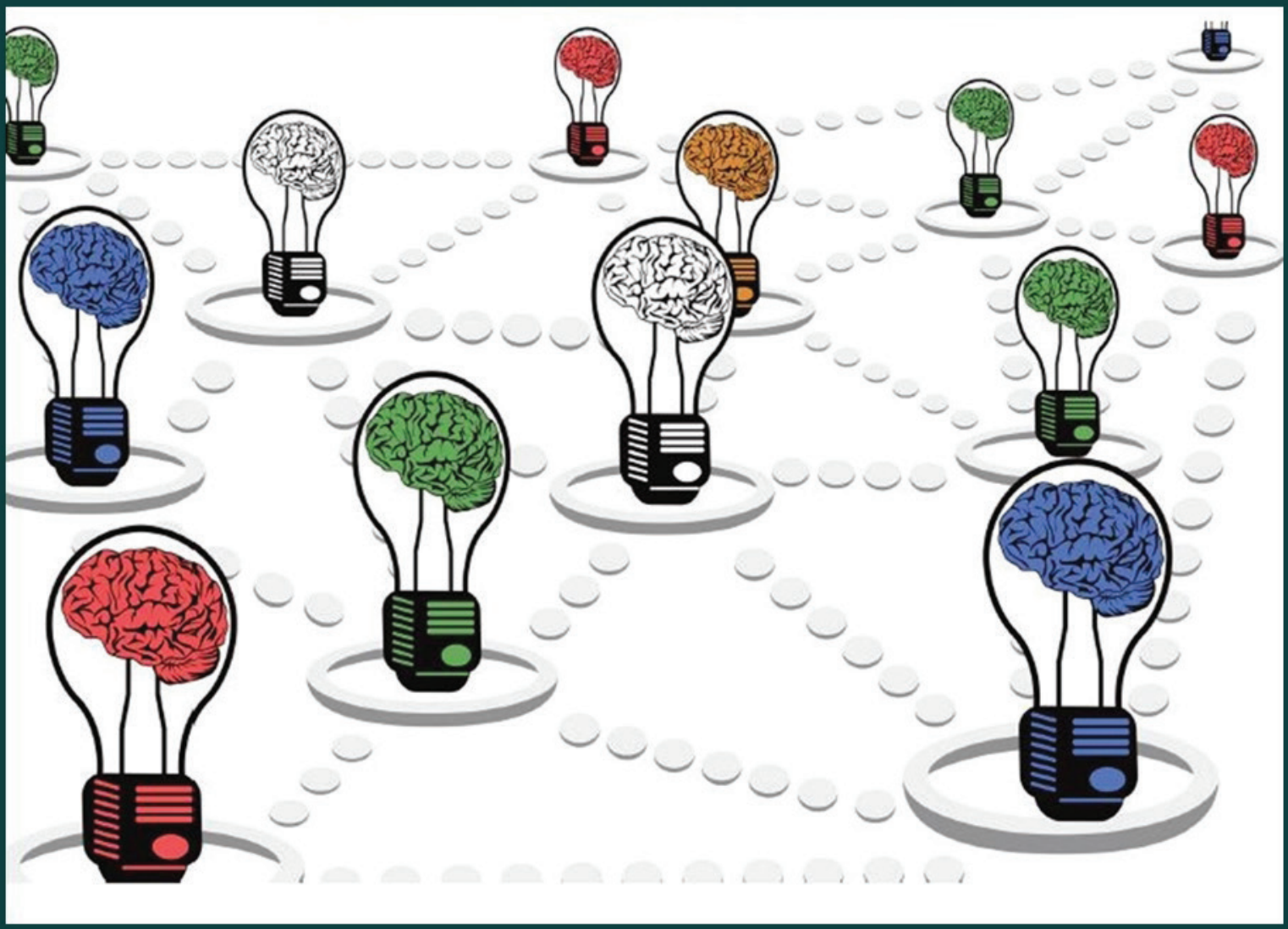

Carmen Migueles

Managing in The Dark

Strategies and Circunstances of Socialization in an Industrial Organization

MANAGING IN THE DARK

STRATEGIES AND CIRCUMSTANCES OF SOCIALIZATION IN AN INDUSTRIAL ORGANIZATION

Carmen Migueles

Presentation[1]:

The effort to understand labor relations and social organizational of production is present in sociology from its birth. The relation between social structure and the division of labor within organizations has long caught the attention of those studying human societies. It is a central issue at Karl Marx's writings. The symbolic and political aspect of the institutional development where companies find their space is central do Max Weber. The ways social organization affect human mental schemes is a theme in Durkheim. All the classics in sociology had capitalism and social its organization at the core of their interests. The division between property and labor, and latter between conception and execution was exhaustively analyzed.

The early stages of the "knowledge society", in which the intangible elements growingly became central for competitiveness, affect the core of this analysis. Knowledge, to put in Marx's term, belongs to the workers and in this sense it alters the previous power balance in which the capital concentrates the means and instruments of production and the worker had only labor do sell, in a disadvantageous position due to their deprivation of resources concentrated at the hands of the capitalist. Knowledge becomes a key resource for organizations. The impact of the new balance of power turns ineffective the previous arrangements based on command and control of labor by management. Results, in the new scenario, depend on the willingness of the workers to contribute to continuous development of alternative forms of improving products, services and solutions. The capacity of managers in coopting workers grows in importance as organization search for renewed ways of facing competition. Some national economies are faster to reorganize and in creating internal coalitions that boost competitiveness.

A growing literature on leadership skills appears to support the development of the desired competences for management. The use of the term "culture" to describe solutions of internal integration appears as the other face of the same coin. The symbolic aspects of work appear in business literature now related to the capacity to deliver results in a consistent manner.

This book, fruit of a research conducted at mid-1990, is an effort to understand, in sociological terms, how this process unfolds at a petrochemical company in Brazil, a country with a relatively recent history of industrialization, strong inequality, a large social distance between managers and workers, and very low predisposition to move to a more dialogical relation. At that point in time, Japan had already surprised the world with a production intense in human intelligence in companies with strong internal cooperation. United States had answered with reengineering programs, regaining part of the leadership lost for Japan in the 1980's. The role of national cultures and history seemed to support those "native" solutions. Brazilian companies were having a hard

[1] This paper is the summary of the doctoral thesis of the same tittle defended at the Sociology Department of Sophia University in July, 1997.

time adjusting to these new forms of organization of production. The long history of distance between managers and workers seemed to create extra difficulties.

At the next few pages (till page 16) I present a short summary of the problem, the findings and the conclusion, for the readers interested in a brief overview of the work.

Following it is presented a deeper analysis, with a debate structured around the classic sociological concepts regarding social organization of work.

Summary:

The Problem

The present paper is an attempt to think, theoretically, on the question of the relation between authority, and the exercise of power by those in the management position, and the motivation for the workers to produce - That is, how an "organizational culture" is created and how it affects those who participate in it.

The need to think theoretically about this issue arose from the need to explain why, and how, the workers of three studied factories[1] (which belong to the same holding company, and produce similar products in the same market), had clearly different degrees of motivation to produce, and exhibited different attitudes towards the quality programs that needed to be implemented[2].

This type of study is of significance because although there is a clear transformation in the nature of the industrial work - and a growing interest in the possibilities of the "design cultures", - there are relatively few efforts to critically analyze this trend[3]. Those studies are even scarcer in relation to the nature of this process in developing nations[4]. Before we can point to the dissimulations that the culture produces, before we can ascribe to it an external function as that of justifying an arbitrary social order, it is necessary to understand more about the mechanisms of the symbolic production that makes the representations it creates appear as a reality to those who participate in it, thus endowing it with the efficacy we can observe.

A questionnaire survey conducted simultaneously with this research confirmed the need to understand better the nature of the differences among the studied plants in order to choose an adequate human resource management strategy (the concern of the manager who contracted the present research), for it presented results apparently incompatible with reality. The clearest example of this tendency was observed in regard to the rating of the physical aspects of the environment. The most modern and comfortable plant rated lower than an old and nonfunctional one even in regard to the physical aspects of the facilities. Even an apparently objective judgment, as the above, about an apparently objective reality, was mediated by a subjective relation to the

company. It is chiefly this 'subjective relation' which needs to be investigated to understand a little more about the process of construction of an "organizational culture".

An earlier conclusion of the present research indicated that the 'management style' of each plant manager was the central element in the development of the observed differences[5]. The existence of an important relation between the leadership of the managers and the responses of the labor force in terms of motivation and productivity has been broadly observed by both researchers and managers as well. The amount of bibliography in this issue is indeed large and more than confirms the existence of such a relation[6]. In theoretical terms, though, we are still far from explaining it satisfactorily.

From a preliminary observation of these three plants, I extracted the hypothesis that the state of motivation of the labor force to produce under the capitalist division of labor is constituted at the site in which the activity is carried out - in this case the factory - where a concrete experience of a given power system occurs.

1 - It is not the result of producing with a given type of technology (Blauner's thesis)[7].
2 - It is not the result of work conditions (Kohn & Schooler).
3 - Alienation is not a condition equally spread in all capitalist division of labor (the Marxist thesis).
4 - Motivation in industry is not necessarily the effect of different religious ethics (Weber's thesis).
5 - It is not the effect of different ethnic composition of the population of the plants (very similar in the 3 plants studied).
6 - It is not the effect of differences in the educational level of the workers (very similar in two plants with relatively minor differences in regard to the third one).

The relation of the workers to their activity and themselves is constructed through the experience of a practical (without concepts) and symbolic (socially constructed representations) reality within the workplace - of which the authority of the manager is the chief organizing power.

Questions that need to be answered to establish theoretically this relation:

1) How is it that through the exercise of an institutionally conferred authority the manager affects the relationship among different individuals within the factory and the relation between the individual and his/her own activity - leading to a state of motivation or alienation of the labor force?

2) What is it in the way they manage that can create such differences in results?

The comparison among the employees of the three factories points to the fact that to create or not an environment in which the workers can experience a feeling of meaningfulness in their activity, and feel empowered to affect the environment through the pursuit of that activity, - leading to the development of a lasting state of motivation or alienation - is related to the <u>capacity of the manager to provide a discourse through</u>

which the workers can experience their activity as meaningful, as well as the conditions for the acceptance of this discourse.

This leads us to a third question

3) What is it in the capitalist division of labor that puts the workers in such a position of dependence on the managers for a more or less meaningful work experience?

The observed situation

In search for an explanation of the differences in the degree of motivation among the workers of the three factories, I found, on the shop-floor of the first observed plant, the workers exhibiting most of the symptoms commonly associated with the phenomenon of alienation as described in the literature, a situation that was not found in the two other plants (it is through the comparison between the relation of the workers of this plant to their activity, to that of the workers of the most successful plant in motivating the workers, that it is possible to see how the concepts of alienation and motivation are presented as antonymous here)[8].

It is a point taken here that to progress with the understanding of alienation and/or motivation in industry it is necessary to overcome the limitations imposed by the structural type of explanation and by the utilization of mid-range type of concepts towards an approach that explores these two phenomena from the point of the dialectic relation between individual and society. I believe that this approach can start to be adequately constructed from a theory of knowledge that includes a discussion of power, or, as Bourdieu says, a theory of knowledge that is a dimension of political theory.

Related to that is another point taken here, that the question of the conditions for the development of a state of alienation /motivation of the labor force in relation to their activity can only be understood by a multidisciplinary approach that links the historical forces of society to the cognitive structure of the workers, where:

The historical forces are:

A
The long term history

- The ambivalence about work as both source of life and punishment for sin.
- The capitalist division of labor and the philosophic distinction between contemplation and activity transformed in a notion of productive/unproductive labor and later skilled/unskilled work.
- The invention of modern work: a product of industrialization and economic rationality.
- The development of the faith on a neutral science of society and the ideological effect of the belief on the possibility of a 'science of production'.
- The emergence of work as a primary factor in socialization, social cohesion and personal identity in modern society.

Its effect on the:

- Creation of a habitus[9]: the transformation of history into nature by a long term experience of given productive relations
- Development and incorporation (embodiment[10]) of classificatory schemes: intellectual X Manual:: superior X inferior ::white collar X blue collar and etc. and the perception of the superiority of intellectual over practical knowledge[11].

B

The recent transformations

- The disenchantment with the left, the weakening of labor union movements in Brazil, and the formation of the belief on the common interests between the company/worker - turning more stable the objective structures of the division of labor and contributing to the development of favorable conditions for the expansion of an orthodox belief on the necessity of such division, thus contributing to its automatic (unquestioned) reproduction.
- The recent transformations in the world market -- from mass-production to innovation mediated or quality production.
- The increase in competition among producers and the need to extract "intellectual" labor from the blue collar workers.
- Redistribution of power within the productive organization.
- Development of new 'disciplines' and disciplinary strategies within industry:
* Mass production: humans are a source of errors - It is the role of the managers to reduce interference so that the organization (like a machine) can run smoothly - managers are responsible for the performance of people (coercion/supervision).
* Quality production: humans are a resource/ an asset- source of ideas, innovation: the manager is responsible for the performance of knowledge (motivation/delegation)[12].

C

The in-time experience of a given collectivity

- The concrete experience of work under given power arrangements
- The development of given ways to perceive one's experience within the productive unit and in relation to its surroundings.
- The 'forgetting' of invented solutions of internal integration and external adaptation as invented solution and their transformation into body automatisms[13].

Motivation

Motivation is to be understood as a socially and historically situated concept: historically because it depends on how, at a given moment of the history of capitalism, the conditions/the need for overcoming the separation between the worker and his activity and the economic necessity for integrating the two arise. And socially because motivation is related to the meaning of the activity, where meaning is not an inaccessible subjective entity but a sense of purposefulness that is socially defined, and experienced by the workers in relation to their expectancies, life trajectories and their

own sense of limits in their life possibilities. Truly meaningful activity endows its holder with some degree of social recognition and allows for the construction of a reputation that is measured by the social evaluation of the worker's contribution.

Innovation oriented production, a condition for competitiveness in the present market situation, depends on the ability of the enterprises in optimizing the utilization of human resources, reversing the trend observed by Braverman in the 1970's of deskilling and fragmentation of work in industry. This trend includes the tendency to self-management by the part of the workers, and consequently the obsolescence of the supervision and coercion based management strategies. "Organizational culture" emerge as the strategy through which management attempts to 'install a generator' in the workers. Motivation, organizational culture and market pressures are, therefore, closely linked phenomena.

To understand how the macro tendencies of society and the global historical trends affect the relation between the individual worker and his activity, it is fundamental to look at the labor of managers – the transformative strength of power and authority – in promoting transformations at the level of concrete human activity. It is in this process where, at least during this transitional stage (that is, before the needs of the new mode of organization of production is fully incorporated as dispositions) I could isolate the manager's capacity to invest educational and cultural capitals in the accumulation of symbolic capital as a fundamental element to create this link.

The unit of analysis

To examine the functioning of this process: the accumulation of symbolic capital and the development of a "healthier" relation between workers and their activity/productive collectivity, I propose to treat each isolated plant as a field - a geo-historical concept to designate the larger micro-economic unity of capitalism - a concrete space within which, in time, political economy transforms itself at the level of concrete human activities and social relations, and where those transformations, and the economic and political relations they imply, can be experienced by the individuals.

In doing so we can understand how, comparing the three plants, only in the one in which the manager could adequately create positive emotional links between the workers and the company (and himself) was it possible to extract all the willing contributions, the feelings of loyalty, belonginess, and identification, necessary for the full appropriation of the economic value under the new market arrangement.

In the two other plants, in which the managers did not possess enough educational/cultural capitals to recognize the need to invest time and resources in the creation of this link, or the necessary political skills to accumulate symbolic capital, they could not fully extract the, (at present), necessary economic value derived from this "intellectual" labor of the workers, a failure that could compromise the competitive strength of the company.

The construction of the symbolic capital: the manager as a pioneer in the conversion to the new order

The manager who successfully created this link, did so:

1) By constant investments in upgrading his own educational and cultural capitals, enhancing his capacity to select substantial tendencies in the enormous flow of information available at present.

2) Till he became a 'modern man': he incorporated the needs and the logic of the new mode of production into his own dispositions - until he thought and acted according to it.

3) By becoming fully convinced of the inevitability, and of the desirability of the new transformations in the global economic market. Through this belief, he could generate a discourse attuned with the movements of this market - providing the collectivity under his command not only with a political organization of the productive activity coherent with the needs of the company under the present economic conditions but also, at the same time, with a discourse that interpreted the activities of each member of the collectivity and the circumstantial happenings that surrounded the plant according to the logic of the quality-oriented production and directed towards maximum performance in the market. That is, the efficacy of the manager to act in the new order depends less on a conscious choice of acting in a certain way to obtain a certain gain than on an act of 'conversion' to this new order, in which the individual himself is transformed. His virtue as a man, who speaks the truth, as perceived by the employees, is derived from a sincerity of belief: the manager himself believes in the truth he professes.

4) Through this coherent and systematic interpretation of each worker's activity, its reason for existence in the context of the enterprise and its contribution for the collective project of succeeding in the market, he created the conditions for the valorization of the blue collar's and all other "subordinated" knowledge's, by raising them to the position of a necessary skill for the company's survival - In doing so, he created the conditions for the apprehension of the meaning and importance of each worker's contribution, thus creating the possibility for the workers to construct a reputation through the excellent performance of the (up to that point) unimportant/ subordinated practical knowledge's[14].

Due to the features of the division of labor in industry, it is necessary, to allow the workers to see how their tasks fit in the larger collective project, a well devised system of communication through which they can see beyond the limits of their routine and understand how, through improving their routine, they can contribute to the group in a meaningful way. But as the industrial organization exists as a field loaded with power differences, an efficient system of communication must, necessarily, be constructed in a way that resentments in relation to power and mistrust in relation to the manager's intention do not become a barrier for the flow of information, and in a way that is meaningful to the workers, that is, by providing information that are related to, and that can be useful to the workers in their productive process. It is in this aspect that the symbolic capital of the manager fulfills its main role: It confers legitimacy to the authority institutionally conferred, and the basis for the establishment of trust in the relationship.

The successful manager in the present case study succeeded by:

Building upon the naturalness of the division of power within industry created by the long historical process **A** - he provided an (ideological) discourse that coherently, logically, and necessarily, situated the experiences in **C** according to the needs and possibilities created in **B** .

But he did so by investing his superior capitals (educational/cultural) recognized by the classificatory schemes naturalized by **A** in the elaboration of an ideological discourse that pushed for the attuning of **C** to **B** in a way that did not seem arbitrary, because it "made sense" (it was necessary, logical and obvious) for the workers, it matched the observed reality, and it was built upon the *doxic*[15] mode of knowledge inculcated through **A** . As the actions of the manager were not perceived as manipulative attempts, but as an effort of a well-intentioned leader in leading the collectivity through inevitable (out of his control) avenues of the modern market, it did not allow for the development of opposing strategies.

The efficacy of the manager action, though, was not constructed only at the level of discourse. By exemplary abiding by the rules that he was trying to impose, thus showing commitment to it, and by his educational effort, teaching people this new mode of relating to the other, and by providing constantly new insights (possible due to the knowledge he could accumulate by a privileged position in the division of labor), he did not open space for the development of competing discourses and fragmentary strategies among the mid-managers or other workers, thus collecting the full benefit of his superior right to speak to impose an ideological discourse fully attuned with the economic necessities of the company. By doing so, the institutionally conferred authority bestowed upon him is complemented by what is perceived as a legitimate right to command - a right derived from the superior intellectual capacity, fully reinforcing the naturality of the choice of the best educated for the best positions and further naturalizing the meritocracy within the modern productive organization.

In this process of imposing an adequate (necessary in face of the present constraints) interpretation of the reality of the company and of the market for the workers, the manager accumulates the honor, prestige, respect, and acknowledgment that compose his symbolic capital and that are responsible for the continuous efficacy of his strategy with much smaller investments of time and effort. - as the 'truths" he professes are endowed with powers - they are of social efficacy - they function in the elimination of most of the barriers to communication within the plant by creating a will to communicate, opening the way for a much easier acceptance of his discourse in all future situations.

The refusal of the workers to communicate, the mistrust of the quality/veracity of the information divulged by the manager observed in one of the plants, or the "deafness" of the workers of another, was not observed in the plant in which the manager succeeded in accumulating symbolic capital. The difficulties in these other two plants are due to the fact that, in them, the top manager either lacked educational and cultural capital to recognize the need to create this link or the political skills to accumulate symbolic capital. In time, the manager the first plant managed, through a conscious search for a better management strategy, to democratize the relations in the

plant and ease the conflict with the workers that were on the way to a full implementation of the new innovation-oriented production system. The holding company substituted the manager of second plant. From this point on, the ability to act according to the requirements of the innovation oriented production became a precondition for the choice of a manager in the company, and institutional mechanisms were devised to aid the managers in this task.

Motivation and class dispositions

Myers (1964) points to the fact that motivation is directly related to the self-actualization of the individual in the job, from which the greatest satisfaction and strongest motivation are derived from achievement, responsibility, growth, work in itself and earned recognition. Being so, the concrete and repetitive experience of boring and fragmented jobs could be mistaken as the cause for lacking of motivation of those who execute tasks of this nature. Nevertheless, Myers and others noticed that even assembly-line workers found their jobs motivating if they had the adequate work environment. This is the same situation found in the studied company.

The possibility of finding a blue collar job motivating can only be understood if situated in relation to the self-evaluation of a worker of his/her own value vis-a-vis their concrete possibilities in society. Before entering the company, the individuals are predisposed to accept the jobs that they are more likely to receive at the company as a possibility already inscribed in their own life-trajectories. They aim at jobs that, in their own evaluation, match the educational and cultural capitals they possess, and the social skills acquired in the family, at the social class of origin. The blue collars are, upon joining the company, already predisposed to accept the blue collar routine and recognize the social superiority of those who possess more educational and cultural capitals, as well as the authority of the manager.

This disposition to accept inferior positions is incorporated through the mutually reinforcing labor of the practical experience of a given social organization and of the classificatory elements that form most of the symbolic tissue of the capitalist society:

- The classificatory system that builds a hierarchy of value upon the opposition between intellectual X manual labor, that in Brazil is taken further to the opposition between non-skilled/skilled: :black/white: :outside/inside: :heavy/light: :dirty/clean: :backward/modern: :poor/elite: :tropical/northern: :underdeveloped/developed, and etc.
- The ideological effect of the so-called 'scientific management' theories, which contributed to further naturalize the hierarchical functioning of the above classificatory system.

The blue collar worker, by the time she/he applied to a blue collar job, had already partially concluded a self-evaluation according to which their own skills are perceived as inferior and subordinated. They are already predisposed to the types of jobs they will execute and ready to accept lower economic benefits in return. All social interactions that occur at the work place are loaded with a priori hierarchical perception of each function. Those workers carry, within themselves, the marks of an inferior position in the social order, a body language that expresses humbleness in the

presence of superiors and a tendency to deny their own interpretation of their productive process. 'To know one's place', a condition to progress in the blue collar carrier, includes the exhibition of this willingness to follow the disciplines of industry.

Inside each plant, there are, in various degrees, complex systems of communication of social value, status and hierarchy of the professions that are built upon the meanings assigned to the different tasks and types of knowledge required for each job. The hierarchy based on the superiority of the intellectual work/higher educational capital is the cognitive category that imposes order to the social system. The workers' self-image is directly related to the social value placed in the activity each one of them executes. The whole self-presentations in the work place, the body languages employed, the vocabulary chosen, are all related to the self-perception of the individual, which is reproduced by himself and by the others in the common course of action, and reinforce the underlying classificatory system and its power in organizing society.

The routine of work and the relative powers to contribute to the construction of an 'organizational culture'

To Edgar Schein, one of the most quoted authors on this issue, an organizational culture is a pattern of basic premises or convictions that the **group** invented, discovered or developed in the learning that occurs through the solution of its internal problems of external adaptation and internal integration, and which works well enough to be considered valid, and that are, therefore, taught to new members as the correct way of perceiving, thinking and feeling about those problems. In time, those strategies are 'forgotten' as developed solutions and become the automatic answers to similar problems.

I agree with him that the main feature of the organizational culture are the 'forgotten' solutions transformed in given ways of perceiving, thinking and feeling, but I believe that the neutral employment of the term "group' is somewhat misleading[16]. To understand the relation between the development of an 'organizational culture' with the authority of the manager/motivation of the workers, it is necessary to look at the company as a field formed by power relations in which the allotment of the right to speak and make oneself heard is uneven. This relative allotment of the rights to speak is directly related to the different perception and value of the various types of knowledge possessed by the different professional groups. The implications of these different rights to speak on the phenomenon of alienation/motivation can only be understood if it is examined within the space in which these relative rights are organized as a system.

The 'developed solutions transformed in forgotten solutions' are not equally developed by the group, but are fundamentally the solutions generated as an effect of, or around, the manager's definitions of the situations, even when resistance to his authority exists. Every communicative situation within the factory walls occurs between people of a rather well defined position in the hierarchy, to which corresponds different rights to speak and express their opinions. In the same way, the speeches of the

various members of the group are not equally loaded with communicative powers. In this sense, the manager, by his position in the division of labor, is not only entitled to a more comprehensive and totaling view of organization, but also the one with the institutionally bestowed power to impose his own discourse, his own definition of the situation, as the right opinion. The understanding of relation of the manager's action and discourse to culture depends on the investigation of the complex power system within which it occurs. To simply state it occurs because of the leadership of the manager (as Schein does) does not add much to the understanding of this process.

Recognizing this relation we can start to understand how the subjugated types of knowledge, the practical mastery of the productive activities in itself, for example, only emerge as a knowledge capable of creating a reputation for its holder by a concession of the holder of the truly recognized superior knowledge, who possesses the attribute of defining the relative allocation of value in the social space. Without a recognized social value, the blue collar knowledge is not perceived as knowledge but as 'lack of qualification'. The holder of such a position in the division of labor has little power to contribute to the formation of the organizational culture - he has no speaking powers, he is socially mute. Without an institutionally recognized value for their knowledge, the shop-floor workers are trapped in a situation of powerlessness to affect any significant chances in the factory, and are, by employing in evaluating their own activity the same schemes as the superiors, unable to perceive the importance of their own tasks to the collective project, experiencing therefore, a deep feeling of meaninglessness in regard to their activity. In such a situation, the worker ends up, in time, breaking any positive relation with their own activity, which in the end, is perceived as responsible for their social inferiority. In a situation as that, the activity is perceived as an obligation due to economic necessity alone, and there are no types of motivational strategies that can bring this worker to consistently produce more and better. In this state, the contribution of the workers to the construction of an organizational culture appears as a sort of unconscious reaction to a negative situation, that although affecting the quality of the environment and the way of producing, is not recognized as a contribution nor acknowledged by the workers themselves as their own creation. Argyris (1975) has broadly demonstrated that worker's motivation is directly derived from a sense of meaningful, purposeful work, in a situation in which the workers feel powerful to affect their environment. The present study attempts to explore what is involved in the management competence to allow the workers to experience their activity as such.

The difficult nature of the definition of the concept of management competence though, arises from the recognition that its understanding is relative and highly dependent on the perspective through which it is analyzed. The understanding of the importance of the motivation of the workers and of the necessity for an upgrading of manager's skills in regard to human resource management did not occur due to a sudden awakening for this form as the best form, as a more 'humane' way of working. The need to motivate workers is clearly related to the end of mass-production era and the beginning of the innovation mediated or quality production, in which more intellectual labor must be extracted from the labor force to assure competitiveness in the market. The possibility of this new type of division of labor within industry is deeply related to the historical moment in which it occurs twice: once, because due to the fall of socialism, it was possible to construct an political orthodoxy according to which

capital and labor have the same interests, creating, therefore, a fertile path for the ideological labor of inculcating the needs of the new system by the manager, and twice because the rising number of competitors changed the rules of the market making it necessary for the productive organizations to invest time and money in creating the adequate conditions to win the workers over to their side.

The relation between the construction of a symbolic capital and the development of a state of motivation among the workers is far from being a straightforward causal relation. It must be contextualized in that specific power system and historical moment to be adequately understood. The type of involvement of the workers with the company required by the post mass-production system is different in many aspects from previous desired states of motivation by the part of the managers. It is expressed by different means and meant to produce different results. In the present context, it expresses different disciplines and disciplinary strategies within the industry, and brings about a type of motivation that is not the same hoped for during the mass-production times. During the mass-production, motivation meant increasing the pace, the speed and the amount of production, it depended less from the intellectual skills of the workers and was less likely to lead to the empowerment of the labor force. In the history of this same company managers and workers alike recall a time when there was a high level of motivation even under an authoritarian power system, but they point out that at that time motivation was measured by the capacity of the labor force of breaking production records (in its beginning, the company belonged to the State, and to learn the technology was associated with a broader nationalistic project, what may have in itself added meaning to the labor of the workers). At that time, productivity records were beaten even under authoritarian bureaucratic arrangement. In the present scene, motivation means contribution to the increase in the quality and variety of the final product, in the creation of innovation. It depends on higher intellectual flexibility of the blue collar workers, and a higher degree of autonomy and space for mistakes – what demands new forms of exercising power.

Under the new system, management skills to create the adequate "organizational culture" are imperative, as it had never being before. As coercion and close supervision cannot produce the needed results, it is necessary to develop more subtle ways of assuring productivity. The strength of an organizational culture as the adequate means of control in the new context arises because, after involvement and adherence is gathered for the manager's programs, each member of the organization continuously reinforce in each other and in themselves overt adherence to the member role. Subtle and complex forms of group control and pressure come to be exerted, condemning heretic opinion about the imposed political orthodoxy. 'Symbolic violence' substitutes coercion and supervision as the most (economically) efficient mode of control.

NOTES:

[1] The data utilized here was gathered in a research conducted as a consulting job for the chief executive officer of a holding company of the petrochemical sector in Brazil. The holding is composed of 3 factories, the headquarter and a separated marketing department. Inspired by the readings of Edgar Schein and by the success of Japanese human resource management

strategies, the CEO of this company decided to hire an anthropologist in an attempt to understand better the differences observed among the plants.

[1] The differences in attitudes and motivation among the plants were first observed by the variation in the percentage of participation of workers of each plant in the quality, safety and suggestion programs, as well as in the concrete results of each plant in terms of quality and productivity. We tried to understand more about the causes of this variation through a questionnaire research covering various aspects of the life in the company. 67% of the workers of the first plant returned the questionnaire (this plant had 445 workers, and the worst marks in terms of accidents and sabotage). 84% of the workers of the second plant (also with problems but not as generalized as in the first one) and 94% of the workers of the third plant (with 174 workers) returned theirs. The very rate of return of the questionnaire served as an indication of the willingness to cooperate with the company's projects. The questionnaire, though, proved to be an inadequate method of investigation for the problems we were trying to access, the research proceeded for 7 months of non-participant observation and open interviews.

[1] There are very good works on this theme, such as KUNDA, Gideon. Engineering Culture. Control and Commitment in a High-Tech Corporation. Temple University Press, Philadelphia, 1992. OFFE, Claus. Beyond Employment: Time, Work and Informal Economy. Polite Press, Cambridge, 1992 CASEY, Catherine. Work, Self and Society after Industrialism Routledge, London, 1995 and KONDO. Dorinne K. Crafting Selves, Power Gender and Discourse of Identity in a Japanese Workplace. Chicago, University of Chicago Press, 1990. There are, though, many relations that still need to be established so that we can understand better the development of adult personality and the consequences of certain work experiences under a given power system.

[1] There are reasons to believe the new forms of organizing and managing production and its impact on the labor force occurs with peculiar features in the developing nation. First because on the leading countries in this process, the "cooking time" of these transformations are longer and they are, somehow, native inventions. When these same elements are introduced in developing nations they are usually urged as imperative modernizing strategies, to be assimilated as fast as possible. Besides, there are different cultural features that must be taken into account. For exemple, DaMATTA, R. (Carnavais, Malandros e Heróis. Para uma sociologia do dilema brasileiro. Rio de Janeiro, Rocco, 1997) notes that in Brazil, the notions of individual as an unit through which runs an axis of moral responsibility is not a central cultural category, being the notion of person, defined in terms of social relations, the predominant category. Barbosa L. (Meritocracia à Brasileira: O que é desempenho no Brasil? RSP,Ano 47, V.120, N. 3 Set.Dez-1996.) points out that the centrality of the category of person is not of small consequences for the culture of the organizations. The imported human resources management strategies (specially from the USA), based on clear categories of merit and competence developed upon the presupposition that there is always a responsible individual to be evaluated, conflict with the native notion that performance is always secondary and depending on surrounding circumstances, and the belief that the group must aways recognize that if the individual does not perform, he/she might not do so for reasons external to his/hers own will. Self-reliance is not a primary cultural category, and consequently the understanding of merit and competence is not the same as in the USA. The reward system, for example, quite often imported along with other management techniques, are reinterpreted in the Brazilian factories producing very dissimilar results.

[1] Partly due to the large geographical distance among the plants and partly due to the faith in the functioning of bureaucracy as an efficient mean to organize people, the human resource management of each plant was, for years, almost totally delegated to the top manager of each factory.

[1] For example: DRUCKER, Peter. Managing in a Time of Great Change. & Post-Capitalist Society, New York: Haper/Collins, 1993, GARVIN, David. Managing Quality: The strategic and Competitive Edge, Free Press, New York, 1988), KANTER, Rosabeth M. The Change Masters. Innovation & Entrepreneurship in the American Corporation. Touchstone Book, Simon & Schuster, New York, 1983 & When Giants Learn to Dance: Mastering the Challenge of Strategy, Management and Careers in the 1990s. Simon and Schuster, New York, 1989, SCHEIN, E.H. Organizational Culture and Leadership. Jossey Bass, San Francisco, 1985, KUNDA, 1992, ARGYRIS, Chris. Personality and Organization. The Conflict Between System and the Individual. New York: Harper & Row, 1975.& The CEO's Behavior: Key to Organizational Development. Harvard Business Review, March-April 1973, nº 73202, HAMMER & CHAMPY, Reengineering the Corporation, A Manifesto for Business Revolution, Harper Collins Publishers, 1993, MARSICK, V. & K. Watkins. Informal and Incidental Learning in the Workplace. Routledge, New York, 1990, among others.

[1] BLAUNER, Robert. Alienation and Freedom. The Factory Worker and his Industry. The University of Chicago Press, 1964.KOHN, Melvin & C. Schooler. Occupational Experience and Psychological Functioning: An assessment of Reciprocal Effects. American Sociological Review 1973, v. 38 (February):97-118. FROMM, Erich. Marx's Concept of Man. With a Translation from Marx's Economic and Philosophical Manuscripts. 1961.WEBER, Max. The Protestant Ethic and the Spirit of Capitalism. New York: Charles Scribner Sons, (1930) 1958.

[1] The concept of alienation is employed here in an attempt to rescue its original implications in the humanist philosophy, especially on the writings of Hegel and Marx, in which it appears in the context of a theory of knowledge that addresses the process of development of human personality through participation in society. I recognize, though, that the utilization of the concept of alienation presents considerable difficulties in terms of logic if we depart from the concept of self as a "fixed entity"

(as it appears in the humanist philosophy) and try to apply it to a fluid understanding of the self as the locus of one's subjective experience (where affect and reason are experienced and the capacity to act beheld, Casey, 1995) - an experience that is deeply entangled in the social production of identity.

It is important to call attention here to the fact that the possibility of having motivated workers does not imply in the idea of dealienation, as it appears in the texts of Hegel and Marx (different in regard to so many other issues). The motivated participation of workers in the company would mean, according to those theories, an alienation in relation to themselves. It could be seen as living a simulacro, finding satisfaction and pleasure in living a reality organized through an ideological discourse that masks the arbitrarity upon which it is constructed.

