firm, the redefinition of costs and outputs, and a less than perfect labor market, then the greater efficiency of worker control will enable the firm to redefine costs and outputs, even where the cost cannot be shifted to consumers of the firm's material outputs. Without the flexibility it has from its greater efficiency, the firm would be in a position not substantially different from its 'capitalist twin', if it operated in a competitive output market. It would only be possible for workers, once they had paid for the use of other inputs, to redistribute the income they receive for exercising labor and entrepreneurial functions in the firm between 'wage' income, and improvements in work conditions and the redefined costs. The greater efficiency of the worker-controlled firm will enable it to pay for the redefined costs and for improvements in work conditions.

The next section examines three areas in which the worker-controlled firm may behave differently, when the three assumptions listed above are made. The areas are the quality of work, location policy and

'pollution' policy.

Implications for the behavior of the firm

The quality of the work environment:

Improvements in the work conditions in the firm will result from redefinition of costs and the reallocation of income to workers between 'wages' and the quality of work.

Many of the costs of production which are borne partially by workers in the firm are costs arising from impairment of the human factor of production.<sup>28</sup> Some protection is given to workers by workmen's compensation laws: but not all workers are covered and the compensation paid differs widely between states. Workers suffer losses which can be described as 'impairment of their human capital' as a result of illness caused by working conditions. The enzymes used in some detergents<sup>29</sup> are the most recent addition to the list of materials which cause illnesses in workers; the others include asbestos, silicones, lead, among many metals and chemicals. The firm can invest in control of workers' exposure to these materials or it can adopt other production processes which no longer use them. If necessary it can discontinue a harmful product. Industrial

injuries are another cost borne partly by workers. In the worker-controlled firm, the firm will reduce risks by making greater investment in safety guards on machines, protective clothing and equipment, gadgets for remote handling of dangerous products. It will also provide social security benefits for workers who are nevertheless injured or become sick.

What happens in Yugoslavia appears to be like the predicted behavior of a participative firm: the government sets basic safety and health standards, but responsibility for operating the system lies with workers management bodies:

it is considered that the workers have a sufficiently close interest in safety and health measures to be able to take the necessary action themselves.<sup>30</sup>

in practice, occupational health and safety occupy quite an important place among the subjects dealt with by the workers management bodies.<sup>31</sup>

Roethlisberger and Dickson have reported that in their interviewing program at the Hawthorne plant they found that "safety and health" was among the most frequently mentioned topics, and one on which they were very unfavorable to the company; it ranked high in urgency.<sup>32</sup> Safety and health standards<sup>33</sup> are an important area of work conditions, in which improvement in conditions through preventional insurance schemes will cause the firm to bear the cost instead of workers.

Other improvements in work conditions, including many which make work more satisfying or interesting, are better seen as consumption. In a worker-controlled firm, workers can improve their work conditions, trading off, where necessary, improvements in work conditions against reductions in efficiency with more satisfying production methods, up to the point at which utility from job conditions and from 'wage' income are equated. The kind of choice of work conditions which workers can make depends on the firm, its product, and the technology it uses. Some industries will be initially more and some less satisfying.<sup>34</sup> Some industries use technologies which allow choices of more or less satisfying work. In other industries very little substitution is possible. Workers then will not be able to change the content of their jobs, but only other factors relating to them. But the technologies which are available to produce a given product are at least partly a reflection of existing production systems. Some work has been done on the development of 'intermediate technology' which is less capital intensive, for underdeveloped countries. Widespread worker participation might similarly result in the development of less sterile technologies, in which jobs could be more satisfying.

In firms in which workers participate only at

some levels of decision-making, the kinds of changes in work conditions which they can produce will depend on the level at which they participate. Floor level participation alone enables workers to control the immediate job organization, timing and rates. Firm level participation alone enables workers to have job security and welfare plans. Firm level participation ultimately is important in improving the quality of the work environment because it makes it possible to change the quality of work at shopfloor level by changing technology and altering the method of production.