[1] Bourdieu, P. "The conditionings associated with a particular class of conditions of existence produce the *habitus*, system of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles which generate and organize practices and representations that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends or an express mastery of the operations necessary in order to attain them. Objectively orchestrated without being the product of the organizing action of a conductor". The logic of Practice, 1991, p.52-65.

[1] See Bourdieu, 1977. P.87.

[1] See Douglas, Mary. Purity and Danger. An Analysis of Concepts of Pollution and Taboo. Frederick A. Praeger Publishers, New York, 1986.

[1] See Drucker,1993, Op.Cit.

[1] Schein, 1985.

[1] It is important to call attention here to the fact that this conclusion is related to the observed empirical reality and may not be possible to generalize to other contexts. Practical knowledge has been, historically, valued in Japan, for example, where practical expertise and bodily experience *(taiken*) are understood as fundamental to the mastery of arts, crafts and productive processes in general. In contrast, in Brazil, the process of physical transformation of raw materials has been historically perceived as a minor/inferior task if compared to 'intellectual' activities. Barbosa 1996, points out that manual work in Brazil is not perceived now as an inferior activity because it was historically carried out by slaves, but that it was historically carried out by slaves because it was perceived as inferior. This socially perceived inferiority of the manual work robs the social status and recognition of those who practice it.

[1] *Doxa* is the term Bourdieu utilizes to refer to the type of perception of the social world in which it appears as natural and self-evident. It is based on a quasi-perfect correspondence between the objective order and the subjective principles of organization of the social world (systems of classification). Bourdieu, 1977, p. 164.

[1] Schein clearly recognizes the centrality of the role of the leader and the founder in the creation of an organizational culture, but this centrality is very much taken-for-granted, and there is no systematic attempt to understand the means by which the leadership works in the way he himself says it does.

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INTRODUCTION

The present study was suggested by a question asked me by the executive president of a petrochemical company. The company, comprised of by three factories and a commercial office, was at the beginning of the implementation of total quality control and reengineering programs, and was facing a difficult problem: the degree of motivation of each factories' employees for participation in the new programs, measured by - 1) the number of suggestions given by the employees to improve the productive process and quality of the product, 2) the comparison among the quantity and types of defects in the final product (some clearly due to sabotage), and 3) the pace of attainment of significant results against pre-established goals, varied significantly among the three factories. The company was under great pressure to be certified as a producer of quality (the certification is granted after the requisites prescribed by the International Organization for Standardization are fulfilled), a must to remain competitive in the international market, and needed the full cooperation of the workforce.

Although a study of the psychology of the workers might have seemed more appropriate to look into the question of motivation, the executive president of the organization had the intuition that the key to the problem was in the 'culture' of each plant, and thought an anthropological study of those 'cultures' would be more revealing (this intuition was the fruit of his readings on organizational culture, especially the writings of Edgar Schein, and the follow-ups of the Japanese success in managing the 'culture of the organization'). Indeed, as the research progressed, the question of motivation proved to be enormously complex, requiring a multidisciplinary investigation to achieve full appreciation. Without any pretension to present a complete answer to the question, I will present the general context in which I believe the issue must be

placed to be understood in all of its richness, and will later proceed with an analysis of the power relations as they are established in a given type of organization of production. The empirical observations at the three plants led me to believe that the different degrees of motivation are directly related to the exercise of authority on the part of the managers[2], and especially the investment of their educational and cultural capitals in the construction of a symbolic capital that confers extra legitimacy to the institutionally conferred authority. In the process of constructing a symbolic capital through the management of the needs of collectivity under his command, the manager plays a fundamental role in the construction of a symbolic reality inside the company through which the workers can construct a more or less meaningful relation to their activity and to the collectivity of the work place.

The concern of the management with the desire of the labor force in participating more actively in the productive activity is in itself an interesting subject for a sociological investigation. For why was it that the historically neglected psychological states of the workers and their relation to the productive process, well addressed in the studies of alienation of the labor force in the industrial organization, had became an issue of high importance for the management? The answer to this question includes the understanding of the new model of production organization developed by the Japanese, which spread initially to the United States (Kenney & Florida, 1993), later reaching Brazil, and other countries. The success of the new model lay precisely in its capability to mobilize the workers' intelligence as well as physical skills. Due to the long history of production organized upon the basic distinction between planning and conception (the

[2] The analysis of how authority is exercised by different managers affects differently the collectivities of workers in similar industrial environments, creating locally shared ways of relating to the company and to one's own activity inside of it, stands against the deterministic generalizations about the capitalist society and places the problem of the labor/management relation inside the frame of a fundamental problem of the relation between practice and symbolic order. Defended in here is the thesis, raised by Sahlins, 1976, that there is nothing in the economic structure that can determine some of the observed relations among the social agents, but this, on the other hand, does not mean that the very concrete economic necessities can be ignored in the analysis of the social practices.

job of the elite) and the execution (the job of the blue collars), especially rooted in the people's way of organizing the social division of labor in a country like Brazil, in which the differences between the social classes have been so great, to implement the desired changes in the division of labor within the industry involved a great effort of behavioral changes at all levels of the hierarchy.

A full appreciation of the situation that lead to the recognition and to the necessity of understanding the different degrees of motivation in the three factories involved three major questions, namely:

1) The macroeconomic transformations of capitalism

The transition from mass-production to quality production aimed at the satisfaction of the client implied a major transformation in the nature of the social division of labor upon which the industrial production had being historically organized, and the rearrangement of the productive processes under the reengineering programs. The need for reengineering and quality programs emerged as the scientific knowledge[3]

[3] As an example of how the spread of scientific knowledge affected the process of adding value to the industrial product, it would be interesting to give as an example a fact that occurred at CPC. One of CPC's main stock holders, Mitsubishi Kasei, developed a new formulation for the production of a given plastic pellet to be sold to CPC. Having as the basis the specification and features of the resin that was being offered, at the price of half a million dollars for the formula, a group of young researchers of the research and development department could develop a similar product in 3 months. According to the head of the department "science is in the air", and how to transform a given raw material by the reaction process CPC employs was sufficiently known to allow their own scientists to develop new products.

Indeed, this fact is well known to leading enterprises of the world and to governments as well. In an attempt to guarantee the position of Japan as a leader in industrial production in the years to come, the Ministry of Trade and Industry of Japan (MITI) and the Ministry of Education announced, in October of 1995, to the Science and Technology section of the foreign embassies in Tokyo, that they are working together to promote basic research and to facilitate the integration between research institutions and industry. To do so, they increased their budget for investment in research and the Ministry of Education expressed its intention to double the number of graduate schools in Japan by the end of the decade, and to multiply the number of scholarships offered to foreign scientists to enhance the exchange of researches. At the Fifth Symposium for the Progress of New Chemistry, held on 25/26th of October of the same year in Yokohama, Japan, the leaders of the chemical and petrochemical industries worldwide agreed that the future of competitiveness depends, as never before, on being ahead in the research of new products and processes from the level of basic science, and not from applied science as it had been until the present. Major scientific breakthroughs are necessary to allow industries to get ahead in the direction of higher value added products. Among the most promising areas are biotechnology, genetic engineering, new materials, new chemistry, and information technologies.

applied to production and the industrial know-how spread even to the less developed regions of the globe, eroding the aggregated value that know-how once added to the product of capital intensive industries, increasing tremendously the competition among producers. In an environment of such high competitiveness, survival came to depend on not only price, but specially client's satisfaction. Clients' satisfaction means shorter delivery times, higher variety, higher flexibility of the product and minimal levels of defect. It implies in a very different type of organization than that of the mass production times, in which the relative scarcity of producers considerably reduced the choices of the clients. The differences among the plants indicated different paces of adjustment to this new reality of the market. This very fact erodes the structural type of explanation, that justify the difficulties in increasing the quality of the industrial product in the developing nations as a function of various structural problems of those countries, and rise the necessity of explaining the factors that promote transformations in the organizations that work in the developing economies.

2) The transformations in the social division of labor at the shop floor

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To give an example of how new discoveries could change the present picture, J.J. Molinos, one of the directors of the raw material producer of *Polo Petroquímico de Triunfo*, gave me the following example: "if you look at the molecule of cocaine, you would be amazed by the simplicity of its structure. Even then, no one has successfully managed to produce it synthetically with the same features as the one extracted from the plant. If you want to obtain cocaine, you have to grow the plant, extract it, purify it and sell it in an extremely risky way. This is, of course, an extreme example, but the same limitation exists for the whole fine chemistry and pharmaceuticals industry, among others. Let us imagine chemical science allowed us to manipulate chemical substances at the level of the molecule, a possibility that seems very close: we would be able to make, synthetically, any type of substance. The first one to discover how to do it, for any kind of product, from pharmaceuticals to dyes and paints, will make enormous amounts of money until somebody else discovers how to do it to. The first one to manipulate a substance at the molecular level will be able to produce with an enormous aggregated value thanks to this original knowledge. That's why every company is trying to integrate, the best way they can, their research and development area to the production area. The faster you can take an innovative product from the laboratory to the market, the longer you will have higher profits. As throughout the world people are researching around few promising possibilities, the innovation won't belong to one company for too long. At the present stage, as the scientific knowledge upon which industrialization is based is already spread worldwide, it is only a matter of months or even weeks till your competitor can produce a product you just developed. Higher added value, in the near future, will depend on developments at the level of basic research. Due to the escalating costs of research, though, we can expect this new stage in the history of industry to happen inside the borders of the richest nations".

The study of the variation of the degree of motivation of the workers of the three factories, placed in the context of the transition from mass-production based organization to client-oriented organization, was in fact the work of understanding how the economic transformations affected the system of social relations and the disposition (schemes of perception and appreciation deposited in every member of the group - Bourdieu, 1977) of the social agents. That is, how the transformation of the logic of economic production affected the 'cultural transaction', the logic of selectivity, the re-contextualization of the acts, the reinterpretation of the needs of the market, the cultural disintegration and the reintegration, and the dynamic transformation of the personalities.

3) The issue of motivation and workers satisfaction

A third element to be understood covers the differences among the three plants in themselves. The quality programs had been launched simultaneously at the three factories, but they were clearly at very different stages of implementation. To further puzzle the top management, a questionnaire survey conducted by another consultant firm to assess the degree of satisfaction of the workers with various aspects of the company produced results apparently incompatible with the concrete facts. The clearest example was the result of one question regarding the quality of the physical environment, in which São Paulo plant exhibited a much higher degree of satisfaction with toilet facilities than the Alagoas plant. But the São Paulo plant had been built in 1945, and was old, and with dysfunctional areas, with toilet facilities unevenly spread throughout the plant, some of which were dark and had mold, while the construction of the Alagoas plant had been finished in 1988, and had toilets that were new, tiled to the ceiling, with ergonomic design and were easy to reach from any point of the plant.

It was rather clear that the collectivity of workers of each factory presented different ways of relating to the company, and that even an apparently objective judgment as the one above was intermediate by a subjective way of relating to the company.

There was a relative consensus within the company that those differences were due to different ways the head of each factory managed his plant, particularly the approach to human resources management policies, and to the history of each plant. There was left the intriguing question of how the exercise of power on the part of the managers could affect the subjective states of the collectivity under their command in a modern, bureaucratic organization, in which professionalism, institutionalized delegation and contract-mediated labor relations were the basis for the social division of labor. That is, how the political arena affects and is affected by the necessities of the economy, and how, in this process, the transformation of personalities occurs. Indeed, during the observation of this progress on the observed company, it was possible to understand the central role the managers of dynamic industries play, in developing nations, in pushing for the integration of the organizations they lead into the global market and for the modernization of labor relations in their own societies. This understanding leads to the need to look more carefully at the labor of the managers of the dynamic industries in connecting two extremes of the economic organization: the microscopic world of shop-floor relations and the macroscopic world of the international trade.

The present paper is, then, an attempt to understand the nature of the transformation of the social division of labor within an industrial organization changing from the mass-production, Fordism-based organization, to a quality, post-mass production organization, trying to understand how the power relations were transformed within the industry and how these new power relations affected the workers.

Empirical observations made it possible for an understanding that the collectivity of the workers is highly dependent on the quality of the management to enjoy a more or less meaningful work experience, making it a central issue for this exercise to understand what it is in the capitalist labor division that creates such dependence. Through the comparison of the experiences of the three plants I will try to demonstrate that such dependence does exist, and the understanding of the historical experiences of the three plants can be very illustrative of this relation.

As a strategy to organize the comparison, I will focus on the Camaçari plant, the one in which the Fordist model of division between conception and execution could be most clearly observed, and where the workers exhibited most of the symptoms associated with the phenomenon of alienation, to be explored, later in the paper, and how the progress towards quality production eliminated most of the causes of alienation, enhancing motivation, without threatening the position of the managers at the top of the hierarchy of command.

The key concept around which the discussion flows is that of symbolic capital.[4] We are going to see how, even in the presence of an institutionalized delegation of power, it is through a daily and personal negotiation that managers build the legitimacy of their authority, based on the quality of their educational and cultural capitals and their skills to invest it in the construction of a symbolic capital.

In a mass-production environment, in which the transformations of the market were considerably slower than at present, the information-based environment, the maintenance of the management's power depended more on coercion and secrecy in

4 The concept of symbolic capital in here is employed in the sense of an authority necessary to impose a definition of the situation, and extracted from the writings of Pierre Bourdieu, especially Bourdieu 1977, 1987, 1989, and 1990.

regard to key information, and the division of labor seemed more arbitrary. In the new environment, the legitimacy of management's authority is more subtly extracted from the shared perception of the manager's superior skill to navigate in the modern market and to offer a firm leadership to the collectivity under his command. Longer years of formal education of a higher quality become the central component of the symbolic capital, which is at the core of the meritocracy within the modern organization.

The simpler management skills, those that are directed to the daily organization of the productive activity itself, are being delegated to blue collar workers, breaking the historical conditions for the reproduction of the alienating labor routines and reversing the tendency towards fragmentation and deskilling of the industrial labor. The educational requirement for shop floor workers is raised, their training improved and broadened and their satisfaction enhanced. The managers are freed from the more 'mundane' administrative tasks and allowed to devote more time to the interpretation of the tendencies of the global market. How the equilibrium in the power relation is established in the new context, how the basis for its functioning is created and how it affects the 'subjective' disposition of the workers (that are objectively created and reproduced) towards the company needs careful examination.

The effort to understand the tendencies of the economy, now irreversibly global, is derived from the understanding that the system of meanings and the logic of the acts performed within the walls of the factories are inextricably linked to the field of political economy. Although the analysis of global economic trends is beyond the competence of the anthropologist, an effort must be made to place the discussion of local situations in its proper macro frame, to avoid the highly meaningless exercise of attempting to explain the reality within separated fields as if they were islands floating above the

concrete economic reality and owing nothing to the powerful economic and political forces that are an integrating part of the individuals' experiences.

The theoretical tools that organize the discussion and connect the facts of the political economy to the cognitive processes of the social agents are those developed by Pierre Bourdieu in his theory of practice (an at-length discussion of the application of his concepts to the present analysis can be found in the section on the possibility of alienation, in chapter I).

The choice of presenting the empirical findings in terms of a comparison among the history of the three plants is, I believe, compatible with the choice of theory and with the conclusion that although it is true that the practice of the individuals and the socially created system of meaning derive their logic from the political and economic structure, it is equally true that meaning and practice are not determined by the structure. The comparison among the three historical experiences serves as an illustration of how this variation can develop within the various fields. Through the historical comparison, I hope to be able to make a full account of the continuous process of change in which individuals live, and explore the elements that, operating within the dialectical process that occur between structures and dispositions, are more central to the organization of the collective experience of the situations and that work as guides to the individual practices. Among other factors, I highlight the system of power as the key element in directing the re-contextualization of acts and discourses, and as the chief organizer of the collective experience.

The text is organized in a form that avoids presenting conclusions without illustrating how conclusions were reached, by means of giving concrete examples collected during the fieldwork. Many examples of practices and discourses are necessary to allow us to

see how a particular form is created. Although it perhaps makes the text over wordy, it is the strategy that, I believe, better allows us to see how the macro, impersonal systems, are incorporated into the representations of local life and experience, that is, how the local forms can be both autonomous and constituted by a larger order.

The facts are presented in the past form. Although a bit unusual, this choice is an attempt to keep in mind the dynamic transformations that were taking place at that specific time. The situations and conflicts described in here, according to later conversations with the employees, were surpassed at a very fast pace, and only one year after the research was finished the company had successfully managed to implement all the changes desired, those that we all anxiously pursued. The past tense, by giving feeling that 'it no longer is' allows the reader, so I hope, to share the feeling I experienced with the collectivity observed, that the changes were very fast and the future unknown. This may rescue some of the uncertainty experienced then.

PART I

CHAPTER 1

This chapter is designed to provide the basic framework for the understanding of the empirical data discussed in the second part of the text. As such, it is divided into two parts that, although apparently unconnected, are necessary to present the issue of motivation in the necessary perspectives, historical and theoretical.

1.1 On the context

1.1.1 From alienation to?

The experience of the blue collar workers of their productive activity in a mass-production environment, have long being described as mentally debasing, physically demanding, non-creative and alienating. Without a sense of identification with their own labor process, the workers reproduce the pre-established routines while remaining dissatisfied with the activities involved in its execution, and tend to feel forced or compelled to act by forces external to themselves.

Marx, in his analysis of the capitalist mode of production, placed the generation of alienated labor[5] at the core of the possibility of reproduction of an unfortunate reality for the workers[6]. Braverman (1974) in his analysis of work in the twentieth century, confirms this alienating tendency of industrial work, and identifies the fragmentation of activities, the separation between conception and execution and deskilling as the central processes around which labor experience is dehumanized and the surrender of the workers' interests occur[7]. Braveman's analysis, by sticking to an idea of sharp

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5 This relation is further discussed in the Appendix I.

6 See: Fromm, Erick. Marx's Concept of Man, with a translation from Marx's Economic and Philosophical Manuscripts by T.B. Bottomore. New York, Ungar, 1961.

7 Braverman, in his analysis, attempt to demonstrate how (not if) any aspect of industry in capitalist society serve the ends of capitalism (Harris, 1987). He assumes that the conflict between workers and management is a

opposition of interests, failed to explain the observable degree of involvement that the workers demonstrate in various industrial environments.

Buranoy's attempts to overcome the limitations of Braverman's type of Marxist analysis, and to introduce the workers' willingness to produce in the analysis of industry by focusing on the construction of consent. Buranoy observes some particular types of games the workers carry on associated with piece-work, and interprets the results of the games as serving to enhance the enjoyment of the workers in relation to their activity, what turns out to serve the interests of the capital at the same time in which it gives the workers the impression that they are "beating the system" (Harris, 1987). As the social relations of production define the rules of the game, in which the workers participate, consent is generated over the rules. Buranoy observes that the foreman and assistant foreman 'either connived or actively assisted in playing the game, and since they are 'management', he argues that these practices could not really have been against management.

Blauner (1964) in his comparison of the alienation of workers in various industries suggests that the study of the alienation in the industrial organization is the study of the relationship among technology, social structure and personal experience. Comparing the workers occupied in trades characterized by continuous processes (such as chemical plants), assembly line (such as the workers in the automobile industry), workers in craft industries (such as printing) and machine-tending (such as textiles) technologies, he tries to establish the relationship between the technological organization of the labor process and the social organization of the factory with the experiences of control or domination, meaningful purpose or futility, social connection

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necessary precondition for monopolistic capitalism, and that technology has been purposefully devised to allow capitalists to progress with deskilling and the subjugation of the workers. The abolition of skills is, according to him, a strategy to enhance the control of the capitalist over the worker. In this sense, the observation of a capital intensive technology in the chemical industry would represent the contrary of this tendency already in a mass production environment, for this specific type of technology, before quality production, contributed to a high level of corporate dependence upon a steady and reliable labor force.

or isolation, spontaneous involvement and self-expression, or detachment and discontent on the part of the workers. He concludes that rather than 'human relations', the nature of the work, the workers relation to the technology and to the division of labor is crucial to the existence of meaning in the activity, and key to an understanding of the process of alienation.

A common element observable in those studies as well as in studies of the effect of work on the personality of industrial workers is that the organization of production that excludes the necessity for self-direction by the worker is either taken for granted or assumed to be a necessity of capitalism, as a strategy to control the workers. There is a strong tendency, in the sociological analysis of industrial work, to focus on *job conditions* in an attempt to understand the relation between work and personality, as if job conditions were a definitive, immutable element of industry. Among these, Melvin Kohn (in Erikson & Vallas, 1990), in synthesizing the tendencies of those studies, points to the fact that most analysis of this process allows for the conclusion that job conditions affect adult personality through a direct process of learning and generalization, so that work conditions affect significantly the employees' values, self-conceptions, orientations to social reality and cognitive functioning. He points out the fact that the effect of job conditions on personality are far from trivial in magnitude, particularly considering how very stable the dimensions of personality studied in these inquiries are. In his prior research, he stated, for example, that the substantive complexity of work has an effect on the intellectual flexibility of adult men fully one-fourth as great as that of their own prior levels of intellectual flexibility, measured ten years earlier[8]. A point that is made here is that far from being an intrinsic and unavoidable feature of the capitalist industrial division of labor, the division of labor that has brought about these types of job conditions were those of the mass-production era,

[8] Kohn, Melvin & Schooler, Carmi. The Reciprocal Effects of the Substantive Complexity of Work and Intellectual Flexibility: A Longitudinal Assessment." American Journal of Sociology 84:24-52, in Unresolved Issues in the Relationship Between Work and Personality, by Melvin Kohn in: Erikson, Kai, 1990.

a type of division of industrial work that is being abandoned in the dynamic industries already in the developing nations, as the example of the Brazilian chemical industry reveals.

One element that is absent in all of those classic works on the nature of the capitalist productive processes and their impact on workers is the role of the top management in shaping the workers relation to the industrial environment and how the specificity of each company is created in this process. Why is it that an issue that I take in here as central for the phenomena of alienation, namely, the power system within the industrial organization, was neglected by those good and well worked papers? The answer is not that their authors neglected power as an important element in the organization of the factories because of their blindness to its importance. The answer is that when they did their researches, the power of individual managers as a fundamental element in the reduction of the effects of alienation was yet to be discovered, and the importance of working with satisfied workers, or its economic necessity, wasn't yet a reality. What has changed? The shift away from the organization based on Fordism's principles was then still to occur, and the present preoccupation with the quality of management was only incipient, so that not only managers were immersed in the belief of the rationality of the bureaucratic organization of production, but social scientists couldn't see beyond that possibility either. At present, the limitations of Fordism and of the bureaucratic organization are widely debated.

Abandoning for a while the focus on the worker and looking for the analysis that deals with management's problems, we can find, especially in the bibliography aimed at the managers, an enormous quantity of titles dealing with the central role leaders play in the organization of the community under their leadership. It also calls our attention, while working with the managers, to the enormous amount of money and time organizations spend in upgrading the leadership skills of their managers. Business consultants, psychologists, and other professionals (including, recently, anthropologists)

have found a niche in supporting the organizations' ability to deal more efficiently with human resources. The nature of the problem they address, though, is hardly new. Lazonick 1983 (in Harris, 1987) summarizes the problems of managers, already during the era of mass production, saying that the mere introduction of machinery embodying human skills did not solve management's difficulties or render all workers interchangeable. On the contrary, since apt workers were relatively expensive to train and not easily found, one of the major necessities of mass production, and indeed of 'monopoly capitalism', was the development, by management, of various strategies aimed at restructuring the working environment so as to allow for the formation of a co-operative work-force[9].

For decades, the inhuman features of industrial work was opposed, in Brazil, and many other countries, by the socialists and labor unions alike, that viewed workers and management as forming two different classes with opposing interests and perceptions of society. There was widespread belief that their differences were irreconcilable, reinforcing management's view of the necessity of close supervision at the shop floor level. But even in the population of the company studied here, represented by a labor union of strong socialist orientation, the objectives and future ideals of the majority of the workers were those of capitalism. Agier & Castro, 1989, in studying proletarian life projects and individuals' destinies among the workers of a petrochemical complex studied, demonstrate that the ultimate goal of freedom sought by those men was to be able to establish themselves in their own business, therefore freeing themselves from the authority of the bosses. By doing so, they could act both autonomously and be in control over their future. Although it is not their objective to explore this dimension of their data, it is possible to see, through the personal statements they gather, that the values of the workers interviewed are those of capitalism. Although all of the interviewed workers proclaim their discontent in relation to the conditions in industry,

[9] Lazonick, H. 1983. Management and Machiavelli. Harmondsworth: Penguin, p.116, 124, 126, in Harris, 1987.

their life dream is to be able to establish themselves as small entrepreneurs and "be winners in life" according to the rules of the capitalist society. They want to become managers themselves. This is in line with my own observations in the studied plants, namely that the discontent of workers is in regard to their position in the system and the management, not against the capitalism as a system itself. It calls for the need to think of what it is in their position that causes the discontent, as many of the men could see perfectly well that with the amount of capital they had to invest and their own knowledge of business they had rather small chances of attaining the same level of income, in a steady monthly flow, and the same benefits as they already had in the chemical industry.

Henry Ford, in conceiving the organization of production based on the separation between conception and execution, and on the fragmentation of activities, had the intention of organizing production more rationally, as a way to increase the outcome by enhancing productivity. Even though his intention was to produce more wealth and general social progress by increasing productivity, the unintended consequence of the system he elaborated was to reinforce the already fragmentary tendencies of the industrial activity in the capitalist organization along with its alienating tendencies.

The belief in the rationality of the bureaucratic organization and on the principles of the scientific organization of production was taken for granted even by those who were dedicated to the sociological analysis of the industrial organization. The belief in the bureaucracy is largely responsible for the fact that most of the analysis of the capitalist system did not relate the phenomenon of alienation with the power system within the industry. Within the mass-production based organization, the human requirements of meaning, identification, and some power to relate positively to their environment was largely regarded as an individual problem by the liberal, and as an unavoidable side-effect of the capitalist division of labor as a whole by the socialists. It was not till the Japanese managed to aggregate a much higher economic value to the product of their

industries through the introduction of a different system of division of industrial labor that the role of management in motivating the labor force was generally perceived and the necessity for this type of labor incorporated by managers. Till then, knowledge was not a value to be extracted from the labor force. Keeping up the pace of production, avoiding time wastage and increasing productivity could, at that specific historical period, be said to generate more returns.

The concept of alienation, historically much more directly related to the economic (the necessity of increasing the scale of production) and technological aspects of production, becomes now more clearly a political concept (inseparable from the capitalist political economy). That is, with the transformations in the economy that lead to the need for a higher level of knowledge added, as the chief value-added to the product of industrial organization, the same organizations that in the past worked with high levels of dissatisfaction and/or alienation, are managing to integrate, successfully, the workers with their productive processes and with the company. Deskilling, fragmentation, and alienation are not direct consequences of the work under a certain type of technology or under a certain productive arrangement as a system (as the capitalist mode of production). It has now became clear that deskilling, fragmentation and alienation are consequences of social forms of organization of production, and a political choice of the management (that is only partially consciously taken) of how much power and information each element at various points of the company's hierarchy is entitled to, in a system in which the technology is more neutral than previously assumed (although the technology is never fully free of consequences for the labor force, nor neutral in terms of the social division of labor. Every industrial process and technology has been developed having in mind specific possibilities of the social utilization of labor. Assembly-lines were built because the possibility of gathering assembly-line workers was very real).

The dichotomy between manual and intellectual labor and the concentration of power in the hands of the capitalist vis-à-vis the workers carried already a strong potential for alienating the labor force. This potential was increased by the principles of scientific management and by the development of the modern bureaucracy. The theories on the advantages of bureaucracy as a steady path for development, and the theories on scientific management provided the logic basis for the progress of the fragmentation of activities and for the naturalization of this process, perceived by managers and workers alike as a necessary path for the progress of industrial societies. Alienation of the labor force was not a necessity for the capitalist organization of production. It is largely the unintended consequences of a given mode of organization of production.

The feelings of meaninglessness, powerlessness, frustration, self-estrangement and of separation between the subject and his/her own activity, that evolves towards the long-lasting lack of motivation to proceed with that activity, and other symptoms associated with the phenomena of alienation were actually experienced by the workers in one of the observed plants. It was indeed the observations of the three plants that brought to my attention the fact that even under the same mode of production (to borrow Marx's term), there can exist quite different relations between workers and their activity. Historically, the study of the phenomena of alienation has been very strongly influenced by Marx's writings, where it appears as pervasive phenomena equally spread in all capitalist division of labor. In the studies that follow Marx's lead, we observe the same tendency to generalize the phenomena to the whole of the capitalist division of labor.

Indeed, as field observations developed, I realized that not only the phenomena of alienation was not evenly spread, but also that the degree of separation between the workers and their activities, within the same company, tended to change in time. As there was no need, under the mass production arrangement, for the systematic monitoring of the involvement between workers and the company, according to the

historical circumstances more or less identification of the workers with the labor process and the company could develop. In the history of the plants we can see that even though the mass production type of organization carried in itself the potential for developing alienating labor relations, there were times in which the phenomena of alienation did not develop. Those were times in which the workers could actually see the meaning of their activities, take pride in their accomplishment and feel they had power to affect their surroundings. Schein, 1985, emphasizes in his writings the process of construction of an 'organizational culture', in which a system of beliefs, shared values, world views and attitudes is developed by the group through their interaction in the workplace. Those shared views serve as the foundation upon which the formal and informal practices are constructed within the organization. According to him, the understanding of those 'hidden presuppositions' is fundamental to understand how the symbolic tissue shapes the dynamic of the organization. Schein grasps well the existence of a relation between the exercise of authority and the formation of a symbolic order in each organization. In his studies he gives special emphasis to the labor of the founder of the organization in spreading a determined 'view of the business' that will serve as a coordinating element in the construction of the common understanding of the organization. But that is as far as he goes in establishing this relationship. How is it that the power of managers, founders, or capitalists operates in composing a symbolic tissue within the modern organization largely remains to be explained. As Fleury, 1989, points out, the concept of 'culture' is still to be properly constructed to address the specific nature of the processes observed in modern organizations. This difficult definition of the scope of the concept is one of the major barriers to the maturing of the discussion.

At a deeper level, the progress in the construction of a proper theoretical and methodological frame of analysis touches at the heart of one major question around which much of the struggles of those dedicated to the progress of human sciences

encounter their limits, namely the relation between the individual and society. It is precisely where power, cognition and the social labor of constructing a symbolic reality meet that we are to find answers to the difficult questions that involve this issue. An analysis that ignores any of these elements is fated to fail to provide a satisfactory explanation for the process of construction of an 'organizational culture'.

Without any pretension to provide this explanation, the comparison among the three plants is presented here more as an illustration of the nature of the complexity of the processes inherent in the construction of an organizational culture than as a completed analysis. I believe that the timing in which the present observations occurred was an extremely fortunate one. Out of pure luck, I was invited to join in the efforts to transform the relations of production in a industrial organization in a time in which many of the taken-for-granted beliefs and assumptions of the mass production type of organizations were being brought to the surface and questioned at all levels of the organization. In such time, the strengths of the coordinating elements that reorder the collectivity and “recontextualize” the acts appear with an extraordinary clarity. As most institutionalized forms of working are being reviewed, rules are being redefined and the formal means of control and domination are being eliminated, the work of power in redefining routines becomes more evident, and the observation of the movement of creation of a shared understanding of the situation reveals the fundamental dialectical process of transformation that occur between structures and dispositions[10]. Cognitive categories, symbols and political power surface as the forming elements recreating the routine.

To understand how is it that the quality production transformed the very basis of the social division of labor upon which the mass-production type of organization rested (by affecting changes in the balance of the division between intellectual and manual labors), I propose to look at the history of the three plants, inquire into what it was that

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10 Dispositions are the schemes of perception and appreciation deposited, in their incorporated state, in every member of the group. Bourdieu, 1977, p.17. Further discussion on the interplay of structures and dispositions as applied in this paper is on the end of this chapter.

allowed the workers to experience higher degrees of identification, their responses, the reasons they gave for this identification, to explore later how the disillusionment occurred and how, in time, alienation developed, to progress into exploring why it is that by exposing the irrationality of the separation between conception and execution in the modern market, and the limits of bureaucracy, the organization of production aimed at higher quality reduces significantly the likeliness of the development of the phenomena of alienation.

In a certain way, the development of quality production leads us in the opposite direction than the one Max Weber visualized when theorizing about the progress of capitalism. Quality production, at least at its introductory stages, brings the revival of the charismatic leader, which is the one who can skillfully utilize his accumulated symbolic capital to construct the legitimacy of his own authority, by leading the community into the transformation of the ways of doing things towards the attainment of a given goal.

If we are to accept the point posited here that under the new, quality production arrangement, the basic elements that contributed to the likeliness of providing the conditions for alienation to develop are largely reduced, why is it important to look at the phenomena of alienation, as presented in the classic writings on the mass-production type of division of labor? Because to understand the nature of the transformation that took place, it is important to understand what it is that is being transformed. If at the present it was made possible for us to realize the fact that alienation is more directly related to the nature of the social and political arrangements within the organizations than a phenomena caused by the type of technology of production or a common element in all capitalist division of labor, then we would have to rethink the contribution of those who studied the phenomena under mass-production in the light of the new findings.

Labor process, among all human activities, is the one more central to the development of the self and class identity. It is through the daily experiences of performing an activity in a given environment that the worker becomes a technician, as engineer, a maintenance worker or an operator. It is through the concrete experience of participating in the division of labor that one develops a sense of social belonging or exclusion and membership to one class or to another. In modern society, the work place is the privileged site at which the dialectic between structures and dispositions occur in a more dynamic and totalizing way. If we can understand why it is that by participating in performing a given activity in a given environment a collectivity of workers can experience a state of alienation, we can access the chief elements that in the work place affect the formation of the self of the workers, their class identities and the sense of concrete limitation in the personal trajectories and life projects. By looking at the process by which a worker comes to feel alienated, it is possible to extract some elements to understand how is it that the a blue collar identity is developed and what forces hold the workers in this place in society, in spite of the frustration it may cause to its holder. Also, by rethinking how the separation between the worker and his activity and the product of his activity occur, it is possible to see the elements that work towards provoking this separation. Having understood that, it is possible to take a firmer step toward thoughts of motivation. A lasting state of motivation, that surpasses the temporary effect of prizes, games and competitions to enhance participation, commonly held at many organizations, depends on successfully integrating the worker with his own activity and the community at work, in a way that the working experience becomes a meaningful one, through which the workers have a sense of positively contributing to some enterprise and constructing something through their efforts[11].

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The approach to the question of alienation, in here, although largely inspired by the works of Marx, is far more limited in its critique of the capitalist arrangement. This is fruit of a lack of conviction on the nature of man and the ideal organization of society that could allow for a more fulfilling development of the human personality. Compared to the more holistic understanding of the phenomena in the work of Marx, and especially if we look at the Hegelian philosophy from which much of Marx's discussion evolved, what I call here a reduction of the alienating tendencies in

We will take a brief look at why it is that in the post-capitalist society (to borrow Drucker's term), motivation becomes an indispensable factor in the productive process and a key to competitiveness, and return, at the end of the chapter, to the question of alienation, to discuss the concept in a theoretical perspective having already in mind the nature of the questions that are being addressed.

1.1.2 The question of the motivation and the transformations in the social division of labor in the industry

The focus on the question of motivation is one strategy used to look at how the economic transformations that occurred recently affected the system of social relations and the disposition[12] of the social agents. The focus on motivation seems adequate, among other possibilities, for it expresses a considerable shift in the expectation, on the part of the managers and investors (or on the part of capital in relation to labor) in regard to the workers. Why is it that the model of close supervision to guarantee a certain amount of output, under a hierarchical order, is being replaced by the necessity

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the quality production represent, in Hegelian terms, a retrocession to the original stage of alienation in which there was no awareness of the separation between the individual and the social tissue. The wealth of the term alienation is very much reduced to fit a discussion of motivation, that is, it is more or less reduced to the relation between man, his activity and the product of this activity in relation to the psychological drive to produce. That is in a sense an absurd reversal of the Marxist problematic. What I call here a reduction of the alienating tendencies may be seen, in Marxist and Hegelian terms, as exactly the opposite, there is, as the deepening of alienation caused by a historical retrocession of the political awareness of exploitation created by the post-cold-war ideology. In a sense, that is precisely what it is. Defining the quality of human experience according to man's participation in a symbolic reality that reproduces power inequalities is the reverse of the ideals of humanism, in which the concept of alienation was more ideally employed. In humanist philosophy, “dealienation” occurs through the encounter of man with himself, and the encounter of the self-aware, free man, with society.

In spite of the confusion this inversion of the problematic might cause, I decided to keep the term alienation in this paper precisely because I wanted to rescue a terminology that was constructed with the focus on the relation between the individual and society and between the individual and his/her own self and activity.

12 The term disposition here is employed according to its conceptualization in Bourdieu's theory, that is, the sort of knowledge that is inscribed in the relationship of familiarity with the familiar environment. The structured dispositions of the social agents is where the social structures are actualized and tend to be reproduced. (Bourdieu, 1977, p.3)

of self-motivation on the part of the worker, in the form of the desire to contribute to the future of the company and to guarantee its position in the market?

The issue of the overcoming of the mass-production type of organization and the need to transform the productive processes has being exhaustibly discussed in the business literature (by Hammer & Champy, 1993, Tomasko, 1993, Drucker, 1993 and 1995, Peters & Waterman, 1982 among others) with the focus on the transformations of the market and on the competitiveness of the modern organization. The intention here is not to reproduce this discussion, but to give a general overview of how this transformation affected the organization of the labor processes for the workers, and to understand how transformations of this nature reach the shop floor, what forces promote the changes and how a new equilibrium of power is reached within the walls of the factory.

1.1.3 From mass-production to quality production

Peter Drucker (1995), in addressing the transformations that occurred in capitalist society from the 1980's, says that what has changed, in relation to capitalism as we knew it from the industrial revolution on, is that nowadays knowledge has become *the resource*, instead of one of the resources. He is saying that land, labor and capital, the chief resource generators of wealth up to the present, are no longer enough to assure the future of a business. Where there is enough knowledge, the other resources can be obtained. The transformation that this shift represents is enough, for him, to name the present society post-capitalist, for the historical clashes between labor and capital have been overcome, and the extraction of surplus-value from labor is no longer central to the generation of profit[13].

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If the extraction of surplus-value from labor is no longer central to the creation of profit, and knowledge is the key element, the basic condition for competitiveness, the hierarchical organization that has had, historically, the goal of assuring the extraction of surplus-value from labor, tends, naturally, to lose its reason for existence. The mass-production type of manager, the one that was in charge of people's performance, must abandon this task and learn to work as someone responsible not for the performance of people but responsible for the application and performance of knowledge.

In concrete terms, though, how to work in this new environment is still being learned even in the developed countries, where the transformations started. The developing nations are hurrying to avoid the formation of big gaps. Discovering new ways of working is not easy. Relaxing supervision must be accompanied by a process of empowerment of the workers, in which each worker can learn how to be responsible for their own performance and results. As Tomasko (1993) noted, many companies, in their attempt to reduce hierarchy through the empowerment of the employees, ended up increasing anxiety in the workers, who tended to cope with it in a number of dysfunctional ways: in some cases, some employees became increasingly rigid and bureaucratic, undermining the hoped-for-flexibilities that were supposed to emerge from hierarchy delayering. In other cases, the number of problems, mistakes and accidents rose. If some of the old jobs of the managers, such as providing coordination and integration to the work flow was relatively easy to substitute with computer systems, others, such as providing a sense of direction and common goals, relieving anxiety and psychological protection against fears of mistakes were left undone. Many companies stepped back in their delayering and re-instituted some sort of hierarchy.

The process that brought about the necessity for moving away from the mass-production type of rigid hierarchy is studied by Piore & Sabel, 1983, and is seen as

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For the relation between the economy based on the extraction of surplus-value from labor and the state of alienation, see Marx, Karl. Capital, vol. 1, Penguin Books, 1976, Smelser 1973 and Bender 1986.

having its origins as far back as in the oil crises of the 1970's, which increased the competition among mass-producers for limited markets and lead to the success of Italy, Japan and Germany. In those countries, they argue, for a matter of less adaptation to the mass-production type of organization, some craft forms were maintained in the industrial organization, allowing for a shift towards flexible specialization. This strategy, based on flexible, multi-use equipment, skilled workers and the creation, through politics, of an industrial community that restricts the forms of competition to those favoring innovation, equip those countries for better competing in the new environment. What Piore and Sabel describe as a shift towards flexible specialization, is the same type of process Kenney & Florida studied in the Japanese organization, that they termed 'innovation-mediated production'. It is into this type of new organization, more flexible and adaptable to changing situations, that the observed company was trying to evolve. I decided, though, not to employ the terms flexible specialization, of Piore and Sabel, nor the term innovation-mediated of Kenney and Florida, to stress the difference in the struggles of the developing nations in this process. While the developed nations are fighting to gain the lead in this process, the developing nations' dynamic industries are fighting to stay in the game. For those companies, the main challenge is to raise the quality level to somewhere close to the leaders of the progress so that lower quality standards won't push them out of the market. In this sense, I feel that the term "quality production" better describes the struggles in the developing nations, and of the studied company in particular.

1.1.4 The irrationality of the mass-production type of organization in the new context

Why did this transformation, from mass-production to quality production happen? The experience of CPC (Companhia Petroquímica de Camaçari) itself can be illustrative.

Since its foundation in 1974, CPC could produce and sell PVC at prices above US$1,200 per ton, although the cost of production was just a little above US$400. It had only one competitor in the domestic market, which was protected by the protectionist measures of the government, and demand was higher than supply in the international market. Clients had no choice. Both CPC and its competitor worked at full capacity, beating production records successively, and were able to set prices with comfort. The structure of the company was inflated, but as the cost of labor was a small part of the total costs of a capital intensive industry, it didn't threaten its position in the market. As money "poured in" as an old-time manager put it, benefits were excellent and the company could maintain a very aggressive salary policy. The reason why it was such a good business was that the technological know-how had not yet been spread, and the construction of such a plant cost much more than a private businessman could afford to risk, especially in the less stable, poorest countries (as is going to be explored later, CPC was constructed as part of a development project between the Brazilian government and a Brazilian private investor, associated with foreign partners). Technological know-how added enormous value to the product. In the same way, as those old time managers themselves recall, they would pay enormous sums of money for North-American, German or Japanese equipment, as parts, machinery or new formulae for the product. They had no choice. They could choose only from the very few producers, who were in the power position to set standards of size, functioning, price and etc.

In time, the number of petrochemical and equipment producers rose, and also the number of people willing to sell know-how or join in joint-ventures in the developing world increased. The teaching of sciences in universities around the world allowed for the development of engineers and scientists in the poorest countries. Southeast Asia joined strongly in the competition, practicing what CPC managers called predatory competitive strategies, commenting especially on South Korea. Prices dropped

drastically. The price of the tonnage fell to below the production cost of CPC. And worst. Now clients had an enormous number of producers squeezed by an excessive supply willing to offer various advantages to their buyers. Many offered assurance of zero defects (in CPC the rate of defective lots was quite high by international standards), just-in-time delivery systems, and were willing to produce according to specific grades of color, transparency and quantity to meet the specific needs of the clients. This was not a temporary or cyclical crisis, of which we have many examples in the history of capitalism. Different from the excessive supply crises of the past, in which a handful of producers overinvested in increasing their productive capacity, the contemporary situation was caused by an excessive number of producers, fighting each other for a larger market share.

The clients who, in the past, would have their production stopped for several days due to delays in the delivery of the product, were no longer willing to compromise. Some clients, now that many producers were assuring zero defects, closed the testing sections of their plants in which they had before searched for impurities in the raw material sold by producers who couldn't assure the purity of the plastic pellets, especially in Europe, USA and Japan. To be sure that they wouldn't have problems with the products they bought, the clients were willing to pay more for producers certified according to ISO 9000 series standards, specified by the International Organization for Standardization[14], and wouldn't buy from those who could not assure the quality of their product according to those standards.

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[14] ISO 9000 series is a group of five guidelines for the management of quality and quality assurance. The ISO 9000 are guidelines for the selection of an adequate model to be followed. ISO 9001, 9002 and 9003 are models to be followed for the implementation of quality assurance, which focus especially in problems prevention, and ISO 9004 are guidelines for systems of quality management. ISO 9001 is the most complete of the models, including 20 items that describe the demands of quality assurance form the activities of research, project and product development, to production, installation and technical assistance. ISO 9002 deals with production, installation and client assistance after sales, and ISO 9003 deals with final processes of inspection and tests. The whole series deals then from the first steps of the projects to marketing and after sales client's assistance, compromising the whole productive process with the clients' necessities. On the previous type of organization of the work process, based on functions, no one in the organization was fully responsible for the whole productive process for one specific client, and the client was usually lost among internal departments and subdivisions in which no one took full responsibility for the complete course of production. In the new system, as part of the checkpoints to evaluate the

The companies who wanted to remain competitive needed to match those standards. Precisely how did this need for producing quality product affect the organization of work inside the company? The use of time, as applied to diverse needs, is one of the elements in which change is more immediately felt. Even before more concrete steps were taken to reorganize the production, the fact that quality became more important than quantity reduced, in a physical way, the pace of production. In the mass-production era, to increase the pace of production and to beat productivity records, resulted in an increase in profits, somewhat independently of the final quality, for even products below specification could be successfully commercialized. One of the first commands that reached the astonished shop-floor workers, used to the idea that productivity meant quantity, is that even if quantity was to be sacrificed, they had to be careful at all the steps to avoid problems in the specification of the resins. Instead of the pace of production, the pace of innovation and measures aimed at increasing quality must rise. The laboratory workers, in their verification of the standards of manufacturing of a given product, were now allowed much more access to the production area. Also, their tests of new resins were given a priority they never had before. As the speed with which a product left the project department and reached the market was fundamental for the securing of clients, the compartmentalization of departments, each one with a chain of bosses at the top, started to be seen as a threat to the adequate pace of work. In The São Paulo plant, the one that had progressed further in the implementation of quality by the time this research started, the young researchers of the laboratory and product development department were allowed to negotiate directly with the operator for some time to test new resins in a reactor. In Camaçari, the same researcher would have to talk with the head of the laboratory and research division, who would then talk with the head of the area, who would in turn then

company's progress in quality assurance implementation, clients file a complaint if any problem occurs. Unanswered complaints and excessive number of complaints prevent a company from being recognized as a quality producer.

negotiate with the head of the production department, who would finally give permission and so on back down the line.

Besides the transformation in the pace of production, the quality production also altered significantly the comparative status of one professional group in relation to the others within the factories, with the production line employees, engineers and operators, losing status for the sales and marketing personnel, now nicknamed 'front-line' workers, for their job of promoting the company's image and products to the clients. If before, beating production records was the key to profits, now, finding clients became most important. As we will discuss ahead, a whole system of status and values developed within the organization needed to be transformed to assimilate the changes.

Compared with a mass-production type of organization, the quality-oriented organization is: 1) more horizontally oriented, working faster across its structure instead of up and down its hierarchy, 2) it is built around reinforced jobs, composite teams and load-bearing managers 3) it replaces units organized around productive or organizational needs with units organized around customer's needs, 4) it replaces functional units and departments with process teams organized around the most important work flows, 5) it replaces back-up or support activities with subcontracted firms, or "outsourcing", as a strategy to reduce the complexity of the structure and concentrate on the streamlined activity (a strategy used chiefly to avoid excessive compartmentalization of the activities within the same organization) (Tomasko, 1993)[15].

1.1.5 The information technology and reengineering programs

[15] The company observed was at the beginning of the streamlining process when the research started. I could observe the anxiety of the workers and the strategies constructed by managers to progress with it and the workers to oppose it. In spite of the crisis generated around it inside the company, my observations at that point indicated that the workers on the areas destined to be outsourced tended to benefit from the transformation. Although this issue will not be dealt with at length in this paper (maybe in a later one), it is important to keep this process in mind when reading the section on the shrinking of the structure of the company. As far as the blue collar activities were involved, downsizing and streamlining did not mean the workers were being fired, but transformed into "service workers", that is, hired to perform a "service" for the company, which is little different from the activity performed before as company worker.

Reengineering is a program of rationalization of production in which the tasks, which in the mass-production era were organized around functions, are transformed to wider jobs organized around processes and projects. In this system, teams pursue a given task from conception to execution, while in the past it was fragmented into various departments, passed to the desks of several specialists to receive dozens of stamps, in a system in which no one was fully responsible either for the process or for the result. Reengineering is, according to Hammer & Champy, a radical process of change in the organization of the productive process, undertaken by the contemporary organization to adapt to the post-mass production scenario.

The decomposition of work proposed since Adam Smith, into simple and basic tasks, is abandoned in exchange for the reunification of the tasks into coherent processes. Reengineering is not meant to improve, slowly and constantly, the already in-use processes, but to completely rethink industrial organization, forgetting the old departments, divisions, groups and job structures and moving toward a new structure aimed at satisfying, more completely, the client's needs. Designed to restore the competitive strength of North-American organizations (largely as an answer to Japanese successes in the 1980's), the reengineering process aims at rationalizing the productive process having the client, rather than the productive process, at the center of the concern of managers. It means to reduce the internal demands of the organization to produce more efficiently for the client's satisfaction (Hammer & Champy, 1993).

Reengineering fights the bureaucracy inside the organization by eliminating fragmented processes that have been historically layered within. As Hammer & Champy put it, reengineering rejects the industrial paradigm of Adam Smith: the division of labor, economy of scale, hierarchical control and all the other elements that were fundamental to the early stages of industrial development. The transformation necessary to eliminate the bureaucracy is not limited to reforms of the organizational

chart, though. In traditional organizations, organized around fragmented activities, the bureaucracy is the organizational strategy that integrates functions. Without the bureaucracy, working processes organized around fragmented functions became chaotic. The progress towards elimination of bureaucracy is linked, in most of the literature, with the introduction of adequate computerized systems. Although process reengineering is different from simple automation, there is the belief that a company can only successfully implement hierarchical delaying, streamlining, and if necessary downsizing, with the aid of efficient ways of conveying and organizing information.

In one of the plants of the studied company, though, significant progress had been made towards quality production thanks to the motivated participation of its workers with the quality programs even before automation was accomplished. On the quality-oriented environment, due to a democratically organized routine, which counts on the full cooperation of the workers, communication among the areas is enormously facilitated and progress can be made on the reduction of bureaucracy. As each worker contributes to the rationalization of his/her own work processes, each individual feels very much compromised with the results of the plant as a whole, reducing significantly disputes among areas. This was the situation observed at the São Paulo plant, which was exactly the opposite situation to that of the Camaçari plant, for example. Based on the fact that São Paulo had managed to rationalize its productive processes without the aid of information technology, the key role attributed by some to its effect in reengineering and quality production will be, for the moment, set aside.

Without denying the powerful influence of software and computerized automation technologies in the reorganization of the work processes within the industrial organization, the comparison among the three plants lead me to agree with Kenney & Florida (1993) that computer automation is most successful in environments where workers are integrated into the production process and where continuous learning can occur. Effectiveness stems from an organizational context and concrete social

relationships that can optimize the use of new technology, not from the technology that simply displaces workers. Hammer & Champy (1993) noted, from their comparison of the experiences of various companies, that automation and investment in information technologies, and even the acquisition of the most sophisticated computerized systems, lead to rather small gains in productivity and time-reduction, especially if compared with the gains allowed by process reengineering, that is a transformation in the social organization of work and on the social relations inside the industrial organization.

The importance of automation and software developments was well understood and sometimes its importance was overestimated by the managers of CPC. As engineers, they tended to stress the transformative potential of technology and favor the rather easier to measure, concrete effects of automation, in which given inputs in to the production process could be seen as generating given outputs at the end of the production chain. The human side of production, despite the trend toward human resources development by the Japanese boom, tended to be regarded, by many, as "philosophizing", in a pejorative way, without much possibility of concrete evaluation of results or possibility of controlled application of principles aimed at pre-stablished results.

1.1.6 The discovery of the new labor process

To an outsider, it may seems rather simple to eliminate the bureaucracy, but the bureaucracy is a powerful organizer of the routines of hundreds of people working together, and a key ally to production by poorly trained and badly integrated human resources. Given the complexity of the industrial process, the elimination of the bureaucracy must proceed gradually to avoid chaos.

In a more direct and practical way, one of the difficulties of proceeding toward horizontal integration of the areas and hierarchical delayering was that this process

was, from its beginning in the observed company, associated with the installation of computer systems, instead of work process reorganization. In fact, there were no ready-to-use systems to be bought over-the-counter and put to work. The computer systems had to be developed for the specific needs of each industry, and each department, organized around each process. To develop the systems, the necessities of each area had to be known. To know the necessities it was necessary to analyze the best way to organize those processes in the ideal situation wanted for the future, after the reengineering was completed.

To develop new systems of organization of production, it is necessary to consult with the people who actually perform the activities, to understand their problems in dealing with other areas, where the repetition of tasks occurs more frequently and listening to their suggestions on how to improve the processes they are involved in. For this, the workers must know the goals of the company, they must have a sense of direction and objective around which they can conceive a new organization. More than that, they must have a sense of duty towards the company and feel convinced of its future.

In practice, learning new ways of producing is slow. It depends on a process of behavioral changes and demands time to be accomplished. What happens is that for a while, everything is temporary in the organization. Routines are disorganized by the new needs, the computer systems are not yet ready for use and work becomes harder and more demanding. Indeed, the organization of new routines, the discovery of new needs, and the translation of new needs into efficient computer programs occur simultaneously, requiring in an enormous amount of re-doing and experimentation. A firm sense of direction and objective is necessary to escape the almost unavoidable crisis. Empirical observation makes it clear that the sense of being lost increases the further one goes down the hierarchy. The old taken-for-grantees are shaken, and the new truths are yet to be incorporated. The more the workers cooperate, the faster the implemented programs can present results. There is no way coercion can squeeze

good ideas and a positive drive towards cooperation from the workers. Cooperation, after this stage, needs to be incorporated in the way of working, for the client oriented production must be based on constant improvements in the product and processes. In the comparison among the plants it becomes clear that the earlier the workers had responsibility and information in regard to the changes they needed to undergo, the smoother the process progressed. Participation, as the example of the São Paulo plant indicates, allowed the managers to obtain the desired motivation even before the reengineering and automation process was accomplished.

Why was it so hard to create a positive environment that allowed for motivated participation and cooperation? The problems started with management itself. For generations managers had believed the labor force to be indolent, to want to avoid working if allowed, and as unable to think coherently about complex realities. The board of directors worried about the danger of delegating and sharing information openly with the workers. The assistant of the executive president, in charge of facilitating my research, was constantly worried that I would leak information down the hierarchy, for I had access to everyone in the hierarchy and knew sensitive information about the future plans of top management in regard to human resources management.

The same fear was felt all the way down the management structure. The workers, on their side, felt the incoherence between the discourses and practices of management and tended also to distrust the managers. Some of the members of middle management failed to perceive the importance of the transformation the company was trying to undergo, and didn't put effort into passing down the message. Others understood very well, and soon realized that delayering could mean losing their jobs, and, therefore, did not to put much effort into pushing for changes. In Alagoas, and especially in Camaçari, the level of anxiety was very high. But the aspect that interests us most here is the fact that even the best intentioned of the managers and workers, recognizing the need for the implementation of quality programs and willing to proceed

with the necessary changes, failed to see what they were doing was counterproductive to the direction they wanted to proceed, and that, especially in the case of Camaçari, the top manager of the plant could not see why his plant did not progress adequately, and tended, in self evaluating his own intentions as the best possible, to put the blame on the top management of the holding company or in the quality of his subordinates.

It is the central point of this paper that, to successfully implement the changes and to attain the desired level of motivation and cooperation, the managers must possess enough educational and cultural capital, and enough competence to legitimate their authority by adequately investing this capital. As one suffers a constant reduction of wealth if one fails to invest adequately one's economic capital, the educational and cultural capital also tends to get eroded unless constant investments are made to keep it updated. The manager of the São Paulo plant started his career an as engineer, but kept investing in his ability to manage human resources and to understand the market by returning periodically to university for specialization courses, and kept up with the international literature, until the needs of the modern market were fully incorporated in his world view. By constantly investing in his formation, he became a 'modern man', he didn't need to make an effort to keep up with the novelties of the market, he 'thinks' by the logic of the new market. The way he the managed São Paulo plant was the result of his convictions that open human resources management was the correct way of working. Participative management was not an attempt to catch up with international tendencies but fruit of his own 'realization' that this was the best way. All his interaction with the community under his command was guided by his convictions, and as he believed it, he took for himself the educational role of guiding the community towards sharing his views.

The manager of Camaçari, also an engineer by training, became a 'man of production', the classic manager of the mass-production era. His cultural capital diminished in time, and he lost the ability to understand, in perspective, the nature of

the transformations of the market and the new needs of the economy. Taught that managing was the task of the coordination of the performance of his subordinates, he had enormous difficulties in accessing how to delegate authority and reorganize production along the new lines. Learning from the top that delegation should proceed, he failed to perceive the equally crucial importance of horizontally integrating and planning at the bottom. What from his point of view was a great deal of freedom and flexibility was, from the point of view of the workers, an uncoordinated, underleveraged, patchwork of middle management fiefdoms. In the absence of firm leadership, the middle managers, the supervisors and the workers, with larger portions of their time (in this order) dedicated to execution of tasks and minor problems, and without access to the plans and policies of top management in an organized and coherent way, ended up fearing the loss of their jobs (for they were unable to access what was expected of them in the new environment), and tended to protect themselves through different strategies, creating subgroups for mutual protection and further complicating communication.

Due to his lack of adequate educational and cultural capital, the top manager of the plant did not possess adequate instruments to address the daily struggles of his subordinates, he could not convince them for he wasn't convinced himself, he could not exemplary abide by the new rules (a key element for the educational process that would lead to behavioral changes in his subordinates) for he wasn't able to create those rules. Although other plants were progressing toward higher quality standards, the Camaçari workers were suffering from the classic problem of alienation associated with mass-production, unable to understand their activities in a coherent context, unable to relate to the product of their activities, feeling powerless in the context of the company, in relation to their future and society, and experiencing a deep feeling of meaninglessness in regard to their activity (why this situation happens in the capitalist organization is going to be explored in the next chapter, that is, why the workers by themselves do not

overcome this situation and why they became dependent on the managers for meaning).

Looking at the history of the plants, it is possible to understand how, in time, the daily solutions presented by the managers can create certain ways of doing and perceiving within the plants. In order to understand the nature of the transformation from mass-production to quality production in regard to the relation of the workers with their own activities, the product of that activity and their sense of belonging, and how the authority of the managers mediate this relation, it is positive to think of the conditions for the development of alienation, and then to try to understand how the creation of an orthodox belief in the community of interests with the company allowed it to be overcome in the classic form.

The effect the power of the managers has on the collectivity is directly related to the leaning process that occurs at the work place. To properly address the nature of this process, we must abandon what Kahn & Gardell[16] call a narrow definition of learning, and recognize that people learn at work not only things that the managers attempt to teach them but also things that were never intended as a learning content. Indeed, as Marsick & Watkins, 1990, point out, it is precisely by understanding the process of incidental learning in the work place that we are able to understand the process that leads to the constitution of assumptions, beliefs, attributions, internalized meaning constructions about the actions of others and hidden curriculum in formal learning. Incidental learning occurs largely unconsciously, unintentionally, as a byproduct of other activities, and comprises much of the taken-for-granted, the tacit agreements that compose an "organizational culture". This process of "learning" how to relate to the other and to oneself as a professional is largely processed through the practical experience of a job design, of how the company decides on compensation and benefits, on how the company trusts the employees, for example, giving or not giving freedom to

16 Robert L. Kahn & Bertil Gardell, In: Leymann & Kornblush, 1989, Introduction.

join a labor union, or how the human resources department functions, its degree of proximity to top management, and especially and fundamentally on how a system of communication is constructed, how information circulates, how various activities are valued in that given context and how integration is processed within the organization.

Although central to the construction of a working community, this learning is not separated from work and from the routine of working, and is often not recognized by managers and is much less coordinated according to pre-established goals and policies. As in any learning process, the one who is learning is modified in this process. Kahn and Gardell, from their observations of the learning process in the work place, conclude that for learner-employees to become activated in the motivational sense of the word, they must be given the opportunity to become active in the learning process. In other words, motivation requires a degree of autonomy on the part of the learner that educators and employers have seldom recognized.

The role of education in the self-formation and the socialization processes is known enough to dispense with further discussion here. The experience of a given factory environment, demonstrated, by the empirical observations, to be extremely dependent on the way the managers work, is what allows for the development of motivation or alienation. This effect of the power of the managers occurs especially through the incidental learning it produces, and the effect it causes in the personalities of the workers. If we look closely at how faith in the bureaucracy allows for the neglect of the role of managers in creation of most of the environment in which this incidental learning occurs, it is easier to understand why the psychological state of the labor force was neglected by the managers and regarded as not being under their power and responsibility to affect this intimate aspect of the workers life[17].

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[17] Baum, 1987, points to the fact that the costs of ignoring psychological domains in organizations are unacceptable. He also points to the fact that many professionals choose to ignore the organizational and interpersonal environment that mixes feelings into their work. “These practitioners tend to assume that solving problems is primarily an abstract intellectual process. Although this belief may help them avoid thinking about uncomfortable ambiguities and risks of organizational politics and power, it is self-defeating. Ignoring unconscious

1.1.7 On the way to political orthodoxy

One of the issues that are fundamental to the understanding of the recent discovery of the desirability of cooperation between workers and management is the development of a post-cold war ideology, and the possibility of the construction of a political orthodoxy[18] according to which labor and capital have many interests in common. Added to this, is the changing mood of the left wing movements in Latin America, now defending industrialization as a path to social progress and welcoming multinational capital. During the cold war period, foreign capital was seen as the enemy of socio-economic development on the subcontinent and the most powerful ally of neocolonialism.

I am not defending here the idea that workers were necessarily socialists, but that the cold war the belief in the commonalty of interests between capital and labor did have a root even outside the left wing movements. The workers of the observed company were still pondering the limits of the newly found equilibrium, even in the São Paulo plant, in which the cooperation between workers and management could be most easily

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anxieties does not drive them away, it only keeps them underground, where they form thickets that trap the unprepared." p.5

[18] The term orthodoxy is employed here according to the distinction made by Bourdieu, between doxa, heterodoxy and orthodoxy, according to which *doxa* is the experience of the social word as self-evident due to the quasi-perfect correspondence between the objective order and the internalized principles of organization; In comparison to this experience, the orthodox and heterodox belief represents the awakening of a political consciousness developed through the existence of a discourse of opposition to the arbitrarity unrecognized in the universe of *doxa*. Orthodoxy is the 'straightened opinion' which aims, without ever entirely succeeding, at restoring the primal state of innocence of *doxa*. The adherence expressed in the *doxic* relation to the social world is the absolute form of recognition of legitimacy through misrecognition of arbitrariness, since it is unaware of the very question of legitimacy. In a class society, in which this innocence has been broken, orthodoxy defines itself against *heterodoxity* by concealing a radical form of censorship that defines the "right" opinion and the "left" or "wrong" opinion. During the cold-war period, by the bitter nature of the management/labor relations in Brazil, it was considerably harder for the managers to impose a "definition of the situation", a discourse of "complementarity of interests between workers and the company" or an acceptable justification for the need for motivation and involvement between workers and the company. In the post-cold war scenario the orthodox belief in the manager's discourse was favored by a new ideology that defended the commonalty of interests between capital and labor.

observed. The role of the labor unions in Brazil and the historical belief in the antagonism of interests between capital and labor was a strong external factor limiting the possibility of adherence to the discourse of the managers.

In the history of CPC itself, at all of its plants, there were episodes of conflict and repression in regard to involvement in labor union activities (in the case of the São Paulo, soon after its acquisition by CPC). Contrary to the situation of leading Japanese corporations, in which quality management first started, where the labor force enjoyed a stability in the job unimaginable to their Brazilian colleagues, high turnover has always been a feature of Brazilian organizations (according to Kanitz, 1996, in terms of national average, 28% of a company's employees change jobs in a single year. Statistically, at that rate, a company will have turned over its entire workforce in five years, a rate that becomes a serious obstacle to quality and training programs). In that context, although capital intensive companies tended to be an exception during the 1970's and early 80's, hard salary negotiations and massive layoffs in case of economic difficulties where not at all rare[19].

The labor unions, influenced by the Labor Party (PT) and by the Workers Single Central (*Central Única dos Trabalhadores*), had their ideological bases constructed upon Marxist ideals. Due to the belief in the antagonism of interests between the workers and the companies, the leaders of the Union of the Chemical and Petrochemical Workers of Bahia (Sindiquímica) declared that, although at that point (February,1992) they did not fully understand what was behind the quality programs that the companies at the complex were launching, they were recommending to the

[19] In the long run, it is possible to assume that the depth of commitment that can be created between the workers and the company may be proportional to the commitment of the company towards the workers. It is hard to imagine strong ties being unilaterally maintained. Indeed, Akio Morita (1986), in synthesizing the essence of the commitment between Japanese workers and their companies, emphasizes that a real responsibility for the future of the employees was fundamental to the creation of a deep commitment and to the strength of human ties. Kenney and Florida (1993) say that new innovation-mediated production can extract much more value from the labor force. It is reasonable to suppose, I believe, that the full extraction of this higher value would depend on a much bigger commitment from the managers and the workers as well.

workers not to be too enthusiastic about them, for it seemed like an attempt by the managers to expropriate the knowledge of the blue collar workers. Knowledge and experience in specific production processes was what gave more stability to the operators of chemical and petrochemical industries in comparison with other groups of industrial workers, for those companies where far more dependent on the knowledge and experience of the workers for stable operation than any other industry.

The questionnaire research conducted at all CPC factories revealed that almost all the blue collars at Alagoas and Camaçari did not trust either the management or the labor union leaders in their intentions or in the neutrality of their opinions. The results contrasted with those of the São Paulo plant, in which both, but especially the management, had managed to create belief in their intentions and opinions. The non-participant observations and the interviews later indicated that the trust in the labor union, or the belief that it was a necessary institution with objectives to be valued, was created by the plant manager himself.

The ability to create a rather orthodox belief that nowadays the workers and the company have common interests (or on the necessity of the eradication of the antagonism between labor and capital) was at the root of the success of the manager of the São Paulo plant's strategy to increase his credibility. Compared with the heterodox conflict of ideologies at the other plants, the common political understanding of the reality of the factory and of the nature of labor/management relations no doubt contributed to the success of the integration of the workers with the company. How it was possible for São Paulo's manager to create a shared sense of the truth, a necessary basis for the orthodox concordance of the opinions, is one of the elements that we need to understand to grasp the basis upon which the legitimation of his leadership was successfully constructed[20].

[20] In the chapter on São Paulo the manager's construction of trust will be better explored, being the point in here to call attention to the fact that the transformations in the economy and in the organization of production did not happen in a vacuum of political ideas. Comparing São Paulo and Alagoas, it is possible to see that the ability to manage not only the internal conflicts in the plant and in the company but also the ones generated outside the

The progress of the new type of production organization will very much depend on overcoming the ideology of conflict that accompanied developments in the mass-production organization. As the coercive exercise of authority loses much of its reason for existence in the new context, quality production becomes increasingly dependent on a sort of political orthodoxy that allows for a more full integration of worker and company. This integration cannot be constructed upon the conviction that the conflict of interests between labor and capital persists. In a sense, the case of the São Paulo plant illustrated the comparative advance in relation to the other plants also in this aspect, showing how the progress of quality programs depends on much more than on standardization of productive procedures and process reorganization.

How long this political orthodoxy will survive is difficult to foresee. From 1994, with the stabilization of the currency and economic growth, a sense of general optimism can be observed in Brazil, with the leaders of the major labor unions shifting their discourse from antagonism-based ideology to that of the necessity of industrialization as a path for social and economic development, which implies the cooperation between workers and productive organizations. According to some interviews conducted in June, 1996, with a few top people in the petrochemical industries in Brazil, the implementation of quality programs are now flowing much more smoothly than earlier in the decade, and the workers are generally quite convinced of the necessity of these programs to guarantee the future of Brazilian industries and of their own livelihoods. They all agreed, though, that the increase in the scale of production and the construction of new plants (Northwest's Petrochemical Complex, where the Camaçari plant is located, finished the duplication of production capacity of raw materials producers in 1992, the Petrochemical Complex of Triumfo, in the South, is now being duplicated and the projection that the construction of a new complex will start in Rio de Janeiro from 1997) will not mean an increase in the supply of employment opportunities, for the

factory walls are important for the legitimation of management's view and one of the issues in which the quality of the symbolic capital of the manager is very important for the success of his integration programs within the factory.

reengineering programs and the new information technologies allow for an increase in output with minimal increases in labor. This trend tends to confirm the thesis of the post-industrialists, according to whom there will be a constant decrease of employment opportunities in the post-industrial societies (see Casey, 1995).

How political faith in a socio-economic system that cannot provide occupations for a large portion of its labor force will be maintained is a key problem the future holds for us. Meanwhile it is possible to affirm, I believe, that faith in the system is a key element of the newly gained equilibrium within the industrial organization, a faith that is transformed in cooperation by the inculcating labor of the managers, while the necessities of the new production arrangements are not incorporated in the social agent's dispositions.

1.2 On the theoretical possibilities

1.2.1 On the historical approach

The choice of presenting the findings by means of a historic narrative is not the result of a historicist intention, as I hope to be able to demonstrate, but is the fruit of the intention to show how dynamic is the cultural reality inside the plants. The organizational culture, as it is called in the business literature, is by no means a set of transferred internal structures nor something that can be imposed by management at will, as some sort of crudely imposed dominant ideology, but the result of human praxis and interaction. If we look at it in a historical perspective, we can grasp how external and internal factors intermingle with strategies of control and resistance creating a way of acting and reacting that, although unique, owes a lot to the logic of the economic and political structure of the larger society to which it belongs.

The historical introduction to the analysis of alienating power relations is compatible with the choice of the concept of habitus for explaining how an individual or a group of individuals came to act the way they do, once the dispositions that incline one to act are to be constituted 'in time', and it is also in time that the dialectic between the structures and individual and collective habitus occur, so that the individual state of alienation, a condition of the workers' self, is produced through the continuous experience of interaction in the field. This is one of the reasons for this choice of approach. But also, I am trying to establish in here the relation between the alienation of the labor force and the existent power relations within a given field. This approach departs from the existent analysis of alienation in two aspects: it distances itself from the classic Marxist approach to this theme in the sense that the phenomena of alienation is not seen as a necessary or pervasive condition in all capitalist working arrangements, although its possibility is drawn in here from this very capitalist relations of production. It distances itself from a second approach, different from the first, and found in the work of Blaunner, among others, in the sense that it is not seen as being derived from the type of fragmentation of the activity of the workers produced or caused by any sort of technology. Rather on the contrary, I defend in here the idea (hardly original) that technology has a very small impact on the constitution of states of alienation[21].