#### Location Policy:

Firms make locational decisions relatively infrequently. They are made when the firm is expanding and the scale of expansion is such that setting up an independently sited plant is a possibility. Another kind of locational decision is made when a firm relocates in a new place where production is more profitable. Locational decisions of firms, and particularly decisions to move out, or relocate, when they are made impose costs not only on workers in the firm but also on a community of people around the plant. Relocation imposes costs on the workers in the plant who must (now) relocate with it and pay moving costs, of which little if any will be paid by the firm for

most workers; or they will stay behind and risk unemployment, which has both material and psychological costs. If they do not relocate with the firm, they risk having to move later to find a job, or having to commute long distances to a new job. At best, even if the worker is not unemployed long, he often loses seniority and other advantages by changing jobs.

None of these costs are taken into account by the capitalist firm. The worker-controlled firm will include the costs to workers in deciding whether to relocate and hence the number of cases where it is economic to move is likely to be much smaller. This will be beneficial to the workers in the firm who in the workers control case will have greater job security.

Location policy is an example of a decision which will be different in the worker-controlled firm. The worker-controlled firm which takes into account the costs to its workers of a locational decision will in some ways benefit the 'community' in which it is located. That 'community' is easily defined, for the extreme case of a firm in a small town far from other towns, as 'the town'. In other cases the firm's 'community' will often consist of all or part of several towns. The community gains income from taxes

of firms which stay in the area, which might have left were they capitalist firms. The firm affects the community through the multiple effects of the employment it supplies. For the community in which the firm is located, internalization of the costs of relocation which are borne by workers will thus be beneficial. The lower mobility of worker-run firms may create new imperfections and cause income to be redistributed away from towns trying to attract new firms.

#### Pollution Policy

Pollution policy is the product of decisions made by the firm to emit noxious effluents of the production process, or to devote resources to purifying its effluents. Production processes at times produce pollution of the air, with smoke and fumes and smells; of water, and also noise and occasionally aesthetic pollution. Where no public regulation exists pollution is often external to the firm. Pollution then will not be remedied in the absence of government intervention to force the firm to bear the costs. When managers make decisions in the firm, pollution costs are externalities to them, because they can usually avoid bearing any of the costs, by living far enough away from the source of pollution, or upstream



of it. In a worker-controlled firm it is less likely that workers will be able in that way to avoid suffering any of the pollution. In general, the workers' share of pollution emitted by their firm is relatively small. The limiting case, though, is one of pollution emitted only inside the plant - harmful dust for example. In a worker-controlled firm, in this situation, workers will adopt any economic means of preventing this pollution; in the 'capitalist twin' firm, the management might but would not necessarily prevent the pollution as far as possible.

The case of a company town in which all the residents are workers would presumably be resolved in the same way as the case of pollution inside the plant. That suggests that a worker-controlled firm will take measures to prevent pollution in the absence of controls, over and above the measures which its capitalist twin would take. The extent of those measures taken by the worker-controlled firm will depend on the cost of preventing the emissions and on the share of the pollution which is borne by workers in the firm; in other words on the cost of the pollution to the workers, relative to the cost of preventing the pollution.

The prevention of pollution by industry is

obviously not a problem which will be solved by worker control of decisions: except in a few cases, the pollution decisions of the worker-controlled firm will not differ from those of capitalist firms. The usual approaches to solving the problems of externalities created by firms which affect a community adversely are prevention or discouragement through regulation or taxation of the polluting firm. Another solution which has been suggested is the establishment of some form of community participation in firms' decisions.<sup>35</sup>

#### Conclusions

The theoretical models of the firm with worker participation in management which have so far been developed deal only with one form of worker participation, (complete control by workers, through representatives who are elected). Moreover, only a limited kind of implication for the behavior of the firm has been discussed by most writers. The existing models suffice to show that it is not logically impossible to conceive of a worker-controlled firm or economy, and that no essential flaw would make one impossible. But some of the assumptions made in them were questioned, and alternatives proposed. One assumption questioned was that the production function of the worker-controlled firm is the same as for its

'capitalist twin'. If we assume a firm with direct worker participation at shopfloor level and also control at firm level, then the assumption of identical efficiency appears unrealistic: there is a considerable literature on worker participation which shows that it raises the productivity of the firm. The second assumption which is questioned is that the inputs and products of the firm will be defined in the same way as in a capitalist twin firm.