I propose in here to look at alienation as the consequence of certain power relations, developed through the history of the collectivity of that field. The mode of thinking upon which the modern division of labor (capitalist) is based is fundamental for the existence

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The critique of the power of technology in constructing given types of social interaction appears clearly in the work of Gallie, D. 1978. In Search of the New Working Class: Automation and Social Integration within the Capitalist Enterprise. Cambridge: Cambridge University Press, where he compares of the construction of industrial relationships in French and British oil refineries, discussed in Harris, 1987. It is also a point taken in Harris' comparison of the two ammonia plants in England, and appears indirectly in all the studies that stress other elements in creating industrial relations, such as the work of Jean Baudrillard 1983, In the Shadow of the Silent Majorities... or the End of the Social, and other essays, New York: Semiotext(e). Emphasizing symbolic production, Finlay-Pelinski, Marike 1987. Powermantics: A Discursive Critique of New Communication Technology, London: Routledge & Kegan Paul, Jurgen Habermas, Harvey 1989, Luke 1991 and Casey 1995, among others. In Casey, 1995.

of alienating power relations, but the latter is not determined by the former. Through the history of the plants, I hope to be able to show how much variation is possible within the same 'mode of production', to borrow the Marx's terminology, and how important it is to progress in the research of alienation, to proceed with careful empirical observations and comparative studies. It is through the history of the plants that we are to see how different "organizational cultures" emerged, how, through long term experience within each field, the labor force was to experience (always relatively) an upward or an downward mobility vis-à-vis the expectancies of individual trajectories in a given social class, and how efficient management has to deal not with an abstract organization, but daily with the anxieties, fears and ambitions of real people facing real situations, and who are always changing and redefining their needs, in a way that no ready-to-use management receipt can work.

The anthropology of the industrial organization deals with quite different realities than the ones which study pre-industrial societies, families and other non-profit institutions in the sense that within the context of industry, the economic aspect of the relationship that binds the individual to his environment is always, at least theoretically, present in a clear, naked form. In this environment, the logic of production apparently imposes the rules of behavior and sets the hierarchical arrangements in a logical and economic manner, in which each member is aware of the fact that he or she executes a set of tasks in exchange for monetary compensation, and clearly understands the nature of this relationship in the context of the larger society in which he/she lives. In non-industrial societies, the economic aspects of life are inseparably intermingled with kinship and other ties, in which the contract-less constraints of social mechanisms are a condition presented at birth, masking much of the economic aspects of human relationships.

In industrial societies, contracts among parts are understood as actualized between free and conscious individuals, groups and institutions in such a way that the nature of

the exchange or the relations it prescribes should suffice to make one aware of one's duties, rights and legitimate expectations. But, indeed, the degree of awareness of the reasons for daily activities and the rationalization upon those activities are not as given as we tend to believe, and the contractual part of the relation between workers and the organization of employment define a rather narrow area of this relationship.

To stick to the cool letter of the contract is not in the best interest of either part. The managers hope for the development of feelings of loyalty and identification on the part of the workers, which will lead to a higher degree of commitment to the interests and goals of the organization. The workers, for their part, hope for praise and recognition that will allow them to usufruct from the maintenance of the security of long term employment and future perspectives, besides the experience of a pleasant and fulfilling work environment. There was, within the context of the observed organization, a constant tendency to conceal the centrality of the economic relation for the definition of human relations within each plant, in an effort to restore "humanity" to those relationships.

To enhance the profitability of the capital invested in the purchase of labor, management needs to work effectively in building up its symbolic capital, which is necessary to assure all the 'non-economic' aspects of the economic process, such as motivation, loyalty to the organization and a sense of group and collectivity, that brings to the maximum the profits of well-coordinated team work indispensable to competition in the modern market. Symbolic capital is "capital denied as capital, recognized as legitimate, that is, misrecognized as capital (recognitions, acknowledgment, in the sense of gratitude aroused by benefits can be one of the foundations of this recognition)"[22], and one of the mechanisms which make capital go to capital. The 'economic capital' also works here, as it does in pre-industrial societies, through its

[22] The terms employed in this paragraph are utilized in reference to Boudieu, 1991, discussion of the pre-industrial societies.

euphemized form of symbolic capital, and also here the conversion of symbolic capital to economic capital, which is the condition of its efficacy, is in no way automatic[23]. It requires constant labor in the form of care and attention, devoted to making and maintaining relations, and also investments in terms of money and time, in devising adequate human resources policies, keeping up with daily complications, selecting adequate human resources personnel, investments in training and keeping up with the innovations in personnel management strategies and with the strategies of the surrounding enterprises, so that one does not lag behind in modernizing one's relations with employees.

This symbolic capital, in the context of the modern enterprise, is derived from the logic of the capital as constituted in modern business philosophies and which legitimates authority in the bases of acquisition of educational and cultural capital and in the form of capability to interpret the complexities of the market and foresee adequately it's future movements. The modern leader is the one who, for the sake of the community dependent on his leadership, can capture a large portion of the market and assure the continuance of the company in the competitive environment of an international economy tending towards globalization of markets. The leader is the self-motivated individual, who provides a sense of direction to the others and who can, through his charismatic features, motivate the community under him to pursue the group's ideals. The cult of personality as an innate talent for management is carried on within the organization as one of the strongest legitimators of the authority of the managers. Through the comparison of the work of the three managers we can see that the success of a given leader is much less due to some mysterious feature of personality, abstractly defined as charisma, than on the adequate management of the group's needs, that is, charisma as constructed through the adequate investment of acquired knowledge on the construction of one's symbolic capital.

[23] Bourdieu, 1991, p. 128

On manager’s side, the constitution of symbolic capital is the key to management success. For the employees, it is would be for their advantage to expose the arbitrariness of the manager's discourse so that they can either obtain more economic advantages from increased productivity and also more power over their labor process and within the company environment by reducing their dependency on the features of the leaders. But the fact is that this tendency is not observable in practice. The discourse of the workers tends, in general, to stress this dependency.

The dependency of the collectivity on the managers for firm leadership towards the attainment of the company's mission and for the interpretation of the market is accepted as natural in the industrial organization. As a function of the size and complexity of the group and of the productive process, a totalizing agent capable of unifying the otherwise fragmented activity and channeling the efforts in the same direction is perceived as indispensable. If the manager successfully fulfills this role, his leadership is more easily accepted. The more arbitrary the present arrangements are felt to be by the workers, the more difficult it is for the managers to extract the needed compliance. The feeling of arbitrariness, as in the case of Camaçari, was largely due to the lack of enough knowledge about the new economic reality, as an indispensable form of capital, which would have allowed the manager to construct his image as a necessary leader of community. When the middle management and other employees perceive new necessities and push for changes before the manager acknowledges their importance, the manager is unable to accumulate symbolic capital, as his educational and cultural capitals are perceived as similar to those of his subordinates. His position at the top of the organization starts to be questioned, and also the quality of the productive and social arrangements inside the plants at lower levels of the hierarchy. There is a dispute over the priorities of the company, and the formation of focus of resistance against the central authority.

But much of the idea of arbitrariness takes as its base precisely the feeling of dependency stressed by subordinates, making it necessary to understand how this "subjective" relation to power is constituted within the organization, what sort of constructive work does the power have in the organization that confirms the feeling of dependence, and how it varies from one plant to another. One of the items in which the collectivity more clearly expressed dependence on the leadership was in regard to the quality of the environment, being "human" or not.

One fact that becomes quite clear in attempting to understand how the present situation within the plants came into being is that no single causal explanation can account for the complexity observed. It is only by analyzing the objective structures (the composition and variations of the labor market, of the prices of the product, the international and domestic tendencies in the transformation of labor relations, the different degrees access of the workers have to formal education and the actual company situation) that we are able to understand the practices of managers and workers alike, and how they were transformed in time[24]. It is only this way that we can pose the question of the mechanism between the structure and the practices and the representations which accompany them, and escape from the inadequate analysis that takes the structure and the agent's accounts of their practice as "reason", "motives", and "thought objects".

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[24] One major problem in this paper is that for a matter of time, resources and availability of sociological studies and other secondary sources, the relation between the impact of the dynamic of the domestic labor market in the workers' self-perception and their relation to the company could only be accomplished in relation to the Camaçari plant. The researchers of Human Resources Center of Federal University of Bahia produced many papers addressing the impact of the complex on the state's economy and of the economic transformations of the labor relations, workers' movements, individual life projects in the area, among others. Similar studies, that would allow for a comparison of the plants in the same ground are inexistent for the two other plants (there are many studies on the economy and sociology of labor in São Paulo, but due to the size of the city, it is much longer history of industrialization and the diversification of its economy it was much more difficult to relate those data and statistics to the plant in the same way as it was possible in Bahia). This relationship could be only clearly established, having hard data as a basis, in the case of Camaçari. For the two other plants I had to rely on the narrative of the informants, which did not allow for conclusions of the same nature. In Bahia it became clear that the nature of the transformations experienced by the collectivity inside the plant was related to the external transformation in the region, but not reduced to it. The company serves as a filter that selects and transforms the external influences of the workers. The discourse of the employees tended to neglect this effect.

It is necessary, as Bourdieu says (1971, p.21) not to treat the pre-scientific representation of the social world, that is, the account the agents give upon rationalization of their own practices, as a science of the social world. "Native experience of the social world never apprehends the system of objective relations other than *in profiles*, i.e. in the form of relations which present themselves only one by one, and hence successively, in the emergency situations of everyday life. If the agents are possessed by their habitus more than they possess it, this is because it acts within them as the organizing principle of their actions, and because this *modus operandi* informing all thought and action (including the thought of action) reveals itself only in the *opus operatum*."(p.18), so that in their reflexive and quasi-theoretical return to their own practice, even the best informed informant produces a discourse which compounds two opposing systems of lacunae. Insofar as it is a discourse of familiarity, it leaves unsaid all that goes without saying ... and insofar as it is an outsider-oriented discourse it tends to exclude all direct reference to particular cases (p.18). To treat the discourse of the employees and managers as the actual motives of their practice and the actual causal relation to the observable situation is to transform the agent's interpretation of their practice into scientific discourse. It would also ignore the fact made many times apparent in the agents' discourse that their interpretation of events tends to include a notion of agency that is only constructed through a retrospective exercise of analysis upon past events, that attribute the cause of a given situation to a deliberated policy, devised prior to the following course of event, as if the outcome could have being foreseen when the inaugural acts took place.

The agents' account of their own or of the managers' previous practices tend to attribute an unlikely capacity of planning to the agents, giving the impression that all that happened in the past did so due to rational decisions and the conscious deliberations of those involved, while the observation of their present interaction points toward the need to place considerable weight on the "non-decisions" upon which daily

interaction is based, and on the understanding of how these "non-decisions" are constituted.

The comparison of the three plants allows us to see how the various elements interacted, in time, creating the habitus within the field and how, through understanding this process we can better understand the successes or failures of management strategies, and how the labor force was penalized, by unable management (by the standards of quality production), into a situation of alienation. It is not only through what is said, but through what is a priori agreed upon that we are able to understand the working of the symbolic capital and the struggles within the organization. At the same time we analyze the devised strategies and their results, sometimes as intended and other times as unintended strategies, we must look at the undiscussed principles upon which their efficacy arose, or the principles that legitimized the uneven allocations of power and symbolic power. We must also keep in mind that the acts of cognition are implied in the misrecognition and recognition that are part of the agents' understanding of the social reality, and that the socially constituted subjectivity that produces them belongs to objective reality[25]. For it is largely due to this shared sense of adequacy of power arrangements that the workers accept and even contribute to the concentration of thinking activity on those holding management positions and create the conditions of their own alienation.

Even the most combative of the labor unions questions all but the naturality of the arrangement that divides manual and intellectual work, closing the access to top occupations within the organization to one group at the expense of the other. Indeed, the effect of the activity in the formation of the self of the workers (and management alike) is such that this division seems very natural indeed, the result of the innate capability for a given job. As Casey (1995) puts it, "people become what they do". The comparative observation of the different occupational groups at different group ages

25 Bourdieu, 1991, p.122.

indeed showed how impressive is the nature of work in the formation of the individual's habitus, and in the workers' own self-perception, mental skills, articulation of the language and in their sense of "personness" (borrowing Cassey's, 1995 term), where emotion and reason is experienced[26].

It is not only in pre-industrial societies that the mechanisms that ensure the reproduction of the social system are to be found in the production of a compliant habitus, that is an integral part of the conditionings of reproduction of the social order and of the productive apparatus itself. As this specific case study demonstrates, even in relationships of an indisputable and clear economic nature, registered in the written form in a contract and mediated by a legal system, the role of the production of a habitus for the perpetuation of a durable relation of domination is fundamental. Even here censorship forces agents to euphemized forms of power and violence, and the building up of symbolic capital depends on the competent usage of socially allowed instruments and strategies. Bourdieu (1991, p.129) noted that in the absence of an officially declared and institutionally guaranteed delegation (and I would say even in the presence of an officially declared and institutionally guaranteed delegation)

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26 During fieldwork, in an attempt to verify if the 'culture of the plants' was as evenly spread among those with many years of experience in the plant as among the newcomers, I asked for group interviews with people by years of employment, mixed hierarchical levels, to observe how they reacted and expressed themselves in regard to different issues about the company. An unexpected issue that caught my attention was the fact that among the young ones (with less than two years of employment) the degree of articulation in expressing their ideas, the physical appearance, the body language and the confidence in speaking did not vary much between white and blue collars or between engineers (some originally from low middle class families, as the operators) and operators. The same was not true for the older employees. Here there was a significant difference in the degree of articulation of thought and language, body usage (reflecting clearly a humble or confident attitude), choice of words and an enormous variety of other elements, confirming the impact of the occupation on the constitution of the self and the habitus of the workers (or suggesting that self and habitus are two aspects of the same subjectivity, a subjectivity that is objectively constituted). The difference among the age groups, I believe, is chiefly created by the long term experience of different activities, but it would be appropriate to mention that there is also the possibility that all the differences might not have been formed in the industry itself, but from differences in access to formal education from early childhood as well. As the enlargement of the middle class in Brazil and mass access to education is a relatively recent phenomenon, part of the difference among the age groups might be a consequence of the fact that in the past it was exclusively the children of the elite who had access to higher education (now the senior managers), so that the top manager and the elder employees came originally from very distinct social classes, while the young ones experienced, from early childhood, more similar environments.

"personal authority can only be lastingly maintained through actions that reassert it practically through their compliance with the values recognized by the group. The 'great' can least afford to take liberties with the official norms and they have to pay for their outstanding value with exemplary conformity to the values of the group. Until a system of mechanisms automatically ensuring the reproduction of the established order is constituted, the dominant agents cannot be content with letting the system that they dominate follow its own course in order to exercise durable domination; they have to work directly, daily, personally, to produce and reproduce conditions of domination which even then are never entirely certain. Because they cannot be satisfied with appropriating the profits of a social machine which has not yet developed the power of self-perpetuation, they are obliged to resort to the elementary forms of domination, in other words the direct domination of one person over another, the limiting case of which is appropriation of persons, that is, slavery. They cannot appropriate the labor, services, goods , homage and respect of others without 'winning' them personally, 'trying' them, in short, creating a bound between persons. The transformation of any given kind of capital into symbolic capital, a legitimate possession grounded in the nature of its possessor, is the fundamental operation of social alchemy (the paradigm of which is the gift exchange). It always presupposes a form of labor, a visible (if not necessarily conspicuous) expenditure of time, money and energy, a redistribution that is necessary in order to secure recognition of the prevailing distribution, in the form of the recognition granted by the person who receives to the person who, being better placed in the distribution is in a position to give, a recognition of a debt which is also a recognition of a value[27]".

Expenditure of time and resources is still a need in the industrial world, although, no doubt, official and institutionalized delegation makes the whole negotiation much more cost efficient (it managed to develop ways to maximize the returns with minimal investment). But the positive, creative aspect of power, that allows it to put to work an integrated and productive network of people, must be constructed daily, and it is this specifically positive aspect of power that make it so fundamental to the functioning of management in industry. By providing the discourse and setting the routine (including or excluding the need for thinking and a more active participation of the labor force), management can create or reduce the possibility of alienation (institutionalization, though, with a logic which is also incorporated as dispositions, transforms the exercise

[27] Bourdieu, 1991, p.129.

of power in a much less risky business than in societies in which it is absent, by making it unnecessary for the costly ostentation that the exercise of power demanded, for its maintenance, in pre-capitalist societies - and also less coercive in the physical sense of the term, for the logic of revenge and honor, with exemplary forms of punishment, being substituted by the adequate psychological and educational strategy[28] (in a didactic sense of the term).

It is the work of the leader to create the limit of the authority of those in the middle management and to define the acceptable patterns of interaction among the various professional groups. In valuing the knowledge of those lower in the hierarchy and delegating responsibility, the top person in the plant make it much more difficult for the middle management to exert authority in a coercive manner, eliminates the shouting, door slamming, and etc., and allows for the blue collar workers to actually have an opportunity to contribute to the progresses to be made in their areas.

When the leader either ignores or values the hierarchical divisions, much more space is open for the middle management to exert power in a despotic manner and for the creation power feuds and all sorts of alliances that jeopardize the quality of the environment and cooperation among the areas and colleagues. The power allotments inherent in the very nature of the division of labor can build on the inherent dispositions

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28 A curious exercise that I had chance of observing in the company was the attempt to reduce the fear of making mistakes and to create an open environment for the recognition of errors. There were many instances in which errors were mentioned as the source of invention. Sentences as "only the one who is trying makes mistakes", "the fear of innovating is the worst of all errors in a modern organization", "the company makes a promise to not punish errors" are constantly repeated. This new discourse on mistakes was originally confined to the practical aspects of production, and later spread to different types of unwanted behaviors (within socially acceptable limits), in a sense that problems that before were a good cause for dismissal, were now looked as a failure of human resource policy to be correct with dialogue and proper training. The mistakes more unlikely to be forgiven were those in which the damage to equipment or loss of production occurred because of irresponsibility or lack of respect for the established procedures, or those involving the safety procedures. Errors generated by experimenting for the sake of productivity or quality gains within one's allowed range of decision, or caused by a lack of training and experience but in which were the responsible performance of one's tasks, and mistakes due to misevaluation in the case of extraordinary events, even if incurring to damage of equipment (depending on the extent of the problem caused) tended to be forgiven, even though they had been punished in the past. Punishments depended much on the perception of the intentions and especially on the reputation of the one who caused the problem in the São Paulo and Alagoas plants. In Camaçari it depended more on the area.

of the workers and managers, allowing for the acceptance, through experience of those relations in time, of extremely alienating relations, in which the labor force is completely excluded from the decision making process. The relation of the worker with middle management tends to be generalized, shaping his perception of the nature of the relations in the plant as a whole. The experience of authoritative power relations are transformed, in time, on the way of performing one's daily tasks. It becomes a habit to follow a daily routine in which thinking about one's activity is dispensable. Thinking and suggesting methods to better one's routine is given up for it does not have an effect. The role of the leader in producing a collective habitus directed towards the attainment of the organizational goals, and of constructing his symbolic power within each plant is indeed a central and difficult one, but it is a must if the company is to be made competitive by modern standards[29].

I believe it would not be too far from the point to affirm that excessive faith in the bureaucratic organization, on the institutionalized professions and on the mechanical functioning of the hierarchical order is one of the central elements in creating a process of alienation of the labor force. By believing in the system, the managers of the mass-production era took for granted, as if it was automatic, the formation of bonding between workers and company and did not invest in the extraction of the necessary non-economic elements of the labor force, as identification with the organization. This 'not performing' of the leadership role is a vacuum on managers authority that allowed for the development of alienation among the workers.

[29] Bourdieu, (1991, p.123) says that "it is important to observe, as Sahlins (1960, 1962-3, 1965) does, pursuing a point made by Marx, that the pre-capitalist economy does not provide the conditions necessary for an indirect, impersonal domination secured quasi-automatically by the logic of the labor market." But although it is true that within the modern capitalist enterprise domination is not exerted by the owners of the capital themselves, and that the systems contain the necessary elements that guarantee its quasi-impersonal reproduction, it is no less true that the same type of labor is necessary for the exercise of domination within the capitalist arrangement, as the only way to guarantee all the "non-economic" aspects of production, necessary for the full appropriation of the profits and for the adequate functioning of the productive organization, as loyalty, commitment and motivation to produce as an inner drive toward the attainment of a collective goal, as demonstrated in here thorough the analysis of the work of the managers. In this sense, I think is perfectly adequate to use the theoretical tools developed by Bourdieu to analyze the relations of domination within the modern capitalist organization, although he had in mind a different setting when he elaborated his concepts.

1.2.2 Alienation and meaning

It is important to keep in mind, during the readings on the history of the plants, that the main question that is to be explained is that of the possibility of a variation of degrees of motivation among the three plants. The question of motivation presents considerable difficulties when it is to be analyzed theoretically having groups rather than a given individual in mind. If we move away from the context of industry, it is less complicated to see how motivation is directly related to meaning, more than to anything else. If we think about the Jesuit priests who, in the eighteenth century, left Europe for the Latin American Mission in the Silver Region, we can see that they could endure danger, loneliness, deprivation, sudden temperature changes without the comforts of civilization, without losing their motivation to proceed with their enterprise, for they had a clear sense of meaning and purpose that kept them going. The scientist is no different. Anthropologists can live in the jungle, laboratory researchers can spend months in isolation without losing their motivation or experiencing a sense of meaninglessness regarding their activity, translators, artists and other professionals experience a lack of connection with others during their working hours, often in workplaces that are not perfectly comfortable, without suffering from their separation from other human beings and most times actually wish to be left alone to dedicate themselves to their activity.

A question that comes to mind in comparing those professionals with factory workers, is the freedom that they theoretically experience to determine the pace and nature of their work process. But freedom is an inadequate measure for the relation of the producer with his product and process of production. The researcher in the chemistry laboratory is not freer to determine his activity that the blue collar worker in the chemical industry. Observation of the research and development area indicated that researchers had proportionally much more of their time tied up to the pace of the experiments than

did the blue collars in relation to their production process, and less time for interaction with others, yet they could not be said to be alienated in relation to their productive process and were usually quite motivated to proceed with their activity, as far as the quality and nature of the work was concerned (in the Camaçari plant, the researchers in the laboratory were not motivated to produce for CPC, due to the disenchantment with the company that we are going to explore below).

If looking at other activities outside the industry we can find high levels of motivation in the most inhospitable environments, we must consider that the quality of the physical environment and the lack of freedom of time usage and body movement is not the key to the question of motivation. The variation observed among the three plants indeed confirmed this affirmation; for there wasn't a large enough difference in the production processes of the plants, especially between Camaçari and Alagoas, to justify the variation of motivation and identification with productive activity as a function of the technology or the type of productive activity. The fact that people had different degrees of motivation and behaved differently in similar environments also pointed out the necessity to reduce (the theoretical understanding of) the strength of rules in determining behavior, for even in industry, where rules are usually more abundant and more organized than in other types of environment (with perhaps the exception of the military organizations), there was the need to motivate people to act, indicating that the existence of rules and social expectations (at least on the part of the managers) is not enough to cause appropriate action.

If we return to the environment of the industry, we can easily observe that the managers, in general, are self-motivated, while the workers are in need of motivation. And also that while it is possible for those in management positions to be against the company, or disenchanted with their relations with that company in particular, it does not reflect in a separation between the subject and his/hers own activity, nor in a process of alienation as it occurred with the workers. Those in management positions

could focus their discontent on their relationship to that company in particular, while the workers, in the plants where an alienating process was observed, tended to be unable to understand their position in the productive chain and to feel powerless in a far more vague and general way. The core of the difference in attitude and feeling between managers and workers is in the amount of power they have in their own environment.

1.2.3 Alienation and power

The concept of power though, needs to be clarified within this relation. In which ways are managers more powerful than workers? The more obvious way lies in the fact that the manager can fire and hire workers, give suspensions and other punishments and has the power to promote or not. But observation of the daily activities in the industry reveals that managers are far from being free to do these things. The ilimited power of hiring and firing by managers never existed in the petrochemical industry, and is nowadays more reduced than ever. First, (as the case of the strike at the Alagoas plant will indicate ahead) because dealing adequately with the equipment requires years of training and intimacies with the machines, that only the blue collars have. Second, because indiscriminate firing has the worst possible impact on the legitimacy of the leader of the working group and bad treatment of blue collar workers reflect directly on the results obtained by the managers, in terms of problems during the production process and the level of productivity. Problems caused by bad operation can paralyze part of the equipment and has a considerable impact on productivity per shift in a continuous process industry. Sabotage, which is a strategy commonly, used against management, can put at risk the extremely expensive and dangerous equipment. The middle managers, who are the ones mainly in contact with the labor force, depend on the quality and quantity of the production of blue collar workers to guarantee their own careers. Besides, those in managerial positions are by no means more secure in their

jobs than are the blue collar workers. There is a minimum number of blue collar workers required to run the plant, but the quantity of middle level managers and white collar workers has been consistently reduced over the years, thanks to the introduction of electronic equipment (that reduced the number of white collar workers in accounting and finance section, the number of secretaries, typists, of people on control of the flow of items from the stock room among others), and to the concept of flat organization (according to which the number of hierarchical layers should be reduced to the minimum possible), reengineering and quality assurance programs. Indeed, since this research was conducted in 1991/1992, up to 1995 when the last contact with the company was made, many of the mid-level managers who had cooperated with me had been fired under this principle, while the number of operators working shifts was about the same (as the total for the three plants).

If the power of hiring and firing is not central to the sense of power and powerlessness (as the job security of blue collar workers over white collar workers indicates), what is it that characterizes the power of managers? A careful observation of the tasks executed by managers in the plant clearly indicates that the amount of power does obviously not correspond to the amount of freedom. Managers are in constant need to raise production and quality levels to international standards, which, as with records in the Olympic Games are always on the rise. They had to be constantly watching other companies abroad, for significant increases in production and/or scale on the international market could put the company out of the game. The complicated variation of supply and demand was constantly threatening their price policies. They needed to be aware of government moves, for at that time Brazilian inflation was soaring and the government was opening the long-time closed domestic market to imports. They needed to implement quality programs, increase workers' motivation, deal with pressure from labor union, plan for medium- and long-term investment in the face of the storm of an inflationary economy and adjust policies to the

demands of the stock holders, who themselves were not always in agreement in regard to the future of the company. It was much more common to see managers and engineers working long hours than blue collar workers doing the same. The amount of pressure to provide results in very short time span was also disproportionately higher for managers. Their freedom, if freedom there was, consisted in the contortions they had to make to adjust their action to an enormous number of variables, usually under stress and pressure.

Returning to the question of meaning, the core difference between managers and workers was not in power as freedom, but power as knowledge: It is the educational and cultural capital that gives more confidence to the managers in the market as a whole, not only in the context of the company, making them freer not to use their time and to impose a rhythm on their own activity, but freer in the sense of having more choices. And most of all, it is knowledge that allows managers to see the meaning of their activity in a much broader context than that of that specific industry, and the power to impose a view of reality upon the collectivity of workers, create their own legitimacy (impose themselves as a holders of charisma) and coordinate the collectivity toward the achievement of goals that are understood in all their implications by the managers themselves. The power of the managers, legitimized by the shared classification upon which the capitalist division of labor rests, gives them the power to accumulate information and knowledge, the most precious capital in the world of industry. Because managers are entrusted with the legitimacy conferred by this capital, they can fire legitimately and command legitimately, in the name of the future of the organization and of the necessity of the market, which managers alone can understand and affect. Managers are in a position of using symbolic violence in the name of something other than themselves. They can legitimately say that the present layoffs are a must to guarantee the survival of the company in the market for years to come, and justify the

sacrifice of some in the name of the preservation of the jobs of others ("in the case of bankruptcy, no one will have a job"), as an interpreter of the mysteries of the market.

The core to the question of power in the industrial organization, is to be found neither in the always relative concept of freedom, nor in the concept of power as the possibility to extract compliance from others pure and simply. The manager does not extract compliance and cooperation from the workers simply because they have power over payment and the authority to coerce. Managers have power over the workers especially, and fundamentally, because they talk in the name of something other them themselves, and have the authority not to coerce but to define reality, to place importance on one element and not another, to decide priorities, to interpret the mystery (for those who do not possess the adequate cultural capital) of the science, technology and the market. Their power derives not from a concrete and naked sort of political authority directly related to their economic position, that allows them to control others according to their will (as the proprietor of the old style capitalist enterprises could, in the industries where elaborate skills were not necessary and labor was abundant), but from their legitimized possession of symbolic capital.[30]

The more concentrated the symbolic capital becomes in the hand of a few, the harder it becomes for the collectivity of the workers to identify, understand and see the meaning of their activity within the whole context of production. Distribution of symbolic capital is concretized in a form of worker empowerment, and depends on democratically open communications and open distribution of information, which becomes the key to the reproduction of the system and its optimum performance under the quality production system. Historically, symbolic capital, the respectability, the

[30] The term symbolic capital (from Bourdieu. 1977, 1987, 1990) is utilized in here in reference to the respectability, recognition, professional pride and socially perceived right, or legitimate access, to given positions at the top of the hierarchy of command that confers on its holder the ultimate right of speaking, of defining situations and having that spoken definition accepted. The term symbolic capital is employed to refer to a form of capital that although chiefly derived from the privileged access to means of qualification, to educational and cultural capital, is not automatically generated by those, and need to be created by the holder's skills in investing those socially accumulated capitals in the construction of the legitimacy of his authority.

acknowledgments, the social recognition of a talent and of superior knowledge, and the right to speak derived from this recognition, was concentrated among those members of the elite who could, through the investment of their intellectual knowledge, create the conditions for the survival of the enterprise and to whom was entrusted the future of the investment and of the collectivity working under that arrangement. Proletarian knowledge, specific, limited, and practical, was not a socially recognized knowledge, and was a sort of subordinated knowledge that in itself affected little (if it was considered to be affecting anything at all) the success of the enterprise, its position in the market and the future existence of the collectivity. This knowledge was perceived as easily acquired, dispensable, and its excellent performance did not create for its holder valid forms of social recognition that would allow him to accumulate symbolic capital in the form of recognition and acknowledgment, and that could attribute meaning to his activity in the field in which the activity was executed and in the external society as well. The social recognition of the workers' knowledge is fundamental to empower the individual in the context of the field. The modern manager is the one who utilizes social recognition of his superior right to speak, the legitimacy of his authority conferred by the socially recognized superiority of the performance of his educational and cultural capital, to impose a system of interpretation of the modern enterprise in which all forms of knowledge are to be recognized as performing a fundamental role in the success of the group. In doing so, he allows all professional groups to acquire some degree of acknowledgment and a sense of professional pride that constructs for them a sense of empowerment in the context of the field. Through distribution, the modern manager increases the efficiency of his own symbolic capital. By not being afraid of sharing power and information (a form of ostensibly exhibiting the abundance of his own 'wealth' as the capacity to endlessly address any possible problems or concerns that might emerge from this sharing), the manager guarantees the recognition of the superiority of his own capital, and legitimizes his own domination. By sharing, by giving

'speaking powers', the manager makes it clear that he is confident about the quality of his own capital, capable of providing an infinite number of interpretations and solutions for the most unexpected issues. The capacity of performance of his knowledge is at the basis of the social recognition of his merit. At the same time, the manager constructs conditions for the workers to experience a sense of meaningful activity, that is meaningful because it is important in that given social context, and a sense of motivation, now that the individual is able to put his own knowledge to perform, for the sake of the group of workers and the company (being in a sense 'promoted' from a mere manual worker to someone that possess an useful intellectual skill).

As long as the historical development of production and market forces allowed for organization of the production to merely extract physical labor from the proletariat, the fact of alienation became inextricably locked within the discourse of the left, and non-leftist sociologists were looking for its causes within the nature of technology or in abstract concepts of massification or consumerism. But nowadays, when the intellectual participation of the labor force in the production process became central to competitiveness in the capitalist market, and the Japanese could reach much higher levels of worker motivation and involvement in production using similar processes and technologies as their Western competitors, we became aware of the fact that it is not the technology in itself, but what people do with it, and how they organize themselves around it, that makes the real difference. Seeing the various different possibilities of production organization, even when they have as a basis the same type of technology, makes it clear to us now that it was not technology that resulted in a given type of working relation or alienation of the labor force but, rather, to the contrary, it was the possibility (or more than that, the historically inculcated necessity and rationality) of using the labor force under alienating arrangements that allowed modern science and engineering to construct machines that work depending on an inhuman usage of the labor force.

Through the history of the plants studied we will be able to verify how different historical circumstances affect the experience of the work place, the perception of one's status in it and in its surroundings, and how the consequences of these historical circumstances can be aggravated or reduced to a minimum (within, naturally, the concrete possibilities of the economic arrangements) by the way the leadership is exercised, leading to an experience of alienation of the workers when the flow of information is unduly controlled, decision making process is concentrated and the communicative strategies are unskillfully constructed, and how it can reduce the effects of the inherent powerlessness of the labor force by delegating authority, opening information and the constructing a way for a fluid and efficient communications (which are, presently, the main means the managers utilizes in the construction of their symbolic capital). The comparison among the plants allows us see how the perception of an "objective reality" is always dependent on a "subjective mood", and that the subjective mood is indeed quite objective (and observable, for it is practically derived from concrete power relations and economic circumstances as interpreted in a given field).

Although the strategic use of knowledge, many times carried out unconsciously by the managers (before the introduction of the quality programs, the managers were not aware of their own tendency to concentrate information and of the implications it might have for the labor force, "it was just how things were done" from the birth of the petrochemical industry in the country, and that they learned through working under managers who did so in the past, so that they reproduced practically what was practically learned while remaining quite unaware of other possibilities, or even of the necessity, to do to otherwise), and other times purposefully manipulated, played a large role in the construction of the collective habitus in each plant, it is no less true that the discourse of the labor union, and their tendency to interpret labor relations as exploitative in country in which not only the income difference between the rich and the

poor is one of the widest in the world and exploitation was indeed a reality for the majority throughout the history of the country, played a part in creating the deafness of the workers to the appeals of the managers. Even when the appeals for cooperation by the manager were justified in a given context, the historical experience of exploitative relations, not only within the industry itself but inherent in the habitus of the workers as a social class, reinforced by the discourse of antagonistic interest of the labor union, prevented the workers from cooperating (the refusal to cooperate existed for the workers as a deep mistrust in the reasons of the management). This refusal to cooperate was not the result of rational analysis and a conscious refusal of the appeal, but was concretized as a sort of deafness. Due to the feeling previously existent that the discourse of the managers would not be in their best interest anyway, especially in Camaçari there was a tendency not to pay attention the information that came from the management. On many occasions I had chance to confirm that what was said was simply not listened to[31]. Information and communication must become a part of the daily problem solving to be efficiently absorbed by the workers.

The feeling of meaninglessness is strongly derived from a belief in the antagonism of interests between the workers and the company. It is partially this perception of antagonism of interests in the relationship that allows the workers to feel used like

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31 One situation that called my attention to this 'deafness' occurred at the beginning of the attempts of the management to improve relations with the workers in Camaçari and to make them more aware of the goals of the organization, in an attempt to extract cooperation with the management's program. Some information on the company's targets in the market for that year was placed on the information board, together with an appeal explaining how the production workers could help to reach that goal. Simultaneously, in a meeting with the supervisors held at the beginning of each shift, the engineer in charge of the production explained the same issue, and tried to focus on the need for cooperation within the spirit of the new quality programs that were to be implemented. After two days, one operator of that group told me, to my surprise, that there was no attempt by the management to communicate and that they had no idea about the future plans of the company. I asked about the contents of the meeting with the engineer, and they (the others jumped into the conversation) said that they didn't quite recall what he had said, but that it was the same nonsense as always. It was during dinner on the evening shift, and I was sitting with 5 operators at the table at the meals room of the production area. One of them said that what the engineer had to say had nothing to do with them, and therefore they just sat there in the meeting bored for those few minutes. They said the engineer had to talk to them to give the boss the impression that he was busy managing the men.

objects, whose activity's only purpose is to generate profit for a third part that would not hesitate to dispense with their presence in the company as soon as it was perceived as being in the best interests of profitability. The lack of an adequate human resource policy made the situation extreme, for by not allowing the workers to make sense of their activity within the whole context of production, and by failing to empower them to affect positively their environment, added to the sense of meaninglessness deep feelings of powerlessness. Being kept in the dark in regard to management's plans and intentions, the workers were unable to work out a strategy that would increase their chances of success in the organization, because bases for understanding their position and the expectation of the company in regard to their own performance and future chances were denied them.