It appears more likely that the worker-controlled firm will include in its costs ones which in an imperfect labor market are borne by workers and not the firm, now. Moreover, improvements in the quality of work conditions will become products of the firm, in addition to its material product.

Finally, some implications of these alternative assumptions for the behavior of the firm in dealing with the quality of work conditions was considered. More briefly, implications for location policy and pollution policy were also summarised.

## Chapter 4

### CONCLUSIONS

The questions which were posed at the start of this paper can be rephrased as: What is the relevance of worker participation in management to the problem of work which is not satisfying? Under what conditions will the introduction of worker participation into a firm raise the level of job satisfaction of workers, or reduce their alienation?

It has been argued that job satisfaction is a missing element in the work done by many people in the developed countries today. Instead, jobs are frequently alienating and unrewarding. If the causes of work alienation and of the unsatisfying content of jobs lay in the technology of production alone, then solutions which deal with technology of production would be appropriate. We considered and rejected the arguments for increased leisure with the retention of today's alienating technology; for job enlargement; for return to pre-industrial technology; and for increased automation; as possible or certain changes in work which would reduce or solve the problems of job satisfaction and alienation. The introduction of worker participation remained as an alternative strategy which might at least alleviate the problems.

Empirical evidence derived from experiments with workers in which the amount, level, directness and method of introduction of worker participation showed that participation does affect workers' morale. Job satisfaction improved when the amount of participation was greatest.

Direct participation affected job satisfaction more than participation through elected representatives. Participation at the shopfloor or office level appeared to be more effective in raising morale than participation at the level of the firm alone. Participation seemed to be a promising strategy with respect to morale.

It was also found that participation schemes, introduced spontaneously by workers or ones which were obviously in workers' interests, were more effective than profit sharing schemes introduced by management to increase efficiency.

The apparent success of participation in increasing job satisfaction justified examination of implications for the behavior of the firm. If participation were introduced or its introduction were encouraged, what other results would ensue? The participation plans discussed above gave workers less than total control of their firms. But economic models, the principal tool used here to study the consequences of participation for the behavior of the firm, deal most easily with polar cases involving extreme assumptions. Failing a model or models of cases of less than full participation, polar models of the participation firm were examined. Their assumptions were described and in some cases questioned. We discussed implications of the standard assumptions and of the alternatives for the behavior of firms in which the workers share of control lies between the worker controlled firm and its 'capitalist twin'. It was found that the empirical evidence of the effects of participation undermines some of the assumptions used in economic theory of firms with worker control. The 'extreme' case of worker

participation is more plausible if assumed to be one in which they participate through elected representatives at the level of the firm only, as the models in the literature assume.

If we consider the more 'extreme' case, we find from the psychological literature on participation that it implies not only that workers will get greater satisfaction from their work than in the 'capitalist twin' but also that workers will be more productive.

Hence the assumption of a production function identical with the 'capitalist twin' firm is no longer appropriate: labor is more productive in the worker controlled firm,

The third assumption questioned is that inputs and products of the firm will be the same with workers control and with managerial control. The assumption which is substituted is that workers (also maximize "the income-per-worker" of the firm) will include as costs to the firm those costs which at present are borne by workers. These costs result from imperfections in the labor market. If perfect competition in all markets is assumed, the costs transferred to workers are nonexistent and the worker controlled firms' behavior will not as a result differ from its 'capitalist twin's' behavior. If imperfect labor markets are assumed, which is the more realistic case, then the behavior of the worker controlled firm may differ substantially from its 'capitalist twin's', as a result of the new assumption. Similarly the worker controlled firm will create better work conditions until the level preferred by workers behavior is reached which

would be identical to what the 'capitalist twin' firm would reach only with perfect markets.