An adequate human resources policy, though, is not simply one that puts down on paper all the management's intentions and plans, but one that becomes a way of doing things and solving problems, one that empowers the workers by allowing them to actually see they can cause changes, and feel their importance within the context of production. The example of Camaçari illustrates the case in which the sense of alienation was deeper, in which the workers were unable to make sense of their reality and were kept in the dark by the lack of an adequate human resources policy. The case of Alagoas illustrates how information alone cannot do the job of integrating the workers with their activity, for although information was abundantly disseminated, it was a one way flow, from the top down, in which power was extremely concentrated, insecurity was high and fears got in the way of more meaningful communications, and São Paulo illustrates how by informing and delegating it is possible to create positive communications from the management down and from the workers up in which the workers are empowered and management is confident enough to delegate, creating the feeling that they were in search of a common goal and that a collective effort could strengthen the company, enhance client's satisfaction by offering them an ever broader

line of products of an improving quality and by doing so saving everyone's jobs and contributing to social development. Two way communication and delegation of responsibilities restored meaning to worker activity, and motivated them to proceed toward the attainment of more than a pay check to support their family.

1.2.4 The historical approach and the object of analysis

Historical analysis is a necessity because the analysis of each plant presented below is not the analysis of an encountered reality, of the pre-constructed object and its features, but is, rather, an attempt to take as the object of analysis the social work of construction of the pre-constructed object. It is less the work of understanding the present reality than of investigating how relations that brought about those realities were constituted in time, in an exercise in which more than confident affirmations it is important to think relationally and relatively. As the history of the three plants varies considerably, it may be said that the strategy of appealing to a historical comparison is groundless. I think this choice is justifiable and necessary. It is necessary because it is only through a historical approach that we can appreciate fully the working of the leadership and its impact on the construction of the habitus of their respective fields, and it is justifiable because what is being attempted is not to construct a model of similarities and differences, but to demonstrate how even within the same company, in the same country, producing for the same market, a considerable variation in the experiences of the collectivities involved exists. If we are to understand what the managers are to manage, we must explore the complexities of the reality to avoid undue reductionism. The history of one plant is not necessarily worse than any other. São Paulo had all the possibilities of developing an environment in which anxiety and feelings of powerlessness were very much present. What I want to show here is that in time experience is an important factor in the formation of the individual and collective

habitus, and that depending on the work of the leadership this same historical experience can be the basis of an alienating experience or not, and also that there is no way out: in not managing those elements that affect the relation between the employees and the plant, the manager is actually allowing for the worst possible outcome in terms of worker identification with the company, as happened in Camaçari.

My own perception of the importance of looking at the history of each field was developed because of the circumstances under which the research started and through the choice of research method. As I didn't know what I was to find and how to proceed with the investigation, I decided to go to the company every day in an attempt to find some clues for the construction to the hypothesis that was to guide my investigations. In my first contact with the workers, I introduced myself as a researcher trying to understand the company and just stayed there talking to whoever was available in a very informal way. A few days passed, and I came to realize that whatever was said about the present situation of the company was defined against how it was in the past. The workers' evaluations of the present situation, was invariably interpreted against their own past experiences within the company. I partially ignored, in the beginning, such tendency, and focused rather on the relationship between the workers and the top managers, which was also a very frequent topic of their discourse. I realized how mistaken it would be to ignore their interpretations of the situation based on their previous experiences when the results of the quantitative research came out (the management had also hired a consulting company for pursuing a quantitative research, using a questionnaire survey as method of data collection. For details, please refer to the appendix II). The most obvious problem with the "objective" research was realized both by me and by the management when Alagoas plant, new and modern, rated lower than São Paulo in regard to the grading of physical aspects of the work environment. Another intriguing result was that in São Paulo, a large majority of the workers marked on the multiple choice card that they knew well the top person at the plant, even though

he would be in the plant only three or four hours a day and thought it unnecessary to visit the production area often (he was usually at the commercial office, located downtown, trying to market the products of the plant), while at the Alagoas plant, the plant manager, who was the first to arrive and one of the last persons to leave each day, and had the habit of almost daily walking through the plant, talking with middle management, supervisors, chief operators and even the operators, received only a low level of recognition on the same item.

At that point, one thing became quite clear: that the "objective" evaluation of an "objective" reality, was subjectively constituted. After the other consultant presented his results, management came to me for an explanation. It became my job to understand the conditions upon which such subjectivity was built. The answer was given by the workers themselves: there was no absolute understanding of their situation, it was an always relative understanding, and the reference for this relative understanding was their past experiences within the plants, and their understanding of their professions and their vocations within the industry, an understanding also formed through daily experiences at work. Another aspect that caught my attention was that the workers' own understanding of their situation was by no means organized into a coherent system of interpretation. There was of a considerable fluidity and the opinion of one person varied considerably according to the situation and the context of the discussion. Usually upon a process of discussion of the national problem of inflation and recession, the workers could put considerable weight on those factors as worsening their economic situation, only a few days after return to put the blame on the managers as being responsible for their struggle to support their families and their unpleasant work experiences. The cause for the existence of a given type of relation with the company was attributed to the holding company's policies, to the national economic situation or to the plant managers depending on the context of the conversation, with the plant manager, followed by the 'company', as the most often blamed.

Once more I returned to Bourdieu for a theoretical explanation. The "ignorance of the objective truth of practice as learned ignorance is the source of innumerable theoretical errors, not least the error from which Western philosophy originated (and which anthropological science endlessly reproduces)[Bourdieu, 1971, p.165). "The explanation agents may provide of their own practice, thanks to a quasi-theoretical reflection on their own practice, conceals, even from their own eyes, the true nature of their practical mastery, i.e. that it is learned ignorance (*docta ignorantia*), a mode of practical knowledge not comprising knowledge of its own principles. It follows that this learned ignorance can only give rise to the misleading discourse of the speaker himself misled, ignorant both of the objective truth about his practical mastery (which is that it is ignorant of its own truth) and of the true principle of the knowledge his practical mastery contains" (idem, p.19). So that while it is fundamental to refer to the agent's discourse, it is important to investigate the relations they point to without transforming their discourse on the truth about the experience they live. The extremely complicated interplay of the facts of the economy and of the PVC market, the effect of the power of the plant manager and the formation of a symbolic reality within each field, as the elements that most directly influence practices within the field, are reduced and transformed into a set of dispositions to act that dispenses with an activity exercise of rationalization upon all the variety of variables that it implies. At all levels of the hierarchy, at varying degrees (the position of the managers at the division of labor, naturally, demand a more active thinking exercise on their part) the execution of routine tasks tends to become quite mechanical, dispensing with an active exercise of thinking.

The history presented here was largely reconstructed through the narrative of selected informants, research on fragmented white papers, which were very fragmented, regional census and bibliographical information collected from the studies of the researchers of the Human Resources Center of the Federal University of Bahia. As the historical reflections of the informants are many times idealized (as a later

examination of the myth of foundation, for example, reveals) or understood subjectively as well, it is not in the historical reconstruction of the informants in itself that we are to understand the conditions upon which their subjective understanding of the present reality was formed, but in the attempt to reconstruct their interpretation having in mind both the objective socio-economic situation at the time in which those experiences were incorporated and the nature of the power relations within the field, based on the shared, but unacknowledged, understanding of the situation that legitimizes the concentration of symbolic capital on the managers as the parameters against which their interpretations are to be placed.

1.2.5 Alienation: few theoretical considerations on its possibility

Bourdieu's theory of practice and the discussion of alienation: new theoretical possibilities

The concept of alienation has been used in a variety of disciplines denoting many times quite distinct phenomena[32]. The history of the concept of alienation is long, with reference to it already appearing in Greek philosophy and medieval theology. Addressing more directly the present concerns of human sciences is the philosophy of Hegel, and later the writings of Marx. In both cases, some metaphysical assumptions on human nature served as bases for the construction of the ideal, dealienated human life[33].

In modern writings, a sort of psycho-social approach is utilized, in which predominates the vague association between factors of modern society, such as mass consumption, mass production, etc. and the feelings of anxiety, powerlessness, meaninglessness, normlessness etc. demonstrated by individuals. Precisely how these factors affect individuals remains largely unexplored. To progress on the understanding of the phenomena of alienation, it is necessary to ground the discussion on a theoretical reasoning that properly connects the forces of society and the formation of

[32] For a historical overview of the usage of the concept and its intellectual background, refer to Schacht, 1971, to the collection of essays edited by Geyer and Heinz, 1992, and to the collection of essays edited by Johnson, 1973.

[33] In the classic writings, the ideal state of non-alienation was clearly stated, whether one agrees or not with the positions of those thinkers is not the case in here, against a metaphysical understanding of the human nature or an utopian ideal. Much of the conclusions of those thinkers evolve from an a priori concept of man. The central questions are: is man essentially a narcissist being or a being who attains a higher degree of fulfillment through relatedness with other? Can man know himself and others by his own apprehension of the material world? If not, how does life in society affects mans' construction of himself? Are man's needs socially defined, as proposed by Durkheim, or anti-social in nature, as proposed by Freud? Does man have an inner need for transcendence, artistic creativity as proposed by Nietzsche, or would the majority of humanity be satisfied by reproducing pre-established roles?; Being the discussion of alienation (or anomie, in Durkheim's case) very much based upon the separation of man from the ideal established upon basis of this nature. For further reference, see Schacht, 1971, and the introduction to his book by Kaufmann.

individual personalities. The two classic discussions that address more directly the problem discussed in here are the discussion of how the social division of labor in the capitalist mode of production leads to alienation, by Marx, and the discussion of how the development of industrialization leads to the breaking of fundamental social ties, generating the phenomenon of anomie, by Durkheim (for details, please refer to appendix 1).

Both the concepts of alienation and anomie are socio-psychological concepts embodying hypothesis about the specific relationships between social conditions and individual psychological states[34] (Lukes, 1972). Also common to both is an underlying theory of human cognition. Marx, departing from Hegel, attempts to reverse the central role of consciousness for the formation of a self-identity, replacing it for activity upon concrete reality as the core of human development. This has the weakness of not allowing for the understanding of how this relation between the subject and the concrete world could create the fetish of commodities and the unwilling process of surrender to society, and the departure from an individualistic position does not allow for the understanding of the how an ideology that is against the interest of individuals could have enough strength to keep society together and allow for the reproduction of power inequalities[35]. It has, though, the strength of having provided a conceptual

[34] One obvious difficulty in dealing sociologically with the concept of alienation is the difficulty in making generalizations in regard to individuals' psychological states. Even in the Camaçari plant, in which most of the symptoms commonly associated with the phenomena of alienation could be observed, there were individuals who could create a healthy detachment from the unfulfilling work environment. There was an operator who wrote poetry and composed popular songs, for example, and who understood in a complex perspective his relation to the plant and the nature of many of the problems experienced within it. It did not seem that the experience of that work environment made him fell meaninglessness in his life. There was another one who had very strong religious inclinations and also did not seem to be affected by the plant environment in the same way as the others. It seems rather clear that the relations between the work experience and the development of personality is intermediated by individual psychological capacity to react to the situation. The fact remains, though, that for most of the workers, the work environment is a strong element preventing a healthy psychological reaction against its alienating power.

[35] I by no means intend by this affirmation to reduce the complexity of Marx's thought by implying that he ignores in his analysis the fact that men are, social beings that come into existence while living in society. This is quite clear in Marx 's theory, and Giddens, 1971, correctly points out that for Marx the "alienation of men from their 'species-being' is a social separation from socially generated characteristics and propensities" (p.16). The term alienation, though, in the works of Marx, retains an abstract philosophical character, to which is inherent some abstract presuppositions on human nature. It is partially this ideal concept of man that serves as the basis for his critique of the capitalist political

apparatus to think of inequality and to understand the importance of taking into account the power differences created according to the principles of political economy for the constitution of society.[36]

Cognition[37] is also a central part in Durkheim's theory. The shared categories of thought, the same symbolic schemes, allow people to communicate, to share feelings and to defend the same moral and ethical principles even in the face of inequality. The weakness of Durkheim's scheme is the well discussed failure to include a proper discussion of power and inequality[38].

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economy and to the notion that the full realization of man's potentialities was to occur after political and economic reforms. In a sense, the Hegelian notion that the ideal relation between the individual and society presupposes individual self-awareness and a rational understanding of the social forces, leading to a willing encounter between the self-aware individual and social tissues, is present in Marx's discussion of alienation. ..."The organizing principle of the future socialist society must be centered upon 'the positive abolition of private property, of human self-alienation, and thus real appropriation of human nature through and for man'; it will involve the return of man himself as social, i.e., really human, being a complete and conscious return which assimilates all the wealth of previous developments" (in Giddens 1971, p. 17). Although Marx has consciously sought a historical and sociological understanding of man, especially in his later works, the traces of the philosophical understanding of alienation and of the relation of man and society persists in his works.

36 The fundamental nature of the relation between man and society is not reduced by Marx (refer to footnote n. 125, in the appendix I), but many theoretical developments were necessary, and still are, to investigate this relation.

37 The studies on social cognition (as a special field of concentration within psychology) aim to understand how the information processing mechanisms mediate the social perceptions and behaviors (Hamilton & Devine, 1994). The multidisciplinary cooperation among researchers of social psychology, specially social cognition, and sociology of alienation seem important to the development of the understanding of the alienation phenomena.

38 The concept of organizational culture, broadly employed in analysis of similar phenomena to the one analyzed in here, is left aside in this paper for it presents much of the same limitations presented in Durkheim's heritage, that is a tendency to study the symbolic systems and the culture its constitutes as a system of communication and expression defined in its capacity for shaping a consensual world view that allows the agreement of the intelligences. Among the works along this line, is the study of the rites inside of the organizations by Beyer and Trice, and the very useful writings of Edgar Schein. The dimension of power, inherent to the symbolic systems, and its role in legitimizing the existent order and hide contradictions in relations of domination, are practically absent in those studies. The temporary 'setting-aside' of the contributions of the researchers in organizational culture does not imply a denial of the value of their contribution. In this paper, the importance of the founders, realized by Schein, and the necessity of recovering the historic moment of the creation of the organization has influenced the way the data was utilized.

Another reason why the well utilized concept of organizational culture was set aside was due to a need to refuse a tendency, common of those studies, to focus on given organizational processes, as the process of training and introduction to the company, the policies to reinforce the social identity of its members (called by Beyer & Trice rites of confirmation), strategies of integration and other specific moments as the privileged occasions in which a culture is inculcated, communicated or reinforced. Although no doubt at those moments a shared system of communication can be reinforced, providing a common vocabulary for the group, I defend in here the idea that strength of an "organizational culture", that is, a 'culture' that is more than an ideological attempt of inculcation, develops especially in the routine of doing, solving problems, or simply participating in the environment, in the

What causes the phenomena of alienation is not only the separation of man from his activity and the product of his activity, as Marx proposes, but also the separation of man from society, in Durkheim's view of this relation, in the sense that the extreme concentration of power in the work place and the manipulation of communicative strategies that it allows prevents the individual from participating meaningfully in the work situation. These two approaches are, though, apparently incompatible, and the observation of the empirical situation imposes on us the need to make them compatible. The core of this incompatibility lies in the fact that, for Marx, the individual's surrender to society, a precondition for the existence of the solidarity proposed by Durkheim, is seen as a negative process, for, if society is to be analyzed as organized through principles of political economy, individual surrender becomes, especially for the lower social classes, synonymous with submission and exploitation. The attempt to unite these two conflicting currents of thought, to analyze a phenomenon such as alienation, so deeply entangled in political implications, might seem unduly eclectic. Nevertheless, it is impossible to understand the very possibility of alienation if political and economic factors are ignored, for they are the very basis upon which social relations are organized within a field. It is equally impossible to see why alienation causes suffering unless we investigate what is being stolen from the individual in this state, and the answer that arose from empirical observation is of a rather Durkheimian orientation: the possibility to participate in society, the feeling that one is "serving something", the possibility of understanding oneself and act vis-à-vis the expectations and meanings provided by society.

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practical dealing with situations. In this sense, the difficulties in "implementing" an ideal 'organizational culture' so commonly mentioned in the literature, have everything to do with the understanding of culture as a "system of values" to be spread in the organization out of a plan of the management, ignoring, many times, that precisely because a capitalist organization is constructed upon a power structure, reaction against the management's attempt may be quite natural.

In this sense, the choice of Bourdieu's theory was not accidental. As we can see through the retrospective of the career of these two concepts, we are in need of a theoretical perspective that allows for the understanding of the power of society to conform individuals that allows, at the same time, for appreciation of the power inequalities and its impact on the formation of self-identity, self-consciousness and action strategies of the those very individuals, there is, a theory of knowledge that is a dimension of political theory (Bourdieu, 1977), "because the specifically symbolic power to impose the principles of the construction of reality - in particular, social reality, is a major dimension of political power (Bourdieu, 1991, p.165).

Returning to the original point the paper is meant to explain, namely, the different degrees of the classic problem of alienation in the two plants and how it was overcome in the third, besides the need to explain how a theory of knowledge should account for the possibility of the analysis of power schemes, we must also explain the possibility of the differences among the plants, how they were created, constituted and maintained. In here, I propose to focus on the concept of field[39] proposed by Bourdieu, as an arena of objectified history. A field in which, as Foucault proposes, "the facts of discourse on the basis of which those facts are built up appears in its non-synthetic purity" (Foucault, The Archaeology of Knowledge, in Major, 1983). Some progress can be made on the study of alienation if we abandon, for a while, the focus on the individual, proposed by Marx, or the focus on the supraindividual reality, Durkheim's project, to focus on the reproduction of a system of relations, of which the ideal unit of analysis is the field, an arena with delimited borders in which face-to-face interaction occurs, an arena in which history, embodied in the habitus as a system of dispositions, objectifies itself in the practices of individuals. But the face-to-face interactions, in themselves, like the words

[39] The concept of field developed by Bourdieu has being modified to fit this discussion. In the original, the concept is not defined in relation to a specific 'geographic' area, but it is more broadly understood in relation to an artistic field, religious field, intellectual field, and etc., referring to a relatively autonomous sphere of society, in which a given habitus is formed. Bourdieu, 1987. In our case, the employed concept of field is an overlapping of the broader concept of "field of industry" (with its own respective habitus) to the smaller and more concrete unit of a factory.

in the discourse, are a too small a unit of analysis to reveal the important relationships we need to investigate, namely, the relationships which confer meaning to the face-to-face interaction. In the field, the macro tendencies of society are reproduced for individuals, who, obviously, do not relate to, or do not experience, as individual, society as a whole.

The concept of field is fundamental to the understanding of the possibility of alienation, for it is in the field that the tendencies of society, as a macro entity, affect individuals and vice-versa. Society exists for the individual through the various fields in which he participates, and among which the organization in which he is engaged for production is of central and determinant importance. The reversal is also true. In the same way as through the field society affects the individuals, it is only through the fields in which one participates that it is possible to affect the larger society. Being so, it is through the experiences and relations constituted in the field that one is to experience or not a situation of powerlessness and meaninglessness, and feel or not alienated.

In this sense, the concept of field is derived both from a geographic[40] and historical understanding of the factory. Geographical in the sense that the factory is a circumscribed area, with defined boundaries, within which, in time, political economy transforms itself. The whole space of the factory has important political connotations, and the utilization of this space is by no means unconnected with the power system. The physical utilization of factory space, a space inextricably connected with the bodies of all those who use it, is indeed one of the most powerful social divider (and integrator, for its usage serves as a vehicle of communication of status) and of significant educational effect (in inculcating the relative social positions within the company and the allowed or accepted use of the space and body movements and bodily relations to the space).

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40 For the relation between power and geography, see: Gordon, Colin, 1977. Power/Knowledge: Selected Interviews and other Writings (1972-1977) By Michael Foucault, chapter four: Questions Geography.

It is in the fields were we can observe how the reproduction of society occurs, and how the political arrangements typical of a given mode of production (once more borrowing the Marxist terminology) affect individuals and are reproduced by them. But, as it is going to be demonstrated through the field work results, the quality of face-to-face relationships and the political implications of a given working arrangement are by no means determined by the general tendencies of the larger society. There is a considerable range of possibilities for the arrangements within each field. In each plant some circumstances are concretized as the results of intentional policies, pre-established goals and plans, and most are out of control of a person or group. Among those are the acts and thoughts which are taken for granted and derive from the doxic mode of knowledge created through the history of a given society and some created through the history of the collectivity of that field, through a dialectical process in which individuals' habitus and the "informal organizational culture" exist in a process of continuous construction. One problem in the studies of alienation in the industrial organization up to the present is precisely that the unit of analysis is too broad to allow a conclusion that includes an explanation of how is it that the individual actually comes to experience alienation in the work situation.

The understanding of alienation depends on the understanding of how the workers came to accept their situation, to conform to it, and as the managers attempts to change demonstrated, to defend it from change. The history of alienation is, in part, the history of the incorporation and naturalization of the principles of modern science and of its transposition to a "science of management", the history of the creation of the process of "rationalization of production", of the social status conferred through education and of the incontestability of reason. Or, in other words, of how the conscious search for knowledge became the unconscious knowledge and how the categories of the scientific and technological world became our own system of interpretation of signs and symbols. The project of analyzing how people behave, feel

and think in the modern industrial organization, is partly the process of matching Foucault's understanding of history with a modern theory of practice.

The classificatory system based on the capitalist division of labor found complementarity in the defense of science and reason, which attributes unquestionable powers to the results of scientific and rational reasoning. The mode of thinking operating under this classic division of labor, under which the alienation of the labor force found plenty of room to develop, owns a good deal to the philosophy of classical theorists such as Henri Fayol, Frederick Taylor and Max Weber, with their defenses of rationality and the desirability of maximized predictability of activity (such as Weber's bureaucracy as the adequate path for continuous development). Taylor, for example, believed in an approach to work in which scientific methods could be used to discover the best way to accomplish a certain work goal (Yunker, 1990). They all conceived the organization as most efficient when operating in a highly rational manner, a concept of rationality that implied a centralized authority commanding a hierarchical structure, in which the individual personality should, in the name of efficiency, be subordinated to the objectives of the organization, and where the performance of duties in an unemotional, efficient and predictable way was the most appreciated (Yunker, 1990). The analysis of the forms of domination is, the more we depart from crude coercion, a matter of analyzing forms of classification, for the forms of classification are, in themselves, forms of domination. That is, the sociology of the power relations in the industrial organizations is the sociology of the forms of recognition and misrecognition, that is, of symbolic forms of domination. The classificatory structures that organize the whole view of society and economy (and politics, by implication) are derived, in the last analysis, from the division between intellectual and manual labor. The above theories of scientific organization of production contributed to further naturalize this division and strength its effect by giving the divisor strategy a 'scientific justification'.

Their alienating potential was very deep for they were based upon the analogy between hands and head, manual labor and intellectual labor (Douglas, 1986), worker and capitalist, already present in the capitalist division of labor, complementing and expanding its efficacy as a mode of thought. In Brazil, a country marked by its long history of slavery and wealth concentration, this analogy was taken further, in the separation between the black man's jobs, dirty, heavy, outside, backward, unskilled and the white man's jobs, clean, light, inside and skilled. The country's dependent and peripheral position in relation to the center of capitalist development, contributed to the creation of the association of all of that was tropical, traditional and agricultural as what is irrational and backward, responsible for poverty and ignorance. The way out was in the foreign, cold, rational, technological and sophisticated, within reach of the hands of the educated elite, the "interpreters of the progress for the ignorant masses".

Returning to the question of the field, it is in observing the relations established within its borders that we are to understand how classificatory schemes are transformed into body schemes (or how reason is transformed in faith, in habit). How the thought of a historical era is transformed into practical belief, which "is not a 'state of mind', still less a kind of arbitrary adherence to a set of instituted dogmas and doctrines ('beliefs'), but rather a state of the body (In which the *doxic* mode of knowledge is constituted- Bourdieu, 1980). *Doxa* is the relationship of immediate adherence that is established in practice between a habitus and the field to which it is attuned, the pre-verbal taking-for-granted of the world that flows from practical sense.

Bourdieu, in searching for a synthesis between objectivism and subjectivism in the analysis of human practice, innovates in the proposal to look at practices as the result of the dialectic of social structures and the structured, structuring dispositions through which schemes of thought are formed and transformed. It is a powerful and needed approach, if we seek to understand a phenomenon such as that of alienation. One thing that becomes clear upon reflecting on the observed empirical reality is that the

regularities observed in practice could not be reduced to a simple result of obedience to rules or prescribed by plans and policies. The very existence of the differences among the three plants is already a strong enough indicator of the variations possible within similar arrangements. On the other hand, it is also quite clear that the situations observed were neither the result of free deliberation of social agents in full exercise of their reason, nor that any of the participants in those environments were fully aware of their own situation and eternally confronted with an infinite number of possibilities to rationally choose from. It is also quite clear that time is a key element in understanding action. Every action makes sense only through the timing of other actions, in the context of the on-going interaction within the field and in relation to happenings outside the field. The very fast pace of the implementation of changes, within which many recognized mistakes happened due to rush and lack of time for planning, was an attempt to match the pace of the internal reformulations to the pace of the external transformations in the national and international market, with many consequences for the arrangements and social relations within the plants. If we are to ignore time pressures in the analysis of human relations within that context, management actions many times appear consequences of unreasonable and stubborn agents[41]. "The principle of practice has to be sought in the relationship between external constraints which leave a very variable margin for choice, and dispositions which are the product of economic and social processes that are more or less completely reducible to these constraints, as defined at a particular moment" (Bourdieu, 1991, p.50). The understanding of the possibility of alienation depends on a theory that allows for an analysis of human action that is neither mechanical nor rationally free. It is necessary

41 The effect of time pressures and external constraints, for example, explains the failure of the holding company in formulating a unifying policy for the group more attuned with the quality programs from the beginning. The urgency of the financial and marketing difficulties, explored ahead, allowed for the unplanned delegation of human resources policies for plant managers.

to look at how, human practice, is constituted, and how through practice reality can be reproduced for the agents.

Bourdieu's theory allows us to escape from the dictatorship of the concept of culture (as a system of beliefs, values, symbols and rules of behavior) frequently employed in the analysis of organizational behavior by consulting specialists as well as sociologists. It is impossible to understand the orderly and constant process of the re-creation of the company's environment with a concept that excludes the dynamic conditions of its transformations. It does not imply, as Bourdieu observes, a return to the positivist materialism, in which the objects of knowledge are passively recorded. It is a departure from the realism of the structure towards the construction of a theory that allows a return to the practice as the site of the dialectic of the objectified products (structure, institutions) and the incorporated products of historical practice (the habitus).

"The conditionings associated with a particular class of conditions of existence produce *habitus*, systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles which generate and organize practices and representations that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends or an express mastery of the operations necessary in order to attain them. Objectively 'regulated' and 'regular' without being in any way the product of obedience to rules, they can be collectively orchestrated without being the product of the organizing action of a conductor".[42]

The habitus operates by estimation of chances presupposing transformation of the past effect into an expected objective (what does not exclude the possibility of strategic conscious calculation, which, by being the product of a particular class of objective regularities, is limited in its diversity). "The habitus, a product of history, produces individual and collective practices - more history - in accordance with the schemes generated by history. It ensures the active presence of past experiences, which, deposited in each organism in the form of schemes of perception, thought and action, tend to guarantee the 'correctness' of practices and their constancy over time, more reliably than formal rules and explicit norms...In reality, the dispositions durably inculcated by the possibilities and impossibilities, freedoms and necessities, opportunities and prohibitions inscribed in the objective conditions (which science apprehends through statistical regularities such as probabilities objectively attached to a group or class) generate dispositions objectively compatible with these conditions and in a sense pre-adapted to their demands. The most improbable practices are therefore excluded, as unthinkable, by a kind of immediate submission to order that inclines agents to make a virtue of necessity, that is, to refuse what is anyway denied and to will the inevitable."(Bourdieu, 1991, p.53 - 54).

[42] Bourdieu, 1991, p.53. For a good overview of the relation between habitus and practice, refer to The Logic of Practice, 1991, p.52 - 65.

As the habitus, which works as practical hypothesis based on past experiences, gives disproportional weight to early experiences (acquired through childhood experiences in the world of domestic economy, forms of division of labor between sexes, household objects, mode of consumption, parent-child relations, existence as a member of a class, and etc.), even before entering the company the disposition to accept as inevitable one's status within it already exists, but largely as a possibility. It is upon entering the company that one's place is to be concretely taken. It is within the company that one's habitus, as a worker, is concretized, and it is within it that one will develop a sense of the limit of one's freedoms and necessities, opportunities and prohibitions, of practical value for within that field.

The regularities within a field (the company, in our case) can be more or less readily apprehended by every new employee for they are a reasonable variation already contained in the habitus, (and what gives it its 'permanent teleological character' as Bourdieu says in quoting Husserl) that work as a system of cognitive and motivating structures of a world of already realized ends (procedures to follow, paths to take, things to be said). The life within the company is accepted as a rather natural continuity of the path of one's life, and the conscious process of learning that occurs from admission on is only in regard to the technical aspects of one's profession (and even those are only partially consciously learned. As we will see later, the introduction of the quality procedures made it possible for workers to realize that they did not know why a given operational sequence and/or procedures were chosen instead of others, and why they worked the way they did. Much was learned from their seniors, in do-as-I-do type of on-the-job training). All the other leanings, the practical leanings of life within the field, appeared to the employee as the 'realization', the awakening for the reality of the things of the world (as in the expression "only now I realize that ...", as if the information and experiences that allowed for this 'realization' were already contained in the individual and now only 'emerged' naturally). The socialization in the company occurs

not through an active process of learning but rather through a passive "discovering" of new aspects of reality, that only seldom demands or creates an active exercise of understanding. It proceeds, rather, through making one used to, of creating belief through bodily experience of repetition and regularity.

Bourdieu (1991, p.48) quoting Pascal on the importance of habit in creating belief (in his critique of the subjectivist appeal to reason) says: "How few things can be demonstrated! proofs only convince the mind; habits provide the strongest proofs and those that are most believed. It inclines the automaton, which leads the mind unconsciously along with it. Whoever proved that it will be dawn tomorrow, and that we shall die? And what is more widely believed? It is, then, habit that convinces us and makes so many Christians. It is habit that makes us Turks, heathens, traders, soldiers, etc. In short, we must resort to habit once the mind has seen where the truth lies, in order to steep and stain ourselves in that belief which constantly eludes us...", and complete quoting Bernard Williams (1973) that "even if it is possible to decide to believe *p*, one cannot both believe *p* and believe that the belief that *p* stems from a decision to believe *p*" (for one cannot rationally pursue the project of founding belief on a rational decision without being led to ask reason to collaborate in its own annihilation in belief); If the decision to believe *p* is to be carried out successfully, it must also obliterate itself from the memory of the believer. Bourdieu notes that all these antinomies flow from the will to think practice in terms of the logic of decisions to will. The conscious and voluntary acts and commitments generally do no more than sanction the progressive slippages of omission, the innumerable, infinitesimal non-decisions that can be described as destiny or vocation. “At a deeper level, how can one fail to see that decision, if decision there is, and the 'system of preferences' which underlies it, depend not only on all the previous choices of the decider but also on the conditions in which his 'choices' have been made, which include all the choices of those who have chosen for him, in his place, pre-judging his judgments and so shaping his judgments"

(Bourdieu, 1991, p.49). Practical sense, which is a social necessity turned into nature through a long and slow process of co-option and initiation, created faith by causing the blind adherence to a given field. This practical sense (that is, as Bourdieu says, diametrically opposed to what Kant, in the Critique of Pure Reason, called 'pragmatic faith'), converts social necessity into motor schemes and body automatisms, and is what causes practice to be sensible, that is, be informed by a common sense, without requiring that the agents know completely what they are doing, and what makes what they do to make more sense than they know.

The reality within each plant is partially the result of the close association of the previous choices of all members of the collectivity and of how they affected each other through this 'choosing'. The dialectic movement of reshaping reality thus produced gave origin to the values upon which the criteria for the judgment of oneself and the other was established differently in each plant. The familiarity with the environment of the plant, created, through habit, the 'belief' in the judgment standards.

We must be careful here in stressing the differences not to cause the impression that all of what is in the field was created freely. Quite obviously the similarities among the plants are deeper and older than the differences. The capitalist arrangement of production, the shared system of classification based in this division, and the categories of thought based on science and reason provide the unifying principles responsible for the similarities, for the very possibility of communication among the various plants and for what equips each worker prior to his entrance into any institution as an adult and guarantees that he can be satisfactorily socialized in it. The emphasis on the differences throughout the paper is not due to the perception that the differences outnumber the similarities, but an attempt to spell out a point against the central tendency in the literature, an inheritance from Marx, of looking at the phenomena of alienation as equally spread in the capitalist division of labor, an approach with

dispenses with the analysis of separate institutions and organizations and of all what is practically created within their walls.

Bourdieu points to the fact that the 'rational actor' theory, which seeks the 'origin' of acts, strictly economic or not, in an 'intention' of 'consciousness' is often associated with a narrow conception of the 'rationality' of practices according to which practices are consciously oriented by the pursuit of maximum profit at minimum cost. The mechanistic economist who searches in economic interest for the causes for action, is unaware that practices can have other principles than mechanical causes or conscious ends and can obey an economic logic without obeying narrowly economic interests (p. 50). Besides the difficulty those theories present for the construction of an adequate theory of practice, the rational action theory, existent in the business world as the mode of thought of an era, is another element that contributes to the constitution of alienation as a phenomena within industrial organizations. This economic view of the social actor within the organization contributes to the condition of blindness in regard to other needs of the workers in this context and reduces the class struggle within the industrial organization to an economic struggle. The conflict of interests between the company and the workers are interpreted as insoluble as far as this view is maintained, for the workers will always be consciously seeking to increase their gains against the interest of the company and vice-versa. It is not a question of blaming theorists and theories for the phenomena of alienation, neither of placing the burden on the left or right wing of political thought, even because, by organizing the workers' struggle against the managers, the Marx inspired labor unions contributed to the creation of the sense of opposition and difficult communications (not that I think they had better choices) consequently tightening the negotiations, with alienating consequences as well. The point in here is to show how a certain "habit" of thought evolved from scientific theories, simplifying it and sometimes using it as an ideological tool to the disadvantage of workers.

The refusal of the concept of rationality as the core of the cognitive process that makes possible the creation of social life makes it necessary also to substitute the concept of ideology presented in the Marxist tradition, which presupposes the capacity of the elite to analyze, understand, manipulate and impose the definition of reality upon the collectivity, by a concept that reduces their power without completely annihilating it. The elite, the managers in our case, are, as the workers, limited by their historical experiences and by the practical experiences of their circumstances, incorporated in their habitus. Their limited invention capabilities allow them to manipulate the categories of interpretation of reality to their advantage, but within relatively narrow limits. They cannot freely create and impose their own definitions of reality upon the collectivity. It is their limited understanding of their own conditions, the limits of the thinkable they experience by the lack of discourse that allows for an investigation of those conditions, which is responsible for their blindness in regard to alienation of the workers even in a situation in which to remove the phenomena of alienation would be to their advantage.

Through the history of the plants, with the national history in the background as the history of a developing capitalist country and subjected to the influence of internal (domestic) and external (international) market influences, we are going to look at how the interaction among leadership styles, market forces, classificatory system and the history of knowledge (as the transformation of the conscious search for knowledge into unconscious knowledge) shaped the collective habitus in each plant, and how, through understanding better the conditions under which the practices occur within the industrial organization as one field in society it is possible to progress in the discussion of alienation in the capitalist division of labor.

From the differences observed, it is possible to assert the enormous influence of the economic structures in the reality socially (re)created in the field at the same time in which we deny the deterministic nature of this relation. If we could imagine the three fields being separated from each other through, for example, the breaking down of the

holding company and the absence of strong external pressure for changes and promotion of a standardization of procedures, it wouldn't be difficult to see that they were tending to proceed into different directions, denying also the existence of given evolutionary tendencies, according to which history proceeds towards progress or revolution. The generative schemes of practice, then, are capable of guaranteeing compliance and similarity without determining the outcome. It is due to the flexibility of those schemes that we can have one factory exhibiting signs of modernity while another remains trapped in traditional and less effective working arrangements. It is also the flexibility of the schemes of perception that allow us to understand how it is that the unquestioned continuity of the hierarchical arrangement can be maintained when a discontinuous brake occurs at the level of political relations established upon the division of labor, as is the case with the introduction of the quality assurance schemes. What I mean is that with quality assurance, the discourse on human relations within the industrial organization changes significantly, constituting one of the historical moments in which we can observe a discontinuous brake in the continuous reproduction of a given organization of the social division of labor. This brake was quite suddenly imported into Brazilian industries, which managed to modernize in a very short period of time, but without significantly altering the basic relations of subordination of one group to another. A transformation at the level of the discourse, matched with the obvious economic necessity of implementing the required transformation, could be incorporated without the questioning of the arbitrariness of the power arrangements within the industry and without awakening a political opposition. We must then look behind the level of discourse to understand the orderly transformation of these power relations, for the strength of those arrangements are precisely in what is out of the consciousness that plan for those transformations and of those who react to it.

How is the reality of each plant created in the first place? The role of the leadership, well recognized in business management literature, is decisive in determining the

allocation of roles, of setting the first rules of conduct and of imposing a disciplinary system. Once the daily interaction begins, a great deal of interpretation and reinterpretation of the original arrangements proceeds, influenced by external happenings, by the news published in the newspapers, by the labor union movement and etc. The field is by no means hermetic. Improvisation and trial and error are common in solving daily problems. Gradually, the logic of the classificatory schemes allows for the construction of a delicate and complex status system within the plants, in which the same logic that confers higher status to the white collar workers, serves as the principle for the further division of status among also the blue collar employees, with the producers of the gas, MVC, dealing with more complex and dangerous equipment, starting to be seen as of higher status than the producers of PVC, which requires more physical effort and depends on a less dangerous process. The production workers, in charge of the safety of the plant, are the ones in charge of liberating routes for maintenance, and through their exercise of control over the routine of the work of the maintenance workers, they start to believe themselves as the elite of the blue collars. The color code of the uniforms and helmets became a symbol of status associated with the status of the different professional groups. The original intention of the color differences were simply that of creating a sign system that would allow a better control of the safety procedures in the dangerous zones.

Those subdivisions of status and reallocations of power can develop to an enormous depth of detail, as in the Camaçari and to a lesser extent, Alagoas plants, or being kept to a minimum as in the case of São Paulo. The distribution of power and the management of the flow of information and communication strategies plays a decisive role in taking these schemes further. The lack of a clear human resources management policy in Camaçari, in the form of an ideological discourse appealing to the necessity of modernity in industrial relations taken into the practice of daily administration, opened space for an enormous amount of teasing and jokes that

worked to deepen the social distance among the professional groups by appealing to an apparently inoffensive play among colleagues. Each joke or teasing by itself appeared as an "absurd an unmotivated sequence of acts and symbols", as the rites described by Bourdieu (1991, p.7) in a stage prior to Levi-Strauss analysis, but meaningful if looked against a "set of other features, as a difference in a system of differences". Among the most annoying jokes for the PVC workers were the ones that called them "bakers", because they were constantly covered with a white powder resembling wheat flour. These jokes were annoying not because of the obvious physical resemblance between the two types of physical dirt, but because of the analogies upon which the resemblance was established. In comparison with the operators in MVC, technological, risky, high costs implied in case of accident, dangerous, "mental", fully controlled by sophisticated equipment, essentially male, the process in the PVC area involved production by independent reactors (limited losses in case of accident), less dangerous (as the process of cooking), was less "technological" (demanding more physical interaction with the process), more female type of activity (the apparently inoffensive question of a MVC workers to PVC workers of "what is for dinner?" would provoke an irritated answer), therefore not so high in status as an industrial activity in an industry that is proud of continuous process, controlled activities and the miracles of technology. Also, the association with the activity of the baker himself was annoying, for the professional activity of the baker is associated with traditional activities, backward techniques and by its distance from the progresses of modern technology.

Although usually the attempts by management to implement an "organizational culture" and to manage according to clearly arbitrarily chosen principles usually fails in gathering natural adherence and faith, when well-planned it works productively in providing a rational justification for the eradication of this kind of teasing activity. By appealing to the irresistible argument of reason and productivity, by showing that such

activities are against the necessary team spirit and undermine attempts to promote respect for all professional activities as necessary under the "*Kaisen*" spirit" (the continuous improvement principle imported from the Japanese business strategies) the managers could, later in the process of quality assurance implementation, reduce this tendency. Because the conditions upon which the practice of teasing and dividing was established are opaque to their producer, the development of an educational strategy to erase them by appealing to their irrationality worked effectively because the rational explanation of its negative effects puts those who insist on it in a position of shame, as the destructive individual who, by an absurd adherence to a silly play, jeopardizes the harmony of the environment. The "rational" explanation has an immense power to control behavior in the environment in which the person who pronounces the appeal is endowed with enough symbolic capital, especially because, according to the incorporate schemes of thought, they do not seem arbitrary, and when well-constructed, "do make sense". Then, even when the management feels that a certain policy is failing because there is no explicit adherence to it (as in the case of appeal for participation in the quality programs in which each employee was expected to exhibit the same motivation as if he was the owner of the business, but in a concrete situation in which they were powerless), the logic of the appeal for the need to respect all professions did show signs of rather fast acceptance. The less coherent, constant and well intentioned is the leader in the eyes of the workers, the more likely that the policies he intends to implement will result in selective acceptance, with unintended results being more frequent than planned ones.

The organizational culture idealized by the managers of the holding company and their discourse on the need for more cooperation are the most easily recognized "ideological" discourse, against which the heterodoxy (the discourse which, by departing from the field of *doxa,* awakens the political consciousness by making it possible for the recognition of the arbitrariness of the political arrangements) more

clearly directs itself, offering counter arguments and feeding the sense of class separation within the company.

This "ideological" discourse, by itself, does not have the power to create the process of alienation (this discourse is perceived, even in the eyes of those involved in the field, for what it is: an obvious attempt to manipulate. It is to have the function of an ideological inculcation properly when it starts to appear as a necessary discourse organizing the random impressions on the transformations of economy that justify it in face of the necessities of the company - and even though the process of inculcation depends on the skills of the manager in making it predominate as the right discourse - for which the manager need to have accumulated enough symbolic capital). At this level, when confrontation and lack of trust predominates, the "field of opinion" (Bourdieu, 1977, p. 168), as the locus of the confrontation of competing discourses, is broad and contains a clear class struggle (as the case of Alagoas illustrates). The management's attempts to impose this discourse upon the collectivity are refused as a manipulative attempt. The obvious arbitrariness of this arrangement makes it impossible for management to transform the heterodox confrontation into an orthodoxy (straight, or rather straightened, opinion, which aims, without ever entirely succeeding, at restoring the primal innocence of *doxa* - Bourdieu, 1977, p.168). The refusal of this sort of management discourse takes various forms, and although the discourse in itself does not have the power to alienate, in the case of Camaçari it discredited the management with the workers and contributed to the deafness of the labor force to the attempts by management to communicate. By being one more element making communication and integration into the community difficult, the raw attempts to impose an ideological discourse ended up aggravating the alienating tendencies.

The effectiveness of the São Paulo plant's management in communicating with the workers rested precisely on the avoidance of this kind of manipulative attempt. The manager of this plant clearly discussed the attempts of the holding company to

implement a "*kaisen* philosophy" as nonsense with the employees, and proceeded with a discourse that acknowledged the differences of power and status. He didn't attempt to hide the fact that the employees were working for money, to support their families, and that their relation with the company was fundamentally economic. In doing so, he was seen as an honest man, and as this discourse was in line with the undisputable principles upon which the capitalist division of labor rests, and did not seem to contain a manipulative strategy, it was much more easily accepted. He did not depart much from the domain of the *doxa* (in this case the undisputed hierarchy of knowledge as the basis for the hierarchy within the industry), neither did he try to hide the inequalities by appealing to an obviously artificial rhetoric that called for "unity of CPC family", and the "goals and missions of CPC collaborators (as the employees were called in the company)"; His success was largely due to the fact that what he said was accepted as inevitable, as a sort of orthodoxy against which only a dishonest man could stand. By articulating a discourse that did not awaken the awareness of manipulation, his appeals did not generate confrontation for they reached more unconscious levels than the "culture of the company" the holding was attempting to impose could reach. The political arrangements within his plant appealed to the logic of thought existent in the habitus, a (practical) logic of thought which is a component of the very self of each worker, which is impregnated in their being as the reality through which they exist. The discourse of the manager in São Paulo conferred meaning to the activity of the workers, and empowered them within the context of production, while the discourse in the other plants contributed to a sense of meaninglessness and made the workers feel powerless to affect and interpret their situation[43].

[43] Kunda (1992), shows how the culture of a high-tech corporation could indeed produce a great deal of control and extract a high degree of commitment from its members. This was not the case in CPC, where all those attempts provoked an awareness of manipulative intentions. One possibility for this difference might be the fact that in CPC the interests of the company and that of the employed were many times seen as conflicting. The adhesion of the middle management to the company's ideology was usually a sort of strategic demonstration of loyalty. Kunda's analysis reinforces the argument that the strength of human resources management philosophies and strategies varies in depth and efficacy among the various fields, making it necessary to look closer at those fields to understand more about the nature of socialization in industrial societies.

The practical, physical experience within plants functions as a never ending socialization process, with impressive potential for behavioral changes. Individuals and groups interact dialectically in a process that transforms the individual perception of self, creating the possibility for the adhesion to position, and the whole system of interpretation of the group, refining and shaping the conditions for interaction. In the places were blue collar workers were especially powerless in relation to management, as in the case of Camaçari, the impact of the hierarchy in the body schemes was especially clear. The use of the space and the value of time differed consistently among the various status groups. The clearest difference was between the blue collar workers and middle management white collar workers, with diploma in engineering. The silent rules of the game defined who could walk into a room without knocking the door, who could take a seat after knocking at a door and who should stand up at the door way until told otherwise. The perception of the relative value of time was also clearer in Camaçari, being a matter of "knowing one's place" to know whether one was in a position of waiting or in a position in which one cannot be made to wait. It was also from the system of relation experienced within the field that one learnt if it was proper to speak confidently, in the name of a scientific, technological or market truth, or of one had to refer to their own productive activity as means of timid suggestion. The implementation of the quality programs, the principles of the flat organization and the valorization of blue collar knowledge as fundamental to the *Kaizen*, was due to upset those relations. In São Paulo, the status differences were already much less felt by the time research started.

The lack of confidence and the body language associated with lower status occupations served to confirm, for those in management positions, the lack of thinking ability of blue collar workers and confirmed to themselves what they already believed, that to dedicate time and effort in creating an effective and consistent system of communication was a waste of time, for the labor force didn't need to, and was unable

to, understand the complex reality of the company's organization of the labor process, its market position and strategy, its plans for the future and its relation to the labor union. This separation of thinking and doing was the central feature of the management strategy in the case of Camaçari. A comparison among the plants in the next chapters will further illustrate how the unthoughtfulness of schemes of power and communication affected the workers and vice-versa, how an alienated labor force affected the company.

From what I could observe in the three factories compared during the field work, the consequences commonly attributed to alienation, powerlessness, meaninglessness, anxiety, frustration, and lack of understanding of the formal structure to which one belongs, among others, is considerably reduced when the worker is able to see how his work contributes to the group, how his activity matters, and is empowered to affect the community in which he works. It is assumed here, in a very gross mode and not without reservations, to be a state of normality when the individual is able to make sense of his surroundings, see the meaning of his activity and have some degree of power to affect positively his own environment[44] (I stress positively in here for, as we shall see later, alienation is an unintended strategy for limiting exploitation, and not seen here as an absolute lack of power to affect the environment, for the ability to work out any strategy, even if done unconsciously, presupposes a certain amount of power). Dealienation is not a state of happiness or self-realization. There are all sorts of anxieties and frustrations that I believe should not be included as consequences of alienation.

The cause of this phenomena of separation of the workers from their activity and the product of their activity is located in here in the structured and structuring symbolic

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44 Although it is tempting to affirm that the need to understand or see the meaning in what one does to be a fairly universal human need, it is my feeling that when the *doxic* innocence has not been broken, to live according to the traditional, socially sanctioned ways, may dispense with the need for the reflection upon the importance of one's activity.

system in each specific field, disseminated through instruments of communication and the sharing of knowledge, and on how they fulfill their political function as instruments of imposition and legitimation of the domination (of the white collar over the blue collar worker, of the capital, through their representatives, over the workers), sometimes by an active exercise of inculcation and other times by default, by, in failing to communicate and by withholding information, making it impossible for the ones in the dominated position to apprehend in a more or less complete way the chain of production in which they are involved, increasing the distance between the workers and their activity, by preventing them to evaluate adequate strategies of action. Through the fieldwork data we are going to see how present and at the same time disguised and diffused those strategies of domination are, and how individual power, in any point of the hierarchy, is limited by the on-going activity in the field, and also how the social use of the space, the body language, the color code of the uniforms, social manners and a whole complexity of signs and symbols are constantly created and recreated by the collectivity, reproducing the status quo and serving as educational strategies for the new members of the organization. The importance of analyzing the communications system in the industrial organization is a function of the size of the group. Whitehead (1977) noted that in a factory with a few hundred people, the principal difficulty in regulating human relations arise from the lack of immediate contact between its component groups, and particularly as between the shop floor employees and the responsible executives at the top. It is not easy for the latter to gauge the needs and sentiments of those lower down the ladder. The opposite is also true, for without clear and structured communications, the blue collar workers have difficulty to evaluate the feelings and intentions of those at the top (it is going to be explored in the next chapter that the most powerful filters of good communications are the barriers created by the social perceptions of the various groups and their intentions). Any effective exercise of inculcation on the part of the manager depends on an effective means of conveying the

contents of this 'educational' exercise, and on a flow of information that allows for the constant evaluation of the needs, that serves to adjust the management discourses to those needs.

The most significant contribution of Bourdieu's theory to the study of alienation is precisely his understanding of the cognitive process as largely a practical process. Many of the difficulties of the modern theories on alienation are due to the fact that too much emphasis has been placed on reason, understanding or refusal to understand having the man as the subject of the activity, as an active knower, which not only implies a too individualistic approach to cognition, but also ignores all the cognitive processes which do not pass through the intellect, at least not actively or rationally. Much empirical investigation and theoretical development is needed to progress in the research of practical modes of knowledge, but the difficulties in reaching more totalizing conclusions on the issue of alienation points to the need to pursue investigations in another direction to that which has brought us to a dead end. Unless we can progress in the research of how man learns to live in a field of power and devise strategies that allow him to do so, the discussion of alienation will continue to be hopelessly vague. The theory of practice is presently the most promising way to investigate how the "individual's surrender" to society can at the same time work as a unifying and others as a dividing principle, and precisely how it allows for consensual uneven allocations of power and different degrees of access to the symbolic capital which allows for the unevenness to be maintained.

Practical learning is a learning that does not provoke an awareness that it is learning, and which is not the result of a learning intention. It is the process implied in the Japanese expression *"taiken"* (体験), by what is meant "knowing by having experienced with the body", and employed in a different context than *"keiken"* (経験), which means knowing by having acquired a "know how", by having accumulated intellectual knowledge over a given matter. In this sense, the macro sociological researches

abundant in the field of investigation of alienation are broad and vague because they only touch the surface of the problem, they allow for recognition that the problem does exist, and identify some of its general features, but it is largely left for the philosophers to investigate the possibilities of such a phenomena and the development of a conceptual apparatus that would allow the deepening of the argumentation, constituting an example of what Bourdieu sees as an obstacle to the development of an adequate science of practice, that is, the separation between those who think about science without practicing it, and those who practice it without reflecting on it with due depth. The progress of the discussion on alienation will depend on the destruction of the artificial barriers among the fields of science and between the sciences and philosophy towards the development of adequate concepts to understand human cognition and the constitution of society in a more holistic and meaningful way. Especially in the case of the understanding of the phenomena of alienation, the methods of research and the conceptual apparatus traditionally confined to anthropology (field work, studies on meaning, signs etc.), sociology (establishment of regularities, tendencies etc. through the usage of questionnaires and interviews) psychology (studies on the development of self, personality, adjustment to group interaction) and philosophy (for theoretical logic and conceptual adequacy), are indispensable, to a more satisfying understanding of the phenomena and are to be found at the interface among those fields of knowledge.

For the research of the phenomena of alienation, the choice of a research methodology is as important as the choice of a theory. The choice of the concept of alienation was not due to the result of clear answers to objective questions, and in this sense, the choice of investigative method directly affected the results and conclusions. For example, if a research instrument to investigate the cases of alienation as related to the quality of human relations had been built excluding long term non-participant observation as a method of investigation, the result would have been different, for the conclusion would have been that CPC employees were not alienated, for the enormous

majority answered that they were satisfied with the human relationships among colleagues and between themselves and their direct superiors, and that their direct superior was open to suggestions and willing to accept comments and introduce changes. Social isolation was not a predominant feature in any of the plants. The observation in Camaçari revealed that the workers believed their bosses and colleagues to be equally trapped in a difficult situation, in which they did not have freedom to do what they would do if they were allowed to. Observation also revealed that the idea of satisfaction was extremely subjective, and was usually resultant of a comparison between the present situation (when the quality programs were already being implemented), and their past experiences, under a more authoritarian arrangement. Also, it changed significantly with educational background, one's self-evaluation within the hierarchy and expectations for the future. In other words, it was judged according to the perception of how much respect was owed to oneself, and the expectancies in relation to the other. The judgment was based on the value system, in the socially constructed reality within the factories. It becomes a matter of examining how this relative idea of "appropriateness", "justice", "respect" are constructed and incorporated by the collectivity.

One possibility to ground the debate on this issue is, I believe, to abandon temporarily complex discussions on the features, qualities, conceptual logic and linguistic impressions of the term, and also the focus on macro sociological debates, and look for a while into the life of the so called "alienated man", and try to understand which forces hold him to his circumstances, how he evaluates his situation and what are his actual choices, how he relates to his community, to the fields in which he experiences his daily life and to the broader society, how he affects his environment and how he becomes himself in this process. Although disagreeing on how it occurs, Marx, Hegel and Durkheim indicated that the focus should be on how socialization is processed, in the cognitive schemes that makes one part of one's environment. The answer is not in

abstract schemes or in loose case studies, but on case studies grounded on the proper theory of knowledge, a theory of knowledge that not only allows us to understand how socialization occurs, but how through socialization the principles of the reproduction of social inequalities is incorporated as a kind of natural order, which allows for the reproduction of the structures which generate those political arrangements.

Equally important to the conclusions of this paper is not only the theoretical connection Bourdieu establishes but also the choice of method he proposes. Without a careful recording of the observed situations and the systematic attempt to establish relations, through the comparison between the declarations of various informants and situations, and the utilization of quantitative and qualitative methods, its is impossible to separate the regularities observed from one's impressions, especially after a few months of daily association with the people. Even with the recorded results pointing to a given direction, personal and emotional attachment to the people researched made it difficult to point at their weaknesses. Especially difficult was to be critical of the Alagoas plant, for the head of the factory was a charismatic leader and had a delightful personality, having a close and paternalistic relationship with middle management, who were much in favor of him. He made all the efforts to help the research proceed according to my plans and to make my stay in Alagoas very pleasant. Much of the anger of some of the young operators against the company was interpreted by middle management as a sign of betrayal to their dedicated leader. Only a systematic recording of power relations through the use of time and space, body movements and appearance and comparative analyses of the style of the middle management and the analogies used within the plant allowed for some objectivity in the results.

Not only had the time come for management to think through the labor relations within the company, but also for the study of the alienation phenomena in the work situation to be seen in a more calm manner. Although I do not agree with Marx's debate about why man comes to be alienated in the capitalist mode of production (as

discussed above), I think his perception of the organization of the productive activity under the traditional capitalist arrangement as the cause for the alienation of the worker is basically correct. Now that the political passion of the past decades has cooled down, we can use, with less fear, some of Marx's profound insights into problems of the capitalism and direct a constructive criticism on society without being misinterpreted. Also, it will be possible for the researchers on alienation who were in favor of the capitalist arrangement to abandon their "neutral" approach to the issue (in which the critique of the society or the political implications were hidden under vagueness), towards a more illuminating approach.

CHAPTER II

On the company and industry

The aim of this chapter is to provide information on the company to allow the reader to evaluate the nature of the problems top management was facing during the time of the implementation of quality assurance programs, in concrete terms, so as to perceive the nature of the limitations and of the difficulties both management and workers faced. Information is also provided on the nature of the product and of the productive process, and later on in the chapter on the debt situation of the company, and on the internal political changes and their impacts on the financial health and competitive strength of the enterprise.

The objective in placing this type of information here is to allow for an evaluation of the complexity of the factors that affected those involved in the field, and that are to be addressed in regard to the specific ways in which it affected each plant as seen in the following chapters. The nature of the product itself was an important element in shaping the perceptions of shop-floor workers of their own activities: the fact that they dealt with dangerous chemicals and advanced technology no doubt affected their self-perception, the perception of their role in the plants and their relation to other professional groups, and was a part of the reality the managers had to address.

The item on the company situation at the time of the research is also important to exemplify the nature of top management problems, so as to see how it was possible, due to circumstantial problems, for the same organization to delegate so much to plant managers to the point of having three different organizational cultures under one same organization. Data on the composition of the units is provided to clarify in which way the formal organizational of each plant differed, and to give an idea of the degree of hierarchy of functions and of the fragmentation of areas. This serves to show that there were minimal differences in regard to the formal organization of functions and

roles. The data on the product, on the technology and on the organizational chart provides empirical evidence to the affirmation that the three plants were very similar in most respects, what should be read as another indicative (together with the data on the similarity of the religious and ethnic backgrounds of the plants) of the fundamental role of the managers in the constitution of the differences in attitudes towards work among the plants.

The items that deal specifically with the industry and with the origin of the company is to illustrate the active role played by top managers in the expansion and survival of the company, creating the link between its insertion on macroeconomic transformations and its process of internal adaptation. It illustrates the historical circumstances that gave birth to specific ways of managing the labor force, and gives evidence to demonstrate that the feelings of dependence felt by the workers in the active exercise of management by the top manager was a precise expression of a concrete and real dependence. The survival of the company and the continuity of the work relation does depend on the competent exercise of management. The workers willingness to invest in cooperation with managers depends on the workers' evaluation of the economic worth of this investment in terms of their perception of the capacity of the manager to assure the future of the company and their own. As the workers do not possess the means to evaluate management's competence by the concrete indicatives of results versus circumstances, their willingness to cooperate depends on their evaluation of intentions, personality, character and capacity for providing coherent explanation and useful solutions to the daily struggles in the plant.

2.1 The product

The company observed produce PVC, polyvinyl chloride, which is a brittle resin that easily decomposes with the application of heat. Through its composition with

plasticizers, stabilizers, fillers and other additives, it gains enormous applicability in various industries and is nowadays one of the major commercial resins. PVC resins are converted to end products using different conversion processes such as rigid and flexible extrusion, rigid and flexible calendering, dispersion processes, injection molding, and blow molding. Among the extruded products are the rigid pipe, tubing, wire and cable, and film and sheet for packaging. These are the largest markets for PVC products. Products of calendering processes include film and sheeting, flooring, and textile. The majority of flexible film and sheeting produced is combined with textiles to produce vinyl coated fabrics. Calendered rigid PVC sheet is used for credit cards, laminates with plywood or particleboard, and packing. Products created by dispersion processes include textiles, paper coating and flooring. Products created by molding processes include photographic records, pipe fittings, automobile bumpers, toys, shoe soles and heels, bicycle grips, bottles and many others. PVC resins are also used to produce protective coatings and adhesives. The Camaçari and Alagoas plants produce by the suspension method and São Paulo plant by the emulsion method.

The basic raw material to produce PVC is VCM. VCM can be produced either by the acetylene process or by the ethylene process. The company observed utilized the ethylene process. This process can be undertaken either by reacting ethylene with chlorine or ethylene with oxygen and hydrogen chloride in order to produce ethylene dichloride (EDC) which is dehydrochlorinated by thermal cracking in order to produce vinyl chloride. CPC combined these two processes.

The production of polyvinyl chloride is undertaken through various polymerization processes such as suspension polymerization, bulk polymerization, emulsion polymerization etc., of which suspension polymerization is the most common. The polyvinyl chloride results from the catalyst (peroxide) process of the monomer, vinyl chloride monomer, VCM, produced by CPC in the Camaçari and Alagoas plants. Monovinyl chloride is utilized in the industry in the form of a gas, which is known to be

highly prejudicial to health. It is cancerous and may be fatal if inhaled. Its production was highly controlled and monitored though equipment, and, quite obviously, no physical interaction in the VCM plant occurred between the operators and their product.

CPC had only one major competitor in the domestic market by the time of the research, a Swiss multinational. CPC gross sales were of the order of 350 million dollars per year, including sales on the domestic market and abroad. In 1993, after the research was concluded, CPC was the first PVC producer to be certified in accordance with the standards of ISO 9002 not only in Brazil but in all the American Continent. ISO 9002 is a part of the ISO 9000-Series. It includes 18 subsystems in regard to the production and application of the industrial product. A detailed and careful inspection takes place in each factory and is homologated by an international agent, the ABS Quality Evaluations. To obtain this certification means to join a select group of petrochemical companies with commercial advantage of competitiveness. The CPC Quality program was launched before the Brazilian Program of Quality and Competitivity was created by the Brazilian government and the Brazilian Standards (NBR - Norma Brasileira Registrada - 19000, the Brazilian version of the ISO-9000) were set. CPC follows the Japanese standard, with the Kaizen (continuous improvement) work philosophy[45]. In practical terms, Kaizen implies in a drastic change

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In here, I think it is important to stop to make few comments, which although secondary to the line of reasoning of this paper are important to avoid misreading of information. If we take the point of view of national development studies, the example of CPC illustrates the fact that governments tend to be slow to react to new economic needs unless there is a strong enough interest group, inside the nation, to push for changes. It is important to take this issue in here to demonstrate the importance of the pre-existence of a dynamic sector in the developing nations economies to allow for the competitive integration of those economies into the "globalized market". In this sense, from the example of CPC, it becomes clear that the role of the managers of the dynamic industries, already fully inserted in the international market, is fundamental for pushing for changes and modernizing labor relations. The understanding of the role of this sector of society becomes much more important now that we need to understand the forces that bring a developing economy with strength into the so called "globalized economy". Another issue, different from the first, is that although a general reading of this paper may lead the reader to believe in the uncritical defense of globalization as a path for social progress in Brazil, I should strongly emphasize in here that THIS IS NOT MY POSITION in regard to globalization. No doubt the case study presented in here shows how, by fighting for insertion and competitiveness in the international market, labor relations were modernized in the studied company and the historical conditions for the development of alienation considerably reduced. It does not mean that for society in general the enhancement of international competitiveness is a positive trend. The reader must keep in mind that were are talking of an extremely privileged sector of Brazilian economy, and of workers labeled "proletarian

of working habits. The tasks executed almost mechanically before, are now systematically registered and them planned in a more efficient way. It implies long discussions of every productive procedure, from the simplest and most automatic steps, to reforms in the equipment, and improvement of the product and process. The results of the implemented changes are then registered and controlled, to be continuously improved. Especially in this aspect of transformation, the cooperation of blue-collar workers was fundamental, for only they could register, evaluate and transform their own working routines.

CPC had an installed PVC production capacity of 414 thousand tons a year. In 1992, CPC produced 340.1 thousand tons of the product, from which 185.5 thousand were sold in the domestic market and 164.9 exported. The world demand for PVC in the same year was of 18.6 million tons, and the installed capacity of production worldwide was 22 million tons. This excess capacity made competition extremely hard, and CPC was competing with the giant producers of the developed countries, with larger productive scale and installed capacity. All these factors created an enormous pressure on the management of the holding company, what reflected directly on each factory. In looking at the context of human resources management at each plant, all these factors must be kept in mind to avoid a single-minded understanding or a moralist criticism of the actions of those involved. The objective in placing the business related information here is to call to mind the fact, many times forgotten in sociological literature on labor relations, that the logic of practice in those fields is directly related the demands of the domestic and international markets, to time pressures and very concrete necessities, and to ignore them implies a reductionism of serious

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aristocracy" by some sociologists (as Castro and Guimarães). The enhancement of international competition is a direct threat to the traditional industries in Brazil, that do not have favorable labor cost to compete with the products of other developing nations, nor do the majority of Brazilian workers have the minimum educational level necessary to allow them to find more "modern jobs". Alienating work is better than no work at all, and I fear the internationalization of markets may affect in very negative ways the enormously large population of unskilled workers in Brazil and perpetuate a situation of continuous misery and starvation in urban areas.

consequences for the understanding of those relations. This information gives an idea of the external constraints affecting practices at that given moment.

2.2 The labor activity and the technology

Blauner, 1964, describes the continuous process production as one of the most advanced types of industry in economic and social terms, having, among the various industries, the best conditions in terms of factory work and employment of technology (as far as the impact of the technology on the mental health of the workers, in comparison to textile and assembly line type industries). Due to the complex and extremely expensive technology, the chemical industries have a higher rate of professional workers on their pay rolls, performing tasks that are much less repetitive and demand much more on-job training than other blue collar occupations, and which require enormous responsibilities on the part of the blue collars, and which allow them to take pride in the outcome of their production.

Considering the cost of the equipment, the danger of the process and the need for precise quality specification of the final product, Blauner (1964), quoting the French sociologist Touraine, says that in the continuous process industry, "responsibility defines the professional skill". Indeed, in the three observed plants, responsibility was the key to the perception of the value of the operator for the plant, defined not only in relation to the commitment to the productive process but also in regard to the commitment to the company's interests.

Due to the dangers inherent in the production process of chemicals, continuous process plants are far more decentralized than factories that do not use the continuous process. Different processes occur at separate buildings, with large stretches of open space between the various buildings and subplants (a must due to the need to control

the risk of fire, explosion or leakages spreading from one area to another). High concentration of people is not found in these plants. Differently from assembly line types of production, where various workers can be seen actively engaged on the assembly of the final product, in the chemical industry the common scenery is of enormous equipment with occasionally one isolated operator or maintenance worker checking its functioning. The larger concentration of people in the production area is to be found in the control rooms (where we can find about 3 to 8 people), the meals rooms, and the maintenance work shops. After the introduction of quality assurance programs, meetings coordinated by supervisors would gather the shift group in the supervisor's room, bringing as many as 15 people together at once. Larger meetings were held the company's audiovisual room or auditorium.

The degree of security of employment in the chemical industry is also higher than in the majority of other blue collar occupations. The number of blue collar workers cannot vary according to consumer demand for the produced goods at a certain period (as in the textile, automobile and many other industries), but is fixed at the minimum necessary to safely run the equipment. It does not mean, though, that there existed in the observed company a generalized feeling of employment security.

In the chemical and petrochemical industries the rhythm of production is largely (though not completely) independent from the rhythm of work. Productivity depends, rather, on the performance of the equipment. To operate adequately the equipment means to reduce to zero all sorts of interferences, making the real production correspond to the actual capacity of the equipment and reducing to a minimum the interruptions for maintenance. Indeed, as the capacity of the equipment is calculated having as a basis a normal, not ideal, functioning of the equipment, excellent operation can take production well above the 100% total capacity prescribed in the technical specifications. The record at Camaçari, for example, in the times prior to the demand for high quality, was 134% of the specified capacity of the equipment. Nowadays, the

demand for quality compensates for the reduction of quantity by adding aggregated value to the product, demanding different operational qualities than those of the time of the demand for large quantities of product.

To increase the production of products of higher commercial value, it is necessary to exert an ever more precise control over the productive process, nowadays made possible by the introduction of Digital System of Distributed Control, that enhances the quality of the monitoring of the process. The new digital technology is being utilized in the Alagoas plant. São Paulo controls production by the oldest analog system, and Camaçari by electronic-analog instrumentation. Contrary to what was expected by the sociologists studying this process, the new technology neither caused a reduction of the number of operators involved in the process (if we compare the Alagoas and the Camaçari, but not São Paulo, which constituted a different case, both in terms of production scale and productivity of employed technology). A similar tendency was confirmed by Castro & Guimarães 1986, denying their original hypothesis in regard to this reduction, and confirming another tendency observed, that new technology, instead of reducing the need for operators' knowledge over the process, indeed demanded a further qualification of the labor force (denying the well quoted assumption of Bravermann 1974, according to whom the new technologies would bring about a further degradation of the labor under the capital). The effect the new technology had was restricted to changes in recruitment policies, for the educational requirements of job applicants were raised. But in regard to the routine of the plant, the highly automated process considerably reduced the need for the manual handling of valves and settings, field analysis and sample gathering for laboratory analysis, theoretically reducing the work of the operators 1 (at the bottom of the operational career level). They were kept in the plant for they were needed in case of accident or equipment failure, and their free time was invested in intensive on-job-training programs.

Although we can observe a general tendency to raise the technical skills and educational level of the operators, the professional schools and/or high school level was perceived as adequate. Education higher than that may generate, as evidenced by the case of Alagoas, an incompatibility between individual aspirations and the blue collar destiny, experienced and constructed within the organization not as a function of the technology but as the experience of powerlessness face one's productive activity, imposed by the organization of the power structure within the company.

It is important to keep in mind that the history of each plant as a different field in which the workers experiences are actualized are variations possible within a larger historical movement. In this sense, the history of CPC is also the history of the transformation of the capitalist productive logic and necessity. The origin of CPC is located in a time in which the protected market and federal government ownership of productive organizations made sense as a strategy of development and could be observed as a tendency not only in Brazil but in many other countries, developed or in development. The time in which the research was conducted was a time in which privatizations were happening on a world-wide basis, and the nature of competition had changed considerably. In the 70's, the strategy in Brazil was especially aimed at constructing a solid basis for the formation of a national industrial economy. It was a period of growth of market with expanding demand for various raw materials for industrial processing, an era in which to acquire and "domesticate" technology was central to assure the supply of raw materials to meet the expected rise on demand due to expanding industrialization. This period was marked by attempts to increase the *quantity* produced. The control of the labor force was exercised through the repression of labor union movements and strong limitations to democratic freedom. High staff turnover rate was a usual disciplinary strategy, made possible by the control the dictatorship imposed on the labor movement[46]. In this setting, entrepreneurial success

[46] Castro, 1988.

was deeply related to agility in taking shares of the domestic market, in continuous expansion, a success celebrate within the company with parties that marked each new record of production.

The period of the research was marked by democratization in the political sphere, economic recession and shrinking consumption on the domestic market, the opening of the domestic market to foreign products during a period of excessive supply of plastic products, globalization of the economy, privatization of public corporations and increasing competition for further added value in the form of increased *quality* of product. Entrepreneurial success depended on increasing client satisfaction, organizational reengineering in the form of rationalization of processes and reduction of costs, and in the adequate involvement of the labor force as part of a competitive strategy. The need for increased quality also reflected the changes of the logic of capitalist production in the sense that it reflected the need for producing flexibly in order to satisfy shifting demands. It implied the need for developing new modalities of labor organization, and fast technological renewal. If in the previous stages conformism and political apathy was the desired pattern of behavior for the labor force, under the new arrangement trustfulness, self-management, responsibility, desire to cooperate and motivation composed the desired standards. This shift created conditions for the appearance of what Castro (1988) calls the "new proletarian aristocracy", making reference to the blue collar workers employed in the dynamic sectors of the economy, earning much higher incomes than other blue collar groups in the "in-development-nations", but retaining blue collar identities and limitations.