The implications of the model of the worker controlled firm with these new assumptions were examined; for the firm's policy relating to conditions of work, location, and pollution. The new assumptions cause the firm to spend more on work conditions, to relocate less frequently and possibly to spend more on pollution controls. The changes in behavior of the firm with the new assumptions did not seem to make it any less likely to be viable than in the pure model.

The effects of worker control on the firm (with our new assumptions) are to tend to redistribute resources to workers, from management and in imperfect markets from consumers. It also would tend to redistribute income to workers employed in existing worker controlled firms and away from other workers, eg, by making the firm less mobile and much less likely to move in response to lower labor costs. This redistributive effect would disappear with free entry of new firms, the supply of jobs would tend to be restricted to those who already had them.

Some conclusions emerge from the sources which have been used (experiments with participation and theoretical models of participative firms). We can devise workable models of firms with participation which will increase job satisfaction. The most conclusive and complete models make extreme assumptions about the level of participation: workers have complete control at floor and at firm level. Not all types of firms with less than complete participation will raise job satisfaction. Where participation is at floor level, or direct, this is likely.

### Implications

The areas of planning in which workers' participation is most immediately applicable are those of development programs for urban or rural poverty areas. The planning of new communities is another place where worker participation would be applied by planners to the economy.

In development programs for poverty areas, the most obvious disadvantages of participative firms would be less harmful than elsewhere. Redistribution of resources to workers in those areas is not undesirable, it is a goal of policy. Public subsidies which are already paid for development in those areas could serve as a source of capital for the creation of participative firms, or for the conversion of existing firms to some form of worker management.

Community Development Corporations<sup>2</sup> have been advocated for areas such as those discussed above. Worker participation could be the basis for management in firms owned by the community, in which the community would retain some share for decisions affecting it. The Cambridge Institute's report on its conference of C.D.C.'s contains a description of one such firm, in Watts, which already exists: it is owned by the community but run by workers rather than managers.

The results of this study show at least that worker participation can meet the need for greater job satisfaction and that this form of management should be investigated.



There are some important issues which have not yet been studied and questions which so far remain unanswered. For example, the problem of the redistributive effects of worker control which result from lower mobility and unwillingness to hire new workers unless their marginal product is higher than the average product of workers already in the firm. The theoretical problems of 'perverse' demand for labor in the worker controlled firm are discussed by Ward, Domar, Joan Robinson and Vanek, but little if any empirical work has been done to test the hypothesis. The problem might prove to be crucial to the workability of a worker-controlled economy. It has obvious implications for the value of setting up worker controlled community development corporations: a tendency to hire fewer workers than a capitalist firm suggests that in one respect at least an extreme worker controlled firm would be less effective for community development than a capitalist firm.

A very important question which underlies this discussion, but is not dealt with here, is the longer term effects of worker participation schemes on the participants. The needs people feel depend on what choices they know are available. A firm with worker participation may change its workers' perception of the possible alternatives. In the capitalist firm:

.... the lack of creative, self-developmental work activities insures that workers will not demand such a work environment: their preference, (like everyone else's) are molded by their environment, and the absence of non-alienating alternatives allows workers no basis on which to change their preferences. (3)3. 0

In a worker controlled firm the opposite may be true: If so, workers will demand more power and more participation.

as a result of having had a little.

The issue of the effects on 'consciousness' of workers is one question underlying the controversy between two groups of socialist advocates of 'workers control.' Both believe that in a socialist world, work will be controlled by workers. This is sometimes called worker self-management. André Gorz<sup>4</sup> argues that demands by workers for increased power inside capitalist firms will raise workers' consciousness and strengthen the opposition to capitalism. Others (eg. Mattick<sup>5</sup>) argue that all participation in the operation of the firm, short of full control, is cooption by management, Paul Mattick<sup>6</sup> writes of forms of worker participation in capitalist-owned firms

These measures do not point to an unfolding industrial democracy but are designed to safeguard existing production relations and reduce their immanent frictions

This study developed from an interest in workers participation as a strategy for solving or at least alleviating the problems of unsatisfying or alienating work, and from the appeal of the workers control as a 'non-reformist reform' strategy for social change.