This transformation is in itself a indication of how limiting is the approach that centers on the nature of the technology the understanding of the social processes encountered within the context of the organization, and calls attention to the need to understand the transformation of the logic of the productive process and its impact on the political organization inside the productive organizations.

2.3 The Company's situation at the time of the research

The research was conducted in a time of fast and dramatic transformations in the Brazilian economy, a period especially dramatic for CPC. CPC had carried a very large debt for the previous two years, partially a consequence of the construction of the Alagoas plant, which was started at a time of expansion in the PVC market, with good potential future profits (when the construction of this plant started, PVC was sold in the domestic market for 1.200 U.S. dollars per ton. By the time the construction finished, prices had dropped to US$540 per ton on the domestic market, and to US$380 per ton abroad!), and finished in a period during which the international market was evolving toward a situation of saturation and the national government's protectionist strategy for development of a national industrial basis was in its last days.

The management priority during the time of the research was to bring the company to a situation of financial health. The problems generated by the debt were making the company extremely vulnerable to market movements. In April, 1990, the corporate debts were threatening its performance and survival. The total debt amounted to US$350 million, from which US$200 million was due on a short term basis. With inflation the interest rates were very high, making the situation unbearable, especially in regard to the short term payments. In an attempt to return to a manageable situation, in June, 1991, CPC increased its capital by US$ 150 million, partly from public subscription and partly by the injection of capital from the majority stock holders (Odebreach, Petroquisa and the Japanese associates, Mitsubishi Kasei and Nissho Iwai). In April, 1992, a further US$72 million was raised for the company with the issuance of Eurobonds on the European market. With the backing of the Japanese partners and the added support of the International Financial Corporation (IFC), of the World Bank, negotiations led to a very favorable rearrangement of the conditions of

payment: the debt was to be paid off over a period of 5 years, with payments starting after two years. In 1993, the company was already in a more comfortable position, with US$200 million of debt, 80% of which was in the long term, and the rest medium term.

The search for financial health forced the company to cut the expenditures to the minimum. The disbursable fixed costs were reduced by 45% between 1989 and 1992. The number of employees was reduced from 1,512 to 827. 60% of the cases corresponded to the option for the centralization of the productive activities in the PVC area (following the international trend to outsource for secondary activities to the main vocation of the company), through the transformation of the other sectors, besides production, in subcontracted labor. This corresponded to the trends in the petrochemical industry aiming at creating large firms specialized in support and accessory activities independent from of producers but networking with them in the same industrial complex. The sectors changed to subcontracted labor were maintenance, laboratory, packing, storage and resin distribution. This process was carried out differently in the three plants, with usually the original CPC employee being hired by the specialized firm.[47].

The largest impact of the reduction was felt among white collar employees. The hierarchical levels were reduced from six to three, enlarging the base of the organizational pyramid, shortening the distance between the top and the bottom, enhancing internal communications and contributing to a faster decision-making process and faster implementation, but reducing the availability of white collar employment (at the same time it increased the need to develop the thinking ability of the blue collar workers, and demands from them the partial management their own productive process).

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47 The data about the company used here was provided by the Informativo NORVIC, the bulletin published by the company for stock holders, on white papers from within the company, and on interviews with top management.

2.4 The work philosophy

Formally, at the time of the research, the unifying work philosophy that the central administration was attempting to implement for the group was that the chief objective of the company was to serve human beings, who should be, at the same time, the origin and the destiny of the benefits generated by the work. The company was there to serve its clients, society, and its own collaborators (employees). This should be done by providing the clients with products and services precisely at the quality agreed, by making an effort to offer not only conventional PVC resins, but to identify new needs and develop products to meet them. For the collaborators, the company should provide them with the possibility of personal fulfillment and professional development. And the company should serve society by guiding its actions according to the principles of "Responsible Care"[48], of which CPC was one of the first Brazilian Petrochemical companies to adopt. The company should serve the stock holder through working to give them adequate returns on invested capital. This attempt to spell out the 'company's philosophy' was in line with a trend developed simultaneously with and related to quality production, according to which the culture of the organization should be constructed around the idea of a company mission in society and a clearly defined understanding of man and work upon which the collectivity could construct the desired 'working values'.

Human resources management was based on the original model inherited from Petrobrás (the state owned company with the monopoly over crude oil extraction). Although both national and multinational partners had, in their own organizations, their

48 The Responsible Care program was developed by the Association of Canadian Chemical Industries and accepted by Abiquim (Brazilian Association of Chemical Industries). Thanks to this program, the chemical and petrochemical Industries are attempting to progress in environmental protection, safety and workers' health areas as soon as risks are identified and before any action is required by society or the legislators. Concretely speaking, after the adoption of the Responsible Care program, CPC is auto-regulating itself, especially in regard to the reduction of emission of VCM to the atmosphere, presently at already less then 1 p.p.m. (part per million), which puts the company among the highest international standards of environmental legislation.

own work ideals and human resources management strategies, they had not tried to impose them on CPC. The whole complex tended to follow the lead of Copene, the raw material producer, the chairman of which was also the president of the union of the companies of the complex.

The importance of creating a corporate philosophy and a company's mission came from the understanding that organizations are cultures. Both the chairman and his assistant for human resources management policies, believed in the importance of creating socially constructed realities, sustained by a ideas, values, norms, rituals and beliefs[49] .

The attempts to impose a view of reality and a set of values never really left the paper. As those attempts bring into the company an extremely idealized set of propositions, without much connection to the daily experience, it is never transformed in dispositions that guide practice. The set of values that the top management wanted to impose, though, served as a tool for some employees to show their readiness to accept the lead of the managers and to demonstrate their 'loyalty' to the organization. As such, it was never more than a badly played theatrical performance. Those attempts to impose a view of reality is the expression of the recognition that a share understanding of the situation is important in coordinating effort towards common goals, and that common values can be important in enhancing motivation and identification with the group. It ignores, though, that the efficacy of a value system and common beliefs rests precisely in the fact that their arbitrariness is ignored by those who share it.

2.5 The policy of the holding company for the productive units

[49] For different images of the organization and its impact on the type of organization constructed, refer to Morgan, 1986

The management of each unit was left very much to the manager of each plant. It was for each unit to define its relationship with the labor union of their respective region, to identify the necessities for human resources management policies according to its own surrounding and to propose changes to the holding company in regard to their own units.

Rises in payment and extra benefits depended on the approval of the holding company. Also concentrated in the holding were decisions regarding management training. The holding company wanted to make sure the types of courses chosen were in line with its goals for the management of the group as a whole. Individual units could decide on training programs for employees that did not hold management positions, elaborate their on-the-job training programs, invite guest speakers and create their own systems of transference among departments.

The holding company provided guidelines for the implementation of the quality programs, but a considerable degree of freedom was allowed to each unit in regard to implementation strategies. Periodical feed-back was requested by the holding company from the units, to allow for follow-up on progress.

The design of the evaluation instrument for employees, the number and frequency of meetings, communication strategies, the amount of information to be dispensed, the nature (formal or informal) of communication between the human resources area and the rest of the employees, the degree of control over routine procedures, the degree of integration among areas, and the integration activities at the club or company were all the responsibility of the manager of individual plants. It is precisely on the areas under responsibility of each plant manager that the differences among the plants are to develop (for details of the company's composition and the organizational chart of the units, refer to appendix II).

2.6 On the petrochemical industry

The development of the petrochemical industry is, even in international terms, a recent phenomenon. Although the first oil industry was built in Pennsylvania, U.S.A., in 1859, the first petrochemical industry appeared only in the 1920's, with the production of isopropanol from gas extracted from petroleum. The new industry appeared as an alternative to the carbochemical industry, which produced chemical products, organic and inorganic, from the alcoholic fermentation of organic substances, wood carbonization and especially mineral charcoal. Due to the close association of the petrochemical industry with the automobile industry, the possibilities for the petrochemical industry increased with the development of automobiles manufacture.

The potential for petrochemical industries increased with the discovery of natural gas as a new raw material. But the advance of the industry on a larger scale occurred only with the Second World War and with the possibility of extraction of aromatics from nafta. Until after the war the petrochemical industry was exclusively North American, and with the war it reached full industrial scale, due to the destruction of the carbochemical industry in Europe and the enormous increase in the demand for intermediary products caused by the war effort, an increase above the expansion capacity of the natural products industry. The internationalization of the petrochemical industry occurred after the war, with North-American investments in Europe and Japan and the effort to reconstruct those regions.

In 1965, North-American petrochemical production accounted for 87.5% of world production, Europe produced 9.2% and the rest of the world 3.3%[50]. Petrochemical production started to grow significantly outside the United States in 1967, with a growth rate of 11.3% outside the USA compared to 8.3% in USA and Europe. Petrochemical production worldwide grew from 12.6 million tons in 1957 to 71 million tons in 1974. This growth occurred simultaneously and as a response to the entry of Japan and

[50] Guillielmo, R. A Petroquímica no Mundo. S.P. Difusão Européia do Livro, 1965, in Suarez, 1986.

Europe into the industry, bringing an enormous dynamism to the sector and high competition. This dynamic growth generated an enormous evolution in technology, enhancing the speed of the outdating of this very technology. To reduce the risks of technological obsolescence generated by competition, petrochemical industries adopted strategies of downstream verticalization and anticipated expansion. Downstream verticalization is a strategy that integrates the productive system of one company to a long chain within the same industry, thereby composing one of the 'building blocks' of various generations, based on intense activities of research and development at its extreme ends (Suarez, 1986). The construction of the Camaçari Complex, at 1974, was very much in line with the international trend, corresponding to the feelings of the operators of participating in a leading industry in terms of technological development and of being at the top of a wave of progress and economic development in Brazil.

In Brazil, the large scale petrochemical industry started with the formation of PETROQUISA, the petrochemical arm of PETROBRÁS (the national oil company, a state owned company with the monopoly over crude oil extraction and refining in Brazil). The role of the state was of central importance to the development of dynamic industries in Brazil. The capital generated in Brazil by primary industries, exporters of agricultural products, had gained enough strength to initiate the importing of production goods, and to start a pioneer industrial capital, aimed at producing non-durable consumer goods in substitution for imported goods, but this capital was still extremely dependent on the dynamics of the primary sector. Some diversification and verticalization of the national industry already existed, but it did not possess sufficient autonomy to allow for the accumulation of enough capital to generate at a viable scale an industry of production goods or consumer durable goods, especially because the production of such goods in the developed economies had already reached a stage

that demanded a large concentration of capital and complex technologies, nonexistent on the periphery of the developed capitalist world.

The entry of the state into the organization of the dynamic sector was what assured the survival of these industries and the advance of the dynamic industries in Brazil. The political alliances that lead to the formation of the three petrochemical complexes in the country, that brought private capital into those industries, and that allowed opposition to the interests of the multinationals was conducted by the technobureaucrats[51] that emerged from the ranks of PETROBRAS.

The tripartite stock composition of CPC was the same as all the other industries in the Bahia complex. The joint-venture system, composed of the associated capital of the state company, a private national partner and a foreign partner, made it possible to implement, with success, the Camaçari complex. Going into operation in 1978, the complex doubled the volume of petrochemicals produced in the country, operating according to the projections of the government: in producing raw material for the durable goods industry in substitution for imports. The profitability of such companies generated a high potential for growth, but the joint-venture system represented the interaction of different groups, each with veto powers over the others, and not always with mutual interests. The multinational partners were, upon joining the system, aiming at getting a share of the domestic market and looking for a strategic position in Latin America. The private national partners, without tradition in the industries or higher commitment with the state strategies for the long-term spread of industrialization, were aiming at the profit those industries could give for strengthening their own capital (these groups joined in the venture because of the fiscal incentives), while the technobureaucrats planned to develop at solid national industrial base. Already at the

[51] Technobureaucrats is the term Suarez, 1985, employs to describe the group of people that remained in top positions of the leading dynamic state industries. Being of technical background and working for the state, this group was, from the beginning, the group that articulated the development of a dynamic industrialization in the country.

beginning of the operation, the conflicts among the founder groups led to a realigning of power among factions, with serious consequences for workers and the future of the industry in the country.

The technobureaucrats had a much bigger power to integrate interest groups around their project than the two other groups. PETROQUISA, to which they belonged, owned 30% of all the companies in the complex and had a strong position at the raw material producer, upon which all the others depended for raw material supply, strong connections at PETROBRAS (with its monopoly over oil extraction and control of oil imports), and solid connections with the National Bank for Social and Economic Development (BNDES).

The growth rate of the Brazilian Economy was already falling and external debt and inflation increasing by 1977, even before the Camaçari complex had started to operate. The technobureaucrats were expecting the complex to go into operation with 300.000 tons of excess capacity, and in despite the slowing of the economy and the external debt threatening the viability of the import substitution model, PETROQUISA decided on the construction of a third complex, in Triumfo, in the far South, with the obvious indication that it was going to provoke an even higher excess of supply. The intention of PETROQUISA of placing the excess on the international market and proceed with the expansion of the industrialization process became clear to the multinational partners, leading to a situation of divergence. The multinational partners either wanted to avoid more competition on the international market, were they already had established positions, or, in some case, didn't want to return to the market of commodities in certain areas, from which they had already strategically withdrawn to proceed with further verticalization towards the production of fine chemistry.

Regarding the Brazilian market, it was in the best interests of the multinationals to participate, through the joint-venture system, only in the production of commodities, reserving the new and more profitable production of fine chemistry for their own

autonomous verticalization. But PETROQUISA was already proceeding towards the formation of the chlorochemical complex in Alagoas and alcoholchemical industry in Pernambuco with the aim of producing raw materials for the fine chemistry industry. For the multinationals, the Camaçari complex was a way to generate capital for their verticalization within the country, and they were not willing to sacrifice its profits for the sake of the plans of PETROQUISA.

The multinationals possessed, besides the veto power over the decisions of the other partners, a higher control over the technology. In the original tripartite agreement, all the decisions were to be approved unanimously by the three sides, and the directorship of the technical area was to be reserved for the foreign partner. The multinational partner had control over technology which was the vital factor in the plans for expansion, with higher independence, of the national capital. Without the technology the national partners were in no position to push for the implementation of their strategies, and the power balance stayed on the side of the multinationals.

Much more interested in the growth of the company to which they were related than on the returns on the investment of shareholders, the employees of those companies, and specially the body of engineers and technicians, associated with the national partners with convergent strategies. Although the tripartite system initially didn't have the intention of bringing about technological transfer, in almost all cases it made possible for technicians and engineers responsible for production-related activities to learn the technology, during the process of learning by doing that occur in the daily problem-solving in the plants, in the laboratories. In terms of the relative status of the various professionals inside the plants, at this early stage those engaged in production activities were considered the most precious assets and enjoyed a high degree of recognition (a decade later this situation was to be quite different).

The results of my interviews are confirmed by Suarez (1986), who noted that the intense learning of technology, at the individual level, proceeded as the fruit of

intellectual self-fulfillment and as a victory against the foreigners. For those involved in the learning, the search for technological capability became an end in itself, independent of the growth strategies of the companies. In the beginning, it was for the multinational partner to provide technical assistance and supervision, but no longer after the beginning of operations the local employees had become independently capable of running the plants. The effort of the technical groups, though, was not enough to promote further technological capability. It was necessary for domestic capital to take for itself the role of generating technological development. As the domestic market was protected against imports, being less competitive than the international market, the incentive for this participation of national capital in technological development came with the need to turn to the external market to absorb excess production.

The progress of the national industry was complicated not only by the conflicts with the multinationals but later on also by changes in Brazilian government itself. Foreign debt and high inflation brought about the need to bring a induced recession to the economy under supervision of the International Monetary Fund. The new government measures brought about a tight control over the budget of state owned companies, making stock re-compositions more difficult and further controlling the investments of PETROQUISA, to the advantage of the multinationals. The techno bureaucrats, in the top positions of the enormous majority of petrochemical industries and other dynamic sectors of the economy, made alliances with the national capital and recreated the stock composition of some of their key industries, under the lead of Geisel, the former Brazilian president, now president of NORQUISA (a company formed by the association of the companies of the complex that had the participation of PETROQUISA in their stock composition). NORQUISA became the key stock holder of the raw material processor, and managed to continue investments by evading budget control, with a maneuver that made PETROQUISA appear as only one of many stock

holders, thereby placing these companies under the law that controlled private investments, as opposed to public. The future of these industries depended on complicated political alliances and on the grouping capacity of the leaders of this process, not only within the sphere of the industry but in the political sphere of government as well as international monetary institutions (for details, see Suarez, 1986).

The ability to create alliances and the possibility of leading the petrochemical industries toward the future with stability depended very much on how the techno bureaucrats constructed their own life trajectory in the industry, their commitment to the future of national dynamic industries and their ability to work with an enormous variety of variables, including technological aspects of production, human resources management and intricate power negotiations. We are going to look ahead to how a wrong decision could have compromised the health of CPC as a company in this process and the future of employment in their factories. A miscalculation in the investment for the Alagoas plant could have taken CPC into bankruptcy. Through this empirical example, we can see that the feelings of dependence experienced by the workers in regard to the leadership are an exact expression of actual and very concrete relations. Under the capitalist division of labor, the dependence of the workers on leaders is not an expression of an abstractly definable psychological dependence, but rather an illustration of how the psychological dependence may be a practical reduction of a complex economic and political relationship to a 'feeling', or a disposition, that inclines the workers towards a given type of interaction with the managers. The death of the first manager, from the techno bureaucrat’s ranks, lead to his succession by a candidate from the private national partner, who did not have experience of the petrochemical industry. This lack of adequate knowledge could, indeed, have resulted in the sacrifice of the whole collectivity under his command. If it wasn't for the interference of stock holders, his replacement by another techno bureaucrat as

chairman, and the promulgation of plans to save the company, bankruptcy would have been inevitable.

The long term experience of this very real dependence on the ability of the manager to lead the enterprise allowed for the reproduction of the disposition that inclines towards the reproduction of a dependence relationship in a practical way. The historical experience of this relation allowed for the formation of a proletarian identity that accepts in practice and a priori this dependence without the need for rationally understanding what it is that managers do that puts them in this position where power is concentrated (and much less understand what it is in the nature of the capitalist division of labor that creates their powerlessness). This practical delegation of the future of the collectivity to the manager is the outcome of the tacit agreement that those endowed with educational and cultural capital are the one's more able to deal with complexities necessary to keep an industry successfully in the market.

As this delegation of responsibility occurs largely unconsciously, by the working of the share cognitive classificatory schemes that naturalize such relations, this mode of comporting oneself toward the others in the company can be practically learned, assimilated at the work place without any necessity for rational or logical justification. New employees learned from older one's, who in their turn had learned while in the ranks of PETROBRAS or PETROQUISA, reproducing in the new industrial complex the historical tendencies that were already constituted within the industry.

2.7 The case of CPC

The origins: Camaçari

The construction of the company started in 1974, together with the other enterprises of the industrial complex of Camaçari[52]. Camaçari was chosen under military government policy of industrial deconcentration (Brazilian industrialization process had been geographically concentrated in the Southeast region, especially São Paulo and Rio de Janeiro, and the policy of the military government was to spread industrialization throughout the country), and as a result of the government's incentive for production of intermediary goods, actualized through Government investments and its policy of import substitution, with the special incentive of the Second National Plan for Development (created under Geisel's presidency, from 1974 to 1979) and deeply related to the vitality of the domestic economy in the 1970's[53], the protection of the market and the government's attempt to reduce the risks of private investors and strengthen their investment capabilities[54].

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52 The 1960 and 70 were the decades in which intense industrial expansion occurred in the Brazilian Northeast, when the region became the new frontier of capitalist expansion. Enormous amounts of capital were invested in the area, giving birth to a new type of blue collar workers. The first large movement was initiated thanks to the investments created by the 34/18 system, as it is called in the Brazil, after the name of the legislation that regulated investments in the Northeast (articles 34, Law 3995, 14/Feb. 1961 and 18, Law 4239, 27/June/1963), and the second large wave created after 1975, when the Northeast Investment Fund was created (FINOR). Under auspices of these policies, was created the "Northeast chemical axis", with the petrochemical complex of Bahia as its core (it included, besides the Bahian complex, the chlorochemical production in Alagoas, where the Alagoas plant was built, potassium fertilizers in Sergipe and Alcalis in Rio Grande do Norte). These new industries transformed the northeast industrial structure, up to then marked by agricultural products transformation industries, small size production of consumer goods, sugar cane mills, vegetable oil processing and manufacture of cotton, bringing the industrial profile of the region closer to that of the rest of Brazil. Side by side with the introduction of the modern industries were introduced, into the region, new ways of producing. Castro, 1988.

53 From 1956 to 1973, Brazilian GNP grew at an average rate of 9.8% a year; from 1973 to 1980 the growth rate dropped to 6.4%. In 1990 it felt to 1.6% and was 0.7% for the period between 1990 and 1993. Source: IBGE, O traço da desigualdade social no Brasil, 1993. With the inflation under control, the country returned to the path of growth in 1994, with a GNP growth of 5% for that year.

54 In: Castro & Guimarães, typed paper entitled "Tecnologia e Organização, tendências de modernização operária na Petroquímica de base". kindly offered for photocopy reproduction by the authors prior to printing. Existent in the library of the Center for Human Resources Study of the Federal University of Bahia, Brazil.

The petrochemical sector is the most spectacular example of this choice of development strategy. In a period of 14 years (from 1972 to 1986) this segment of the economy developed greatly and was able to keep pace with the technological innovations abroad. This development was led by, and occurred around, the First Petrochemical Pole, in São Paulo, the Second, in Camaçari, and the Third, in Triumfo. The location of these industrial complexes did not follow the path usually chosen by business minded private investors. Different strategies were employed to attract industries to the chosen areas, including tax incentives, government partnerships, development of energy sources and infrastructure in general and attraction of foreign partners to join in a joint-venture system. Especially in the case of Camaçari, the area of destiny of these industries was not prepared to receive them, lacking, among other things, a properly educated labor force used to working under a modern capitalist arrangement[55].

Petroleum was discovered in Bahia state in the 1950s, and was already being explored by the national petroleum company (Petrobrás). In the location chosen to be the site of the industrial complex two chemical industries (Ciquine and Nitrofértil), were already installed and working, and the geography of the region was favorable to the project. The complex concentrated 45 factories, 34 being those of chemical industries. The complex generated 25,000 direct jobs, with a calculated generation of indirect jobs at a rate of 2.4 indirect jobs for each direct one. On July 29, 1978, the complex began its activities, as the first planned petrochemical complex in Brazil, and is nowadays the largest integrated industrial complex in the Southern hemisphere[56]. Created first with

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Among the most significant transformations that occurred in Brazilian society in the last 30 years was the intense, largely induced, industrial growth that occurred from the 1960s on. The Brazilian population, in the post-war period, was predominantly rural. By the end of the 1950s, with the introduction of new industries, such as durable consumer goods, basic industrial raw materials and capital intensive enterprises the situation started to change. In 3 three decades, until 1980, Brazilian internal production grew 10 times in real value and per capita income was multiplied by four. The urban population, 36% of the total in 1950 was already 67.6% by 1980. One of the main features of this growth is that it was sectional, uneven and regional, and the increase in total wealth also corresponded to an increase in income concentration. IBGE, 1993.

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the intention of providing the domestic market with raw materials, the complex led the way for the modern industrialization of Bahia state, and definitely altered the balance of participation of industrialized products in the state's gross income[57]. It is partially the impact of this transformations of the local labor force on the perception of upward mobility by the time of hiring of the Camaçari workers, and the relative feeling of downward mobility the same workers plant experienced in the future of the plant that we are to observe[58] while we compare the effect of different management strategies on the employees of the three plants.

The majority of the factories are connected to COPENE (Northeast Petrochemical Co.), the raw material producer, by ducts and pipes[59]. COPENE gets its raw material from an refinery plant located 27 Km away from the complex. The "EtheneDuct", a giant underground pipe system, connects COPENE to the Chlorochemical complex of Macei¾, the capital of the state of Alagoas, providing raw material also to CPC

In the publication by the Committee for the Stimulation of Industrial Activity in Camaçari (Comitê de Fomento Industrial de Camaçari), entitled P¾lo. No date.

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The order of magnitude of the investments directed towards the complex was such that from 1980, two years after 1978 when the complex started to produce, it was already responsible for 50% of the Brazilian production of petrochemicals, being the largest petrochemical complex in the country. Brazil, with its 3 petrochemical complexes, is the largest producer of Latin America and the seventh in the world ranking. Castro, 1988.

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The complex is divided into four large areas. The central one is the area of the Basic Complex, that comprises 1,293 hectares of land and includes almost the totality of chemical and petrochemical industries. The East Industrial Area, with 2,614 hectares of land, is where are concentrated the second and third generation industries and the company in charge of environmental protection (Cetrel). The North Industrial area, with 451 hectares of land, concentrates the industries that do not depend directly on the flow of raw material produced in the Basic Complex, for example the Cellulose industries. The West Industrial area, with 544 hectares of land, has a copper metallurgical industry and beer manufacture. The whole complex is located 50 km from the city of Salvador, the capital of the state of Bahia, and historically the first capital of Brazil. The total area of the complex is of 235 Km2. To make the complex viable, roads and highways were opened to make possible the flow of people and merchandise. The objective was to create a highly integrated industrial complex, with maximum possible productive scale, to maximize the return of the investments in infrastructure. This integration made it possible for the companies to share transportation buses and other facilities, and also made it possible for the workers to have a higher degree of contact with the employees of other factories and exchange ideas on payment, benefits, and working conditions. The concentration also made easier the activity of labor union in organizing the workers. The union organized a major strike in 1985, including almost all the companies in the complex. CPC workers were the only ones, at that point, not to join the movement. According to them, at that point CPC was a family, and there was no need to join in such violent confrontation, "for the company was good and took good care of us".

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COFIC, P¾lo. No date.

Alagoas, which is located at about 500 Km to the north of the Bahian complex. The São Paulo plant, located at about 2,000 Km to the south of the Camaçari complex, receives its raw material by trucks, that transport it from the harbor.

During the first years of functioning of the Bahia complex, the living standard of the blue collar workers of the complex was about the same as the middle class, with a much higher consumption capability than blue collar workers of the other industries. In 1981, while 71% of Bahian salaried workers had an income of less than 3 minimum salaries, this proportion felt to 16% in the petrochemical industries (usually paid to service employees, such as cleaning personnel, waiters etc.). Also, while 14% of salaried workers in the transformation industries had a monthly income above 5 minimum salaries, in the petrochemical industries this percentage was 65%. If the comparison takes the Camaçari complex as its basis, we find that, for 1981, 71% of the workers were receiving more than 5 minimum salaries, and only 11% less than 3[60].

The first years of CPC were years of abundance. The protected domestic market assures the high profitability of the company. At that time, an old PVC plant was put up for sale for by a traditionally wealthy family, now in serious financial difficulties. The plant had been constructed in 1945, with technology bought from the USA, and is, nowadays, completely outdated. Even against the advice of its technical body, CPC acquired the plant to prevent its main competitor, a Swiss multinational, from purchasing it and to assure a distribution point close to the main consumer market. Upon purchasing the plant, CPC had not decided whether it was going to shut down the production area of the plant or if it was possible to use it profitably.

Around the same time, in 1983, CPC started to plan for the construction of a new plant. Confident in the profitability of the PVC market, the chairman of CPC decided to

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60 Araújo, Tarcísio. Caracterização operária do mercado de trabalho em Camaçari à base de informações da RAIS". Boletim sobre a população operária, Emprego e Renda no Nordeste, II (3), Sep/Dec, Recife, SUDENE, pp.393-420. In Castro, 1988.

construct new plants with the profits of Camaçari and the expected future profits of the new plant. According to the techno bureaucrats in charge of the other plants in the complex, this decision was a mixture of lack of tradition in the industry, excess optimism and lack of prudence. This third chairman of CPC (after the death of the first his successor stayed for only a few months) came from the ranks of the national private partner, a giant in the construction business, which is much more dependent on the dynamics of the domestic market than on international trends.

To proceed with the construction of the Alagoas plant, money was borrowed on the open market, some of which was short term, counting on the permanence of the favorable market situation. All the other industries in the complex had, for such large investments, negotiated special loans with the National Bank for Socio-Economic Development or international financial institution at preferential rates. Even using inexpensive money, the managers of the other plants believed it was the wrong time to invest. Difficulties in finding funds for investments at that time may have been what motivated the CPC chairman to proceed on his own. CPC Alagoas was built even further to the North of Brazil, far away from the domestic consumer market, with the intention of concentrating the production for export on a geographical area closer to the United States. According to other managers in the complex, of lack of tradition and knowledge of the petrochemical business led the CPC chairman to pursue the construction in a time when the international market was tending towards saturation, and in a period in which the heavy investments of the Koreans in the production of petrochemicals was already known.

The financial situation of CPC was already difficult prior to the operation of the Alagoas plant, in 1988. High inflation, very high interest rates and payments due in the short term led the company into a situation of technical bankruptcy. To bring the company back to financial health, the chairman was replaced by a man from the ranks of Petroquisa, at that time working for the raw material producer of the Camaçari

complex, COPENE. CPC, which had managed to work with high profits throughout the first years of the recession, now had its very survival threatened. Its situation was to become even worse, for the president elected in 1990 had, as part as his economic program, the opening of the domestic market to foreign competition.

The workers, especially in Camaçari, who had experienced many years of work in the company in a comfortable financial situation were, by the time of the research, experiencing constant reductions in benefits (and pay, eroded by inflation), constant threats of a reduction of personnel, and had lost the feeling that through their efforts the company would grow strong and solid. Even though they worked as before, the company situation continued to worsen, and although they could observe that the volume produced was about the same, according to management it was not enough to guarantee the company's survival. At the bottom of the pyramid, without much effort toward honest and open communications, the situation seemed absurd. It was in the evolution of this scenario that the implementation of the quality assurance programs was to proceed.

2.8 The Physical Setting

The physical setting and the internal appearance of the factories was quite different. The São Paulo plant's buildings and equipment were old, required constant repairs, and the lay-out of the buildings, the factory, and the furniture reminded the material culture of post-war period. Inside the plant, there were deactivated areas, were the small size of the reactors made it uneconomical even for the production of specialties, the market in which the company was to find its niche. In spite of the efforts for conservation, physical deterioration was clear.

Climbing the steel four-story structure building in which the production equipment was installed we could see over the walls of the plant. As far as the eyes could see, were

the ruins of what had been the 'Matarazzo empire', a group of industries of a now bankrupt family. In the surrounding buildings, during the golden age of that family, up to six thousand workers had been employed in various industries. Of those, only the CPC factory was still working. Compared to the regions of the other plants, São Paulo city was gray, especially in the cold winter days, wet by a fine and constant rain.

Camaçari was far up to the north, in a tropical climate region. The view of the area was, at first, impressive because of the dimension of the equipment and the size of the complex. Before reaching CPC, one had to pass many other factories, all organized around a planned structure of roads and access ways, with giant spheres and pipes on both side of the roads. On the way to the complex, in the mornings and afternoons, one could not fail but notice the national highway crowded with buses taking thousands of people to and from the complex, on the fifty kilometers that separate the complex from Salvador city. The first impression of someone who, like me, was not used to the world of industry was of amazement due to the size of the equipment and the extension of land occupied by those factories.

I was amazed by the organization of the Camaçari plant, but the perception that Camaçari was clean and organized changed after my visit to the Alagoas plant, which had clean white walls, perfectly kept gardens, and spotless cement flooring in the industrial area. The light gray aspect of the cement on the floor of the maintenance area contrasted to the completely black floor at Camaçari, stained over the years by the dripping of grease, but which had impressed me by being nicely swept. If the control rooms at the Camaçari plant seemed to me an amazing collection of modern technology, the control room at Alagoas felt like a futuristic project. Modern computer systems, integrated to the production area, presented the operators, on large crystal liquid screens, in colorful designs, all the handling of the product in the plant and the monitoring of all valves, all side-by-side above command tables on which operators proceeded with the inputs of the programing of production. To reach the plant, the

company bus that picked me and other employees from their homes, passed by beautiful blue beaches, adorned by coconut trees, in a tropical paradise-like area.

PART II

Symbolic capital and legitimacy of the managers' authority

At the second part of the text we are going to proceed properly to the empirical examples. In the three cases described here, it is my intention to demonstrate how a given management style affects the whole organization of the field, the nature of human relations and the very relation of the individuals with their own productive activity. It is important to keep in mind, though, that the management style discussed here is by no means a solid, closed entity. A given management style is, more than anything else, a practical process of dealing with practical problems carried out by a social agent. It is not a coherent system of propositions or a firmly established, finished body of policies. The discussion of the relation between management style and organizational culture should not, therefore, be understood as a study of ideal types or as "types of cultures". It should, rather, be look at as examples of how given types of knowledge, as applied to the practice of human resources management, can be or not efficient in relation to the economic needs as defined on a given historical moment.

The ascertaining of the central role of top management for the survival and success of the industrial organizational is by no means original. Implicitly or directly, many authors have addressed this issue, and there is a high degree of consensus on the importance of this relation, especially in the bibliography focused on business administration. More specifically, there is a clear relation between the leadership style[61] of the manager and the processes of human resources development (Argyris 1973, 1975; Drucker 1993; Fleury 1990; Fruin, 1992; Hammer, 1993; Inohara, 1992; Kenney

[61] In general, the term leadership style is utilized, in the business management literature, in regard to the tendency of the manager to concentrate authority or delegate, to work in a group or in isolation, to listen to subordinates or not, to value or not human resources development, the degree decisiveness with which the manager pursues changes, the handling of the communications system inside the organization and on how their views of the business are transformed into a strategy of power.

& Florida, 1993; Mannari, 1976; Morgan, 1986; Peters, 1982; Tanaka, 1988; Teboul, 1990; Tomasko, 1993, Yunker, 1990; Kanter, 1983 and Schein, 1985).

The manager is the dynamic element that establishes a fundamental link between the organization (here called field) and the macroeconomic market, and who pushes for internal transformations that affect the workers and inserts them in the dynamics of this macroeconomic market[62].

It is in this process of leading a community towards the attainment of economic goals that the manager creates the conditions for a motivated labor force to identify positively with the company and their activity, or negatively, falling into a state of alienation. In the observed plants, the leadership style was the outstanding element responsible for the observed differences in attitudes[63].

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62 Kanter (1983) compares the skills required of the corporate leaders to those of the architect. "The skill of corporate leaders, the ultimate change masters, lies in their ability to envision a new reality and aid in its transformation into concrete terms"(p.278). In this labor, "corporate entrepreneurs - single-minded individuals that they are - still get their projects done by crafting coalitions and building teams of devoted employees who feel a heightened sense of joint involvement and contribution to decisions. The integrative, participative vehicles surrounding innovators - open communication, interdependent responsibilities, frequent team efforts - keep them close to the power sources they need to operate, ensuring access to information, resources, and the support needed for implementation" (p.241): "Corporate entrepreneurs acquire their power through mobilizing others (and being mobilized by them) as collaborators; they are not "solo artists". They secure information, support, and resources by building an actual or implicit "team" of people who will maximize goals of their own through their involvement" (p.237).

63 The three plants, as stated before, belong to the same holding, are functioning in the same country, produce for similar markets and are composed of a fairly homogeneous population in regard to ethnic, educational and religious backgrounds. Especially the populations of workers of the São Paulo and Camaçari plants were very similar in every respect. The blue collars of both plants were predominantly composed of immigrants from the Northeast states of Brazil (close to 90% in both plants), especially Bahia and Pernambuco. Over 80% of those declared themselves to be non-practicing Catholics, with a minority of practicing Catholics and Protestants (less than 2%). Few of the non-practicing Catholics said they eventually participated in the rites and ceremonies of the most popular Afro-Brazilian religions (Umbanda and candomblé) or to believe in Spiritualism of Alan Cardec, especially in periods of life-crises. In terms of ethnic background, the large majority knew if they had European ancestry, but defined themselves as "typically Brazilian", that is, mixed and unclear ascendancy with an African ancestor at some point.