The results of the study have confirmed the role of participation in reducing alienation. My interest in workers control as a strategy for social change remains. Needs for more research became evident at every stage of the study. Among them, a prime need was for

the development of some further theoretical models of workers controlled firms and economies. From these developments, testable hypotheses should emerge to be tested against reality.

APPENDIX TO CHAPTER 2Experiments with worker participation: summary of the evidence

Alex Bavelas, ("Some Problems of Organizational Change", Journal of Social Issues, Summer 1948, p. 48+):

Using workers at a garment factory, Bavelas compared the efficiency of two matched groups of sewing machine operators. One group discussed and decided on its production goal; the other group discussed their work but did not set their production goal. The first group was the more productive.

Lawrence and Smith ("Group Decision and Employee Participation", Journal of Applied Psychology 1955, vol. 39, p. 334):

This was a study of workers in a (different) garment factory using two groups, one of office workers paid a set wage; the other of factory workers on piece rates. Half of each group discussed work related problems but did not discuss or set production goals, in addition to discussing the other topics. Morale rose in all groups. Production rose in all the groups but the increase in efficiency in the participative group which set production goals was much greater; each of the participant groups increased its efficiency over its original starting point to a degree significant at the 0.05 level and at the 0.01 level compared with changes in the control groups.

Coch and French ("Overcoming Resistance to Change", Human Relations, 1948, vol. 1, pp. 512+):

A comparison of three groups of garment workers who "participated" in the introduction of changes in their job, with one group which did not "participate". The group which did not participate was informed of changes in the job. One group "participated" through representatives who were chosen by the group who were to introduce the new method. The two other groups were "total-participation" groups in which all members shared in introducing the new method, as the representatives shared in the second group. Management had already decided on the changes to be made and set rates for them. The participant groups were informed in a more "dramatic" way of the changes. Both morale and productivity fell in the first group, the non-participants, after the change. The customary output restriction, low productivity, hostility to management, and labor turnover occurred; within 40 days of the change 17% of the workers had quit their jobs.

In the groups with participation, no quits occurred during the first 40 days. Productivity rose after the change. In the representation group relearning occurred faster than usual and attitudes to work were reported good. In the groups with total participation, efficiency rose almost immediately to a level 14% above what it had been before the change.

Morse and Reimer ("The Experimental Manipulation of a Major Organizational Variable", Journal of Abnormal Social Psychology, 1956, vol. 52, pp. 120+):

The effects of increasing and decreasing the level of decision-making on workers in a clerical office of an insurance firm were examined in this study. In two groups the level of decision-making was systematically increased; in the other two it was correspondingly decreased. In the "participation" groups the workers had control of "work methods and processes, and personnel matters, such as recess periods, the handling of tardiness, etc." (Morse and Reimer, p. 122). The workers had the power formally vested in the supervisor and also "control over some of the decisions regarding personnel matters and work processes previously made fairly high in the supervisory line (Daniel Katz, a colleague of Morse and Reimer's, quoted in Blumberg, p. 88). The group did not, however, have complete autonomy and was subject to some of the same rules and regulations as other employees" (ibid). The experiment lasted a year and a half. Morse and Reimer administered questionnaires to the workers, interviewed supervisory personnel and employees, and studied company records of turnover, absenteeism, productivity, etc. They described satisfaction in work as composed of four dimensions. They were self-actualization, attitudes toward supervisors, satisfaction with the company, and "intrinsic job satisfaction". With every measure of satisfaction, the workers in the participative sections were more satisfied, and the workers in the hierarchical sections were less satisfied than before the changes in control.

Productivity rose in both sections, but by more (14%) in the hierarchical sections than in the participative sections where it rose by only 10% on average.

The "Hawthorne Experiments: Roethlisberger and Dickson (Management and the Worker, Harvard University Press, 1938):

In their study of the Relay Assembly Test Room, Roethlisberger and Dickson studied the effects of changes in the work environment on a small sample of workers whose job was assembling electrical equipment parts. The researchers planned to alter systematically conditions of work such as the number and duration of rest periods, improved diet, shorter work days and work weeks, and the effect of wage incentives. Each of these variables was expected to have an effect on the productivity of the workers. During the first part of the experiment, up till 1929, productivity rose fairly steadily no matter what changes were introduced, or whether work conditions as they were defined by the experimenters were improved or worsened. Morale similarly rose. During this period of the experiment, the girls were allowed to discuss changes to be introduced, to suggest changes to be tried, and even to veto changes. The foreman from the main workshop was excluded and replaced by supervision by the experimenters. The workers had a much higher amount of participation in deciding their work conditions than they had had previously.

The experiment continued after 1929, although Roethlisberger and Dickson did not report on it in any detail. During this period, the experimenters lost interest in the Relay Assembly Test Room part of their study. As the experimenters' interest in the study declined, the amount of participation which the operators were allowed in setting the experiment was reduced. Their working conditions were changed without notice. The workers had less control over their jobs. The workers' control over their jobs was

further reduced by the depression which dictated changes in the work conditions of the test room such as shorter hours and lay-offs which even the experimenters could not control. During the period, the workers' productivity no longer improved, as it had continuously during the first two years of the experiment. After the lay-offs began, productivity fell to a lower level than it had ever been before. The morale of the workers fell simultaneously: workers in the test room became bored, disillusioned, and restive. "The degree of direct workers' participation in decision-making, however, did undergo a marked change after 1929, and its decline was roughly coincidental with the rise of disaffection among the workers" (Blumberg, p. 40).

Strauss (in William F. Whyte, Money and Motivation, Harper and Row, New York, 1955, p.90):

Strauss has described an instance of participation at shop-floor level which involved direct control by workers of the speed and environment in which they worked. In a toy factory, the female workers whose job was to paint toys showed very low productivity after their job had been re-engineered. They complained of the speed of the line and of the heat of the room. Management eventually allowed the workers to have fans installed to cool the room, at the workers' suggestion, and also installed a control for the speed of the production line in the room. The girls discussed the speeds at which the line was to be set and made the decision themselves. They varied the speed throughout the day. On average, however, the speed was higher than it had been. The result of a constant speed by which



been when set at a constant speed by management. Productivity increased between 30-50% over expected levels, and morale rose (partly reflecting increases in pay, since the girls were paid piecework rates). The girls' control both over the machinery with which they worked, and over supervision (since they were making for themselves decisions which had been management prerogatives) both had increased, and these were presumably the cause of their increased production and work satisfaction.

Trist, Higgin, Murray and Pollack (Organizational Choice):

The Tavistock Institute in London has studied a number of cases in which worker participation has occurred in the context of changing technology. E.L. Trist and others have described alternative forms of social organization and of mining technique in Northern England coal mines. The oldest technique is the traditional method, in which each miner works one work place, doing each stage of the work himself, using hand picks; and the coal is removed from the face in tubs. The two newer methods are: conventional longwall, in which the work is highly specialized, subdivided and each miner has one job only; and composite longwall, in which there is no rigid division of labor and miners work as a team by dividing the jobs between them -- hence not observing rigid job divisions.

Composite longwall working represents an alternative social organization within longwall technology. With composite longwall operation, a team of 50 or so miners and responsibility for operating a longwall face and is consequently paid as a group

(basic pay, with a bonus if a cycle is completed within 3 shifts). The team of miners is self-selected from among comparable skill levels. The team is responsible for allocating to its members all the roles needed to do the prescribed task and is in control of the workplace organization to a large extent. Consequently, foremen are free to provide miners with services which enable the cycle to proceed with greater ease, whereas with conventional longwall he must do "progress chasing". The Tavistock researchers found that composite work gave miners more variety, and meant that difficulties when they occurred were shared, not restricted to a few men on the shift. Absence rates among composite longwall workers were lower, as were sickness and accident rates. Productivity was higher for these teams. The investigators therefore concluded that:

within the same longwall technology, composite organization was found to possess characteristics more conducive than (conventional longwall) to productive effectiveness, low cost, work satisfaction, good relations and social health. (Trist, p. 291)

### APPENDIX TO CHAPTER 3

#### Examples of firms with worker participation:

What follows is a brief description of those examples of worker participation which may be unfamiliar to readers:

#### Yugoslavia: Worker Self-management

The Yugoslav economy<sup>1</sup> is based on a system of worker self management in enterprises, with some central planning and some elements of community control.

In Yugoslavia all capital is owned by the state, which receives for it a fixed return (so that the state is in the position of a lender, with no say in decisions about the operation of the firm). The enterprise is run by all the members of the enterprise who meet as the workers' collective. The workers' collective makes decisions by democratic vote; it delegates much of its authority for day to day decisions (except in small enterprises with fewer than 30 members) to a workers council with up to 30 members. The workers council meets monthly and is responsible for major decisions on basic issues: the enterprise's economic plan, the allocation of the net profit, prices of the firm's product, production plans, budgets, what to produce, etc. and for decisions on labor relations. It appoints and can discharge the director. It elects a managing board of about 10 persons which acts as agent of the council, meets frequently, and is responsible for carrying out the council's decisions on a day to day basis.

The profits of the enterprise, net of the fee paid to the state for use of capital, are available to the workers for distribution or reinvestment, either in the same plant or in expansion in the same commune or a different one.

The director of the enterprise, who runs it for the workers collective, is appointed by a selection committee, by open competition, in conjunction with the workers council. The selection committee is composed of representatives of the workers council, and of the local people's committee. The manager can be removed by the workers council.

Workers are elected to the workers council for a two year term, with half replaced each year; no council member may serve two consecutive terms. In small enterprises, members are elected at large; in larger ones they represent units of the enterprise. Candidates are nominated at meetings of the workers' collective; the vote is by secret ballot. The union has some, but probably not predominant influence in the selection process.<sup>2</sup>

Attempts have been made and are being made to bring participation in the Yugoslav firm to the shopfloor level: enterprises are divided into economic units of 20 - 100 workers, which are responsible for production and innovation, and increasing productivity. They make some investment decisions, and the profits of the enterprise which are to be distributed are shared between economic units on the basis of their productivity.

The commune in which the firm is located shares in decisions to a limited extent through its role in the appointment of the manager; but most decisions about the operation of the firm are

made by workers, as members of economic units and of the workers' collective; by elected representatives of the workers, on the workers council and the management committee; and by the director who is chosen by representatives of the workers.

Studies of Yugoslav firms have shown that on the whole, elections are contested; they are not dominated by the union or the party, though both have branches in each enterprise. Limits on the terms and number of terms served by elected representatives operate to hinder or prevent the development of a class of "workers" separate from the rest who run the firm. And studies show that workers management has produced developments which were not foreseen or wanted by the government and the party, which suggests again that they do not control firms: wage and price increases, the development of increasing concentration in Yugoslav industry and of monopolistic practices in Yugoslav firms, which led to the need for anti-trust legislation. Studies of Yugoslav worker self management produce results which show that workers in worker managed enterprises believe that they do have significant amounts of control of the operation of their enterprises.<sup>3</sup>

#### West Germany: Mitbestimmung

In Western Europe, West Germany<sup>1</sup> has the most extensive form of workers participation: its scheme of Mitbestimmung (codetermination) was introduced (as a result of labor pressure in the coal, iron and steel industries after World War II), in the early '50s, when it was considered vital to West Germany's recovery to raise productivity in those sectors. In each firm

covered by the legislation, labor representatives, chosen by the workers council (all workers in the firm) and by the unions, sit on the supervisory board together with an equal number of representatives of the owners and management and with one independent member approved by both sides. The executive board of each firm includes a labor member.

The system of Mitbestimmung was first established in federal law in the largest firms; in 1956 it was extended to holding companies controlling mainly firms subject to the 1951 law. The smaller firms in the coal and steel industries and all firms in other industries have a system of participation and representation which falls well short of Mitbestimmung in the control it gives to worker: workers are consulted by management, but have no final say in decisions.

The presence of both a type of worker control and of participation in German firms is a potential source of some evidence on the differences in impact on individual workers of the two systems. In the firms with codetermination industrial relations appear to be better; the enterprises with codetermination lead the way in the German economy with social services and provision of fringe benefits. They use more of their receipts for wages and other benefits to workers than do the correspondingly sized firms in industries without Mitbestimmung. The differences between control and participation do appear to be represented in differences in behavior between the two types of system.

In firms with Mitbestimmung, the firm is controlled both by workers and by private owners. The profits go to the owners; but

as a result of pressures from worker directors a share of profits goes to workers as expenditures on wages, fringe benefits, social services, etc. Firms with participation have workers who have less power: they can comment and make suggestions but are not able to impose any decisions on the firm.

#### United States: The Scanlon Plan

The Scanlon Plan<sup>1</sup> is probably the most important workers participation scheme to be put into practice in the U.S.: it has been applied in a number of firms; and results of its application have been documented and evaluated. The differences which exist between the versions used in different firms are relatively small.

The plan was originally devised in the early 1950's by Joseph Scanlon of the MIT department of Industrial Relations. It is designed to be introduced by workers and management in collaboration. Its advocates attribute some failures of the plan to failure at this point: the imposition of "participation" by managers on workers with inadequate prior consultation and agreement with them. This arouses (possibly justified) suspicions among employees that the management is trying to put something over on them. In many cases, however, the Scanlon Plan is introduced because a firm is in financial difficulties and in danger of closing down. In this case, the similarity of interests of workers and management is obvious.

The plan calls for a sharing of profits, or of the increases in profits attributable to increased productivity, between owners



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and workers in the firm. It includes opening of managerial decisions and the running of the firm to workers: they are given access to information about the firm to a greater extent than is usual. A major component is the opening of routes to the acceptance of workers' ideas to increase the efficiency of the firm or plant, the ideas being evaluated by joint worker-management committees. Unlike most suggestion plans, the Scanlon Plan does not reward individual workers for their ideas, but shares the increases in profits derived from worker ideas between all workers. Scanlon Plan firms usually distribute to workers a fixed percentage of any increases in productivity over a base period (before the plan). The percentage ranges from 50% to 100%. The Plan implies "opening the accounts" of the firm so workers can judge for themselves that the calculation of bonuses is done fairly.

In addition to increased profits and incomes for owners and workers, the plan's advocates claim that it increases productivity and improves the quality of work-life for workers. Scanlon writes:

If you visited one of the participating plants, you would say to yourself, 'here are people at work, not resentful or suspicious, not just here because they have to earn their living, they are enjoying their work. They are participating'.<sup>2</sup>

While initial successes of the plan may be attributable to a "honeymoon effect", the plan has been shown by evaluations to continue to raise efficiency and labor productivity even 2 or more years after the initial phase. On average, as table 3.1 shows, one evaluation showed a 23% increase in efficiency over 2 years of operation.

Problems with the Scanlon plan frequently arise at management levels: lower level supervisors feel stripped of authority, union leaders perceive loss of power, and higher managers see the role of listening to initiatives from below as an abdication of authority.

TABLE 3.1

Percentage Increases in Productivity in Scanlon Plan Firms

<u>Company</u>	<u>First-Year Relative Efficiency</u>	<u>Second-Year Relative Efficiency</u>	<u>Two-year Average Relative Efficiency (Unweighted)</u>
A	14.9	10.9	12.9
B	21.9	12.7	17.3
C	16.7	13.2	15.0
D	36.7	29.3	33.0
E	28.9	49.4	39.2
F	32.9	42.9	37.9
G	38.7	25.1	31.9
H	14.1	16.5	15.3
I	12.9	23.2	.8.1
J	6.8	13.7	10.3
<hr/>			
Average (unweighted)	22.5	23.7	23.1

Source: Frederick G. Lesieur, ed. The Scanlon Plan  
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