The population of Alagoas was a little different from the other two plants, with the average age of blue and white collars alike being lower (the population of the plant was younger) and the average level of education higher (in number of years of formal education). In terms of ethnic background there wasn't a clear difference, but the majority of the employees were recruited in Alagoas state itself.

The similarity in ethnic and religious backgrounds, especially, is enough, I believe, to refute the possibility of drawing a hypothesis on the observed differences in attitudes and values in relation to work as a function of the incorporation of religious ethics (as the classic Weberian distinction between Protestants and catholic values in regard to work ethics) or some cultural differences that existed prior to entry into the company.

Edgar Schein, one of the most influential writers on the subject for practitioners defines organizational culture[64] as deep a phenomenon that manifests itself in a variety of behaviors. According to him, an adequate definition of this culture should be constructed from the understanding that culture is concentrated on 'the deepest cognitive layers'. For him, any given group with a substantial history develops its own culture, that is a pattern of basic premises or convictions that the group invented, discovered or developed in the learning that occurs thorough the solution of its internal problems of external adaptation or internal integration, and which works well enough to be considered valid, and that are, therefore, taught to new members as the correct way of perceiving, thinking and feeling in regard to those problems. If a given way of perceiving, thinking and feeling about given problems works repetitively, there develops a feeling of comfort with the invented solution, and of success. This development of habitual solutions avoids the anxiety of having to search for a new strategy every time the same problem appears. If the developed strategy continues to work, it is 'forgotten' as a developed solution and become the automatic answer to similar problems. The process of construction of a cultural reality occurs through the accumulation of solutions to the various problems encountered through the years. Through the daily management of the tasks aimed at the goals of the organization and of the daily tasks internal to the organization people learn to work with each other, developing patterns of perception, thought and feeling that tend to form a whole that gives meaning to the daily tasks. For Schein, the organizational culture is this pattern of automatic premises unconsciously maintained and never questioned by the members of the organization.

For Schein, not all organizations develop a culture, only those that have a significant history shared by a reasonably stable group of people, in which emotional ways of looking at the problems have been formed. The solutions leaned through the

[64] Seminário-diálogo com Edgar Schein sobre Cultura Organizacional. Amana Desenvolvimento & EducOperária. Apoio Crefisul/Citibank. No date.

organizational culture direct the way by which the organization creates its market strategy, develop its objectives, chooses the means to attain those objectives, creates the means to measure the development and control of its production and to correct the situations that escape its traditional forms of control.

The organizational culture, then, in Schein's view, is created especially through the interaction of strategies of external adaptation and survival and solutions to internal problems. The exercise of putting to work the organization on this basis led to the formation of a common language, common concepts of time and space, a common view of human nature and interpersonal communications, authority and intimacy, and of the roles and tasks that define the work and provide the basis for human organization.

Schein's perception of the process of construction of an organizational culture indicates quite well the nature of the problem to be understood, that is, this interplay between the need for external adaptation and internal development of a common language that allows for the development of a routine in which an active exercise of thinking is dispensable. It also points to an issue that while peripheral to the concerns of an organizational consultant is meaningful sociologically for a better theoretical understanding of this process: For Schein, the development of an organizational culture is a broader phenomena than one that can be addressed by an analysis of social agents bending to social and institutional rules of whatever sort, or resorting to logic and reason on the daily solution of routine tasks. Organizational culture is largely an unthought of and unconscious process of construction of a practical knowledge, a knowledge without concepts. It is important to complement Schein's analysis, though, to understand better this process.

The construction of an organizational culture quite naturally does not start from conscious, free individuals engaging of their free will in a social contract like that of Rousseau. The organizational culture is constructed by individuals of different socio-economic backgrounds, who possess different amounts of educational and cultural

capitals and who are destined to possess different amounts of power in the work environment and different degrees of access to the economic results of the collective effort. These individuals are, by the dispositions inherited from their class condition, ready to accept different roles within the organization and the corresponding rights to express themselves and have their opinion heard in regard to the solutions the organization will develop on the issues raised by Schein. The opinion of the top manager, quite obviously, has a different weight than any other opinion in the organization, and the institutional means for imposing itself as the right opinion. The manager has the legitimate right to impose his views as the official views upon the others, and count on the acceptance of this right by the others. Some opposition and debate are still tolerable, and sometimes stimulated, among the managerial level itself, but this right of expression and of making oneself heard decreases the more one nears the shop-floor.

Although in the three plants there was some awareness of the fact that the differences perceived among the plants were chiefly due to differences in the management style of the managers, neither the employees nor the managers were aware of the way in which those differences were constructed and of precisely how the power of the managers affected the collectivity under their command[65]. Argyris, 1973, from also from his experience in consulting work, shows that a common and critical problem in many organizations is the inability of the top executive to behave in accordance with the new values (defined according to the tendencies of the economy) necessary to put to work effectively new theories in real life situations. That is,

[65] Argyris (1973) points to the fact the company presidents researched by him recognized that there is a clear impact of their leadership style on their subordinates. Especially in the early years, in which the organizations are highly vulnerable, subordinates are likely to feel that their single-minded, compulsive, hard-working chief executive is a critical factor in keeping the organization alive and growing (the same point is also emphasized by Schein, who also researched the impact of the founders' leadership style on the creation of an organizational culture). He fulfills their needs as well as the company's (p.8). Argyris goes on through the various strategies and techniques (and their respective degree of success) the chief executives employ in their attempt to develop their own behavior to affect positively, in the direction they want, the behaviors of the subordinates. Argyris demonstrates that leadership style is the key factor in a successful human resources development policy.

international competition pushes for constant transformations in the way of producing (quality production is one example of such transformations), and the managers must transform their own behavior so as to affect in the right way the community under their command. Argyris points out that this is an extremely difficult process, and many CEOs (Chief Executive Officers) and their subordinates experience a sense of frustration and failure in implementing the necessary changes. Argyris argues that it is extremely difficult to know why people come to accept the reality as the leader creates it, and points to the fact that it is equally difficult to access this relation during a research situation, for the workers are very influenced in their views by the environment in which they work.

The questionnaire survey (described in appendix III) confirms this difficulty. The fact that a subjective feeling towards the company and the management affected the responses to the apparently objective questions was obvious when the responses of the three plants were compared and the results checked against the facts. It was clear also that the managers themselves could develop only a very partial understanding of this process and of their own role in it.

Through those comments we can perceive the limitations of what Bourdieu calls the objectivist and subjectivist sociological theories[66]. It is unnecessary to say that people in industrial organizations do not experience "labor under the capitalist mode of production" but experience a concrete activity, through the interaction with a given type of technology, under a given type of division of labor that is politically organized in order to produce the desired goods, in a field in which face-to-face interaction occurs, that is, in which one relates not to abstract categories but to real people under concrete

[66] And the limitations of exclusive methods of research for that matter. Qualitative research is fundamental to grasp the features of the population under study and the items on which opinions vary, but those results cannot be taken for granted as the true opinions about an absolute reality. Contrary to what is assumed by many writers (such as Mills, 1975), scientificity is different from well-established quantitative regularities. On the other hand, non-participant observation (and perhaps even more participant observation) tends to generate an undesirable degree of intimacy with the subject and the difficulty to see regularities at all.

circumstances. It is also quite clear that individual experiences are organized (but not determined) by the logic of the economy and around very concrete needs as defined in specific circumstances. Practical activity, political experience in the community, feelings toward work and the work community, and self-perception are not separate or separable elements in the life of each employee but are all part of the same lived reality.

Empirical observations call to mind the absurdity of talking about the experience of labor in abstract terms, detached from the practical experience of work. The experience of labor is not the experience of social relations of production in general, but an experience intermediated by a symbolic representation of that reality (Jones, 1996). Each company has its 'typical' features, its own jargon, its own way of carrying out tasks, and of doing the 'right' thing. Each company creates a way of relating to others, superiors and subordinates. Different companies have different ways of resolving conflicts, different perceptions of the relative values of the various professional groups in its hierarchy and a tendency to privilege certain elements in favor of others in the organization of its routine (Jones, 1996, Schein, 1985). Words have different connotations in different organizational contexts, and arise different feelings in their members. In one observed plant the expression "labor union involvement" provoked irritated reactions, in the other the pleasant feeling of a recently acquired freedom. These reactions were clearly constructed in relation to the policy of the top managers of each plant and to the perception the employees had of the manager and of the company. To look at the question of motivation (and worker satisfaction) in perspective, it is of fundamental importance to understand the process of construction of this symbolic reality.

Returning to the question of motivation, one can only talk of wholehearted involvement in a task (under the capitalist system), of dedication and motivation, if the bare economic nature of the relationship in which the productive activity occurs is at

least partially covered from the eyes of the producer, in a situation in which the activity is perceived as meaningful and necessary to its executor (and not as only the sale of labor power in exchange for a salary). In a situation in which the oppressed, the inferior, or the exploited is aware of his or her own exploitation or of the conditions that allows for the reproduction of a subjugated position, it is hard to imagine the possibility of extracting extra compliance or hope for the non-development of strategies of resistance[67].

The post-cold war scenario is the necessary 'culture medium[68]' for the cultivation of this harmonic relation between workers and management. The introduction of quality

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[67] During the mass production years, labor union movements, mostly of socialist orientation, campaigned in Brazil against the capitalist exploitation of workers and attempted to expose, as much as possible, the unfairness of the system. in those days, it was not rare the existence of leaders of unions in the shop-floor stimulating the resistance of the workers to the authority of the management. Coercion, close supervision and threats of dismissal were common tools to which managers resorted to extract compliance. But in the plants studied here, I did not observe any form of organized resistance to the management, nor had I the opportunity to observe the work of labor union leaders on the shop floor. At an interview with the leader of the labor union for the whole complex of industries of Bahia, I was informed that there was no formal leader from the union in the CPC plant.

For an analysis of this process in Brazil, refer to GUIMARÃES, A.S. & CASTRO. Trabalho, Sindicalismo e Reconversão Industrial no Brasil: Perpectivas para a Década que se Inicia. in Lua Nova, N. 22, dez/1990a; PECCHIA, G.A. Controle e Resistência da Força de Trabalho numa Indústria Petroquímica: a Copene. Belo Horizonte: Mestrado em Ciência Política da UFMG, tese de Mestrado, 1985; GUIMARÃES, A.S. e CASTRO, N. Inovação Tecnol¾gica, Subjetividade Operária Ação e Sindical na Indústria Petroquímica Brasileira. Salvador, CRH, Projeto de Pesquisa. GUIMARÃES & CASTRO. Espaços Regionais de Construção da Identidade: A Classe Trabalhadora no Brasil P¾s-77, in Ciências Sociais Hoje: 1988, São Paulo, ANPOCS/Vértice, p. 13-49.

[68] Although from the side of the workers it seems to be to be a rather recent trend the tendency to accept the discourse of community of interest with the company, from the side of the managers the concern with the development of human resources is a bit older. As Mills ((1975) points out, in 1974 84.4% of 251 corporate presidents in America (with average sales of USS138 million) perceived employee motivation to be of far greater concern than a decade ago. (MILLS, Ted, Human resources - why the new concern? Reprinted from HBR March-April 1975, Number 75208, in Reprints of Selected Articles - Organizational Development, Part IV. Harvard Business Review, 1976. According to the author, there are four theories on the question of motivation, that lead to the acknowledgement of a problem in the satisfaction of the workers with their jobs and the resulting decrease in the output and quality of their performance., all of them of questionable validity in the statistical measurements that support them. They are (1): Alienation, boredom and job satisfaction - associated with assembly-line work (2) Decreasing motivation and increasing counter-productive behavior - associated with the erosion of the protestant work ethic, (3) Rising expectations and declining institutions - associated with the decline of power and prestige the social institutions brought by the higher expectations of the young of a richer society (4) Dying mechanisms and changing ideas - based on the assumption the progress towards postindustrial society has brought about disenchantment with the mechanized society and recognition of its inability to satisfy our higher aspirations. The author denies that the developments in the human resources area derive from the "negative" approaches above, and raises the hypothesis that Human resources development provides a high potential rate of return on a relatively low-cost, low risk investment of resources - the source of Human Resources Development is in a business which itself has discovered that HRD efforts work. It is simply sound management. And it seems even more valid as the United

programs, in the present fertile environment, is interpreted as a democratization of industrial relations, as a form of valorization of the previously subjugated proletarian knowledges, and as a social evolution towards the restitution of humanity to the productive organization. The process of inculcation and construction of a consensus in regard to the need for full cooperation of the totality of the workers in quality programs is constructed in such a way that the bare and obvious economic advantages of the quality program appear as secondary to its moral worth: quality programs reduce waste, environmental risks and value the contribution of every professional group in a way that the mass production type of organization did not. If we reduce it to its bare economic nature, it is a way of extracting much more value from labor without implying higher remuneration. Indeed, all the processes of implementation of the quality program in the observed company occurred simultaneously to cuts in formal benefits and pay, eroded by inflation. But the empirical examples looked at in here allow us to conclude that even if the adequate 'culture medium' exists, the expected rise motivation and the creation of identification with the company is by no means automatically assured. The enormous number and types of programs for upgrading management skills more than confirm the need for the labor of the managers in creating this link.

The question of the possibility of motivation and dealienation under the system of quality production can only be satisfactorily answered if we allow ourselves to forget temporarily that the capitalist society is supposedly a society aware of the economic basis of its social relations of production. What I mean is that the question of feeling, satisfaction and willingness to cooperate cannot be successfully answered if we insist in denying that there is a tendency inside industrial organizations toward concealing from the eyes of the producers (not only pushed by the management but sponsored by the workers themselves) the fact that their activity is carried out only for economic

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States begins to lose affluence and prosperity. The managers have come to realize that Human Resources Development significantly increases morale, quality of product or service and their important by-product, productivity.

purposes, and that their membership to the work group has economic results as its sole purpose. The present transformations of the capitalist society cannot be understood if we look at our own society as "philosophical society", a society capable of reflecting upon itself, in opposition to the mythical, primitive societies unable to untangle the logic of its own reality. It is necessary not to take for granted that the exploitative nature of capitalism in relation to labor is a lesson well learned by the workers from past conflicts of the mass-production era[69], to understand the construction of the present identification between workers and the companies. The economic benefits of the quality production arrangement could only be fully appropriated in the observed company in the plant in which the bare economic nature of the relationship among workers, managers and the company could be more successfully disguised through the production of a symbolic reality in which professional pride, mutual respect, prestige, honor, and acknowledgments were accumulated at all levels of the hierarchy. Under quality production, higher profitability comes with a 'happier' worker, but not necessarily with a richer worker.

How is this sense of satisfaction constructed? How and why is it that while actualizing similar functions the workers of the different plants could experience different feelings in relation to their activity?

The feeling of meaningful activity that is at the basis of the feeling of professional pride and of a sense of accomplishment upon which a state of motivation is constructed, is derived from the perception the worker has of his activity in the context of the larger society, and of the importance of the function he executes for the attainment of the goals and objectives of the company as his own frame of membership

[69] In this sense, I believe it to be useful to insert a comment by Marcuse that "The primary liberation cannot be 'spontaneous' because such spontaneity would only express the values and goals derived from the established system. Self-liberation is self-education but as such it presupposes education by others" (in Baudrillard, 1981, p.8). It is possible that the ease with which the workers assimilate recent ideological impositions of capitalism is related to the reduction of activity of "workers conscientization" that the labor unions and shop-floor activists carried on during the mass-production years. Left on their own on the shop-floor, the workers became much more vulnerable to symbolic violence imposed on them through the inculcation of the new political orthodoxy.

and reference. Given the features of blue collar activities in the world of industry, the enormous amount of time dedicated to manual activities, and the complexity of the economy of which the company is part, a perspective understanding of one's position can only be attained, and lastingly maintained, through the labor of a totalizing agent capable of offering a coherent interpretation and a sense of direction to those submerged in otherwise fragmented and routine jobs. The top manager is, by his privileged position in the division of labor, the element capable of providing this connection, and of clarifying the links between each individual's activities, the objectives of the company, and the strategies devised for the market. Under the present context, to provide this link has become one of the manager's chief tasks, and one of the ways in which the manager can better serve the interests of the company. But this "serving" of the company, whose central interest lies in profitability, is disguised under the new arrangement by the artificial creation of higher goals. It is no coincidence that most modern enterprises are now worried about spelling out their 'work philosophy', in which they propose to serve human beings through intensive research and development of products that can provide more comfort and security, to contribute to the progress of society through a dynamic action directed at creating new jobs and progress and to protect the environment through the constant upgrading of the technology. As the company's reason for existence is 'no longer' merely economic, the accumulated cultural and educational capitals of the manager are not serving merely the extraction of economic advantage. The capitals of the manager are necessary to lead the organization toward competitiveness (the collective) goal, at the same time as humanizing the environment and contributing to social development. The workers are inserted on the construction of those highly meaningful objectives through participation in the managers' projects.

Due to the enormous amount of information and the complexity of the situations a manager must digest to fulfill his role, it is understood as natural that the recommended

person for this job is someone that possesses enough educational and cultural capitals to make sense of this complex reality. The necessity of educational and cultural capitals of higher quality becomes even more clear if we consider Drucker's (1994) affirmation that in the post-mass production scenario knowledge becomes the chief resource determining the success of a business. The educational and cultural capitals are, seen from this perspective, clearly related to the necessities of the economic system and it seems relatively clear that as such they are socially accumulated capitals, fruit of a privileged class position and of privileged access to, and a privileged position in, the educational system. But once this capital is put to work (in the plant where the higher degree of motivation could be observed), in the solution of daily problems inside the organization, it suffers a process of transmutation, through which it ceases to be perceived as socially constructed and socially accumulated capitals (the result of both a privileged class position and privileged position in the division of labor), and are transformed into a natural talent for management, a virtue of personality, a superior capacity for coordination of the collective effort, a symbolic capital that legitimizes the authority of the manager and assures the willing acceptance of his leadership. This transformation of a socially accumulated capital into a natural gift, a innate talent, is at the basis of the cult of personality upon which the meritocracy of the modern organization rests.

In the plant in which this process of transmutation from educational and cultural capitals into symbolic capital was fully accomplished by the manager (the São Paulo plant), the manager's definition of the situation could be imposed as the official truth about the company and the market. The manager, thanks to his accumulated knowledge, could endlessly address the problems that were brought to him as if all the solutions were coherent with a long term plan. The fact that he was aware of the necessity of implementing quality programs before anybody else in the company had heard of the term, for example, contributed to the creation of the image of a visionary

leader, able to select, from the sea of novelties, the adequate elements to ensure the future of the company. As he was conscious of the need to continue to learn about the novelties of the market, and his privileged position at the division of labor allowed him to accumulate more knowledge in the course of his labor routine, he could keep 'feeding' subordinates with insights and information. Differently from the other two managers, he provided not only a framework for the organization of the routine in the plant but also a framework of interpretation for the market, the company and human relations inside it, in which the workers could meaningfully perceive themselves.

The process of transmutation from socially acquired capitals into symbolic capital is related to an attempt (on the part of enterprises) to transform the social relations of production within capitalism in which the purely economic concept of labor, with its correspondent calculation of productivity, is being denied, and activity is being view as directed towards the reproduction of a necessary order. It is related to the perception of the economic advantages of a morally integrated society at the work place, but appears to the social actors involved as a wakening to a more humane reality.

The role of the manager is indeed of central importance in the construction of the symbolic reality as we observe it. It is the top manager who provides the guidelines for the utilization and organization of the physical space of the environment, the one who defines the frequency, nature and contents of meetings, who defines the amount of professional freedom at the various levels of the hierarchy, who decides on the process of delegation of decisions and many other elements upon which the routine is to be built and upon which a more or less enduring pattern of interaction will occur. The discourse of the manager, by the institutionally conferred power, has the right to predominated above all competing discourses, and to impose itself arbitrarily, or coercively, when such imposition cannot be achieved with legitimacy, that is, with the approval of those subordinate to it.

The strength of this created symbolic reality inside the field is such, that in the plant in which the manager had successfully accomplished its construction according to modern theories, there was only one man (in more than 100) speaking openly against him. This maintenance worker insisted that all that had changed was the discourse, that at his family's table the amount of food was reducing as the full adjustment of salaries with inflation was not being granted. He was facing enormous criticisms by his colleagues, who accused him of speaking in 'bad faith', of being a crude, ignorant person unable to understand 'all that the manager has done for us', and of greediness in evaluating the company in purely monetary terms. This man accused the others of letting themselves be used, only to hear in return that 'we do what we do because we like it, because the company and our colleagues deserve it. We are not like you, so concerned about money' (in regard to all the extra tasks the workers of the plant performed without remuneration, as described in chapter IV).

The comparison among the plants illustrates the relation between the legitimate exercise of authority by the manager and the overcoming of a process of alienation of the workers. In a different situation, it illustrates how coercion destroys trust, and the possibility of the construction of a symbolic capital by the manager, and how, in this type of situation, the relation of the workers to their own activity does not lead to the necessary identification for the construction of a meaningful relation. When the educational and cultural capitals of the manager is not enough to allow him to keep ahead in understanding the various elements that affect the company and to generate the feeling among subordinates that there is a clear sense of direction for the collective effort, the manager is not in a position to adequately invest his educational and cultural capitals in the accumulation of a symbolic capital. The amount of educational and cultural capitals of the manager must be much higher than that of subordinates to make it possible for the manager to successfully invest it in the construction of his symbolic capital. The 'definitions of the situation' that those managers without symbolic capital

(or without enough symbolic capital, for some accumulation of this type of capital is the natural outcome of holding the more prestigious position in the group) attempt to impose encounter opposing discourses and definitions that they are not able to overcome (not necessarily only from the shop-floor workers, but also from middle managers as well). Those competing discourses that are formed within the organization threaten the authority of the top manager in the plant, who ends up resorting to cruder forms of coercion and to other less sophisticated strategies of control to assure that his leadership is accepted. The manager's right to speak and the acceptance of the truth he speaks as superior to all other discourses in the plant, depends on his ability to accumulate symbolic capital in the form of professional acknowledgment, prestige and honor.

In the case of the Camaçari and Alagoas plants, some sort of censorship on the circulation of information and limits to the participation in an open system of communication were devised to control the formation of opposing views, in a attempt to keep control over the official version of the reality of the plant. This strategy of control was perceived as an arbitrary attempt to control opposition, for it was based on lesser means than the appeal to the indisputable logic that links the facts of the field to the facts of the macroeconomic market. It acts against the manager in the process of the accumulation of symbolic capital, and the manager, unable to fully ground his authority in the legitimacy conferred by the accumulated symbolic capital, reproduces the pattern of arbitrary control to reinforce his leadership position (the more the forms of control are perceived as arbitrary, the more the manager's symbolic capital is destroyed in the eyes of the community). In the São Paulo plant, there was a shared conviction that nobody else could perform the task of the manager better than himself, a feeling that was by no means true for the managers of the other two plants.

How was this accomplished? The interpretation of the facts and discourses observed in the São Paulo's plant (compared to the problems lived in the other plants) indicated

that the efficacy of the discourse of the manager was derived from the hidden correspondence between the structure of the social space within which it was produced (the field of business administration, the field of industrial relations) and the structure of the field of social classes within which the recipients are situated and in relation to which they interpret the message, and on the labor of the manager in adjusting the two. Borrowing the words of John Thompson, we can say that "those who, like Max Weber, have set the magical or charismatic law of the collective oath or the ordeal in opposition to a rational law based on calculability and predictability forget that the most rigorously rationalized law is never anything more than an act of social magic that works[70]". The overcoming of the mass production type of organization of production exposed 'scientific management' as an ideological construct based on the false premise that the best form of social organization was that in which human qualities should be subjugated to the interests of a rational organization or a 'scientific division of labor". But it did so by constructing a new ideological model, within which humanity is rescued in the division of labor and human qualities are valued by the productive organization (but for the sake of higher competitiveness - as a necessary for the fight for survival). It is in this truthful pursuit of the 'humane' organization of labor, flexibly capable of constant acts of external adaptation and strong to survive, that the manager of São Paulo constructs his symbolic capital, and is recognized as 'the good leader'.

Bourdieu, in his study of language, points to the fact that everyday linguistic exchanges are situated encounters between agents endowed with socially structured resources and competencies, in such a way that every linguistic interaction, however personal and insignificant, bears the traces of the social structure that it both expresses and helps to reproduce (Thompson, 1991). A privileged social agent, with enough educational and cultural capital, can construct a practical competence and produce

[70] Thompson, John B., in the Introduction to Pierre Bourdieu's Language and Symbolic Power, Harvard University Press, Cambridge, 1991.

utterances that are appropriate to the circumstances and in accordance with practical strategies that have numerous functions and which are tacitly adjusted to the relations of power between speakers and hearers in a way that what he says appears as an undeniable truth. This practical competence involves not only the capacity to produce grammatical utterances, but also the capacity to make oneself heard, believed, obeyed and so on (Thompson, 1991). The adequate investment of the educational and cultural capitals by the manager, in the creation of a rational, logical, necessary and humane discourse that includes an interpretation of the reality of each employee and created the condition for a meaningful apprehension of their activity, confers on the manager the recognition of the right to speak above anyone else in the context of the organization. The skillful handling of the communicative situations allow the manager to endow his authority with extra powers of legitimacy, thus transforming the manager into the key player in the process of construction of an 'organizational culture' as described by Schein.

All the rituals of everyday life (in Erving Goffman's terms) are occasions for reaffirming these relations of power. The authority bestowed upon the manager by his institutionalized position at the top of the division of labor allows the manager to have a privileged starting point in imposing his definitions of the situations, for it confers authority to his discourse from the beginning, but it is in itself not sufficient. The manager must construct his competency by adequately investing his right to speak to produce a discourse that provides the framework for all the other discourses produced in the organization. The example of the São Paulo plant, in chapter IV, explores how the manager was capable of doing that and how in this process the professional pride and the sense of meaningful activity of the workers of the plant was constructed.

There is a close relation between the acceptance of what is said by those endowed with the right to speak and those, in a communicative situation, that are ready to accept or reject a problematic claim, with the amount of symbolic capital accumulated by the

speaker and/or his representatives. There were countless occasions, at the Alagoas and Camaçari plants in which the discourse of the manager was met by deaf ears or an a priori disposition to refute it or to accept it only partially. This selective acceptance of information was attributed by the workers to the fact that the intentions of the manager were not clear, that the explanations of the manager were many times "strange", did not match observed facts, that the manager was not 'on our side', that the manager 'do not trust us, so he filters information', etc. The honor and the character of the manager, as perceived by the workers, was directly related to their willingness to engage in a deeper relationship of exchange with the manager and the company. Naturally, the case here is not the "true" aspect of the manager's personality and character, but how, through the solution of daily problems in the plant, he presented himself as a trustful person. As the case studies demonstrate, the manager of the plant that could impose himself in that way possessed enough educational and cultural capitals to provide a coherent and modern discourse, that addressed adequately the issues that involved the community under his command. His management style was not an accident of trajectory but the fruit of a continuous investment in the upgrading of his own management skills.

It is true that, in modern societies, with the development of objectified institutions, the importance of symbolic mechanisms for sustaining domination through interpersonal relations has declined (compared with tribal or peasant societies). The development of institutions enables different kinds of capital to be accumulated and differentially appropriated, while dispensing with the need for individuals to pursue strategies aimed directly at the domination of others (Thompson, 1991). Violence is, as Thompson puts it, built into the institution itself. He says, commenting on Bourdieu's theory, that if one wishes to understand the ways in which symbolic power is exercised and reproduced in our societies, one must look more carefully at how, in different markets and fields, institutionalized mechanisms have emerged which tend to fix the value accorded to different products, to allocate these products differentially and to inculcate the belief in

their value. In this sense, we perceive the continuity of the process initiated in the educational system actualizing itself in the productive organization. The educational system involves a certain kind of objectification in which formally defined credentials or qualifications become a mechanism for creating and sustaining inequalities. By concealing the link between the qualifications obtained by individuals and the cultural capital inherited by virtue of their social background, this mechanism provides a practical justification for the established order. "It enables those who benefit most from the system to convince themselves of their own intrinsic worthiness, while preventing those who benefit least from grasping the basis of their own deprivation" (Thompson, 1991). This process that occurs in the educational system, is the necessary pre-condition for the acceptance of inequality in the industrial organization, and for the actualization of practices that reproduce this inequality.

It is true that much of the process of inculcating the inevitability of given life trajectories occurs as a result of the acquisition of cultural capitals of different social value through the participation in given institutions. But as the present case study demonstrates, it does not dispense completely with the need for the domination of one individual over others, although the domination exercised in the context of the modern institution rewards the one in the dominant position for his labor of domination through institutional means. Theoretically, at least, in the eyes of those involved in the field, the exercise of domination by the manager finds its justification in the interests of the organization, and not of the individual himself. In this context, scientific management theories and theories on the advantages of a bureaucratic organization of the industrial division of labor (defending as natural, rational and scientific the superiority of the intellectual functions over the manual ones) exert a doubly strong ideological effect: First because it is coherent with the habitus acquired in the educational system, and second because this system of disposition is reinforced by the practical experience of a

division of labor that is based on the same system of perception, helping to further naturalize the arrangement.

The manager has his institutionally conferred authority grounded in this system of dispositions that makes it seems natural for those endowed with higher qualifications to hold the posts that demand the higher qualifications. So far, the question of the necessity of investing this capital accumulated, the higher qualifications, in the construction of a symbolic capital is not clear. During the years of mass-production, indeed, this necessity was only very superficially "felt". In quality production times, in which it has being organized in a form of logically constructed propositions, it is "known".

It was with the development of the quality production system that this necessity was fully recognized, and business literature oriented toward managers started to deal in more depth with the question of management style, leadership development, the importance of charisma, and etc., and the volume of publications dealing with 'organizational culture' started to boom (there are examples of researchers concerned with those issues before, as the articles of Harvard Management Review of the early seventies prove, but these were relatively rare when we consider the enormous numbers of titles published on the subject from mid-eighties on).

It might seem rather contradictory to say that the phenomena of alienation, as traditionally observed in the industrial organization in the form of deep feelings of meaninglessness, anxiety, frustration, futility and powerlessness came to be overcome precisely when the political heterodoxy that theoretically increased the awareness of the arbitrariness of the political and economic system retroceded, and opened space for the formation of a political orthodoxy that partially restored the blind faith in the system. And it is contradictory if we take the concept of alienation to mean what the humanist philosophers meant it to mean: the encounter of the self-aware man with society and with himself. But empirical observation pointed in another direction: the feeling of

purpose, meaningfulness, social integration and powerfulness occurred precisely in the environment in which the manager had progressed in utilizing this acquired qualification to impose a discourse of modernity that was highly ideological. But the imposition of this discourse was only possible because the manager, by adequately investing, and conspicuously exhibiting his capital, constructed an image of merit and respectability that gave his discourse a much higher 'reliability' than any other. In time, all the middle managers realized that their own authority over their subordinates increased if they acted in tune with the guidelines of the top manager. Through the accumulation of symbolic capital, the manager could create the willingness to accept the truth he professed, and it was this willingness to listen and understand on the part of the subordinates that made the circulation of his messages so easy throughout on the plant.

The other managers, on the other hand, encountered in the mistrust or 'deafness' of their subordinates the strongest barrier against the progress of the policies they wanted to implement. This 'deafness' was a sort of unconscious strategy that limited the power of the leader that who was not considered very suitable in the first place. In Camaçari, the authority of middle management was also jeopardized within this context. As the middle managers have a much more direct physical contact with subordinates, they feel directly the impact of the lack of trust on the top manager's discourse and policies and have to deal directly with their subordinates' resistance to accept his definition of the situation. The quality of this interpersonal relationship, their own personal authority and control capacity tend to deteriorate if they attempt to push for the acceptance of a discourse that is not compatible with the needs of the subordinates and does not address satisfactorily the circumstances they face. Middle managers felt compelled to compensate by offering alternatives to the official policy and to negotiate their own authority through the course of interaction. The "culture" of the organization became a

patchwork of competing "subcultures"[71]. In Alagoas, where the top manager won the acceptance of middle managers but not of the shop-floor workers, the fact that middle managers backed the plant manager, whose exercise of authority was perceived as arbitrary and coercive, led to the construction of strategies of resistance at the shop floor level and to the described (chapter V) strike of the young operators in the past, and to the present (when the research was in progress) difficult to manage situation of mistrust.

As Bourdieu points out, although it is legitimate to treat social relations - even relations of domination - as symbolic interactions, that is, as relations of communication implying cognition and recognition, one must not forget that the relations of communication par excellence - linguistic exchanges - are also relations of symbolic power in which the power relations between speakers and their respective groups are actualized[72]. To move beyond the opposition presently existent in the analysis of the industrial organization, it is necessary to move beyond the traditional Marxist analysis (of strategies of domination and resistance) and the "cultural" type of approach, to look at the organizational context as a place where symbolic exchanges occur within the frame of an economic structure properly. These symbolic exchanges have a

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[71] The idea that subcultures are formed within the context of a given organizational context is different from the assumption that different 'classes' of employee (defined in relation to the proximity of interests between the employee and the enterprise) develop a discourse of resistance or of approval intermingled with values of occupational qualifications (as engineer culture, accountant culture, etc.). The observed empirical situations pointed to the formation of subcultures among people that were in constant contact, such as the maintenance subculture, the operations subculture, the white collar subculture and so on. In each of these groups people of different qualifications shared similar tendencies of perception and feeling in relation to the organization. In each of these subgroups, though, there was the tendency for those with higher qualification to formulate the logical discourse of opposition and the criticism against the manager according to the principles of the new theories of management and in relation to the new needs of the market. Those with less formal qualification tended to express their feelings in relation to the company, personified in the manager, in terms of moral indignation, especially in regard to the abandonment of the idea of CPC as a family, as it had been under the first manager. This doesn't mean that those with higher qualifications did not express feelings of moral indignation (Bourdieu, 1987, p. 11-12 analyses these tendencies) or that those with less educational qualifications did not express their concerns on similar logical grounds (with a lesser degree of articulation than those with higher educational qualifications). These observations express not a rule but a tendency based on frequency on which these behaviors are externalized.

[72] Bourdieu, 1991, p.36.

mechanism of construction that is their own, but are created and recreated according to the logic of economic transformations. It is not 'uncritical' not to address more deeply the question of resistance. The adequate critical approach, in the present environment, is not the one that tries artificially to increase the power of the workers (by searching for strategies of resistance that are not there), but the one that addresses the question of how the question of resistance, when and where it can be observed, is constructed within the limits of the thinkable imposed by the lived symbolic reality, at the risk of assigning a philosophical capacity of reasoning upon the lived reality by the shop floor workers that they actually do not possess.

That is, an analysis of how a symbolic universe was generated around the idea that quality production is a progress toward the internationalization of national societies, necessary for survival in the global market in which excellence is defined by a higher concern for the client expressed through higher quality and greater variety of the final product, ecological concern with the reduction of pollutants emission and with the reduction of waste in general, and with a social preoccupation with survival for the sake of 'social progress', how the managers pushed for the implementation of this way of perceiving the transformations in the capitalist system, and how the workers were willing to accept this new ideology, through which they constructed a sense of meaningful activity and professional pride (an acceptance that implies in a prior acceptance of a blue collar destiny).

CHAPTER III

* CAMAÇARI PLANT

3.1 Introduction

Morgan (1986) states that effective managers and professionals have to become skilled "readers" of the situations that they are attempting to organize or manage. This skill, according to Morgan, develops as an intuitive process, learned through experience and natural ability. This kind of mystique and power is often based on the ability to develop deep appreciation of the situations being addressed. Also according to Morgan, these leaders have the capacity to remain open and flexible and of reading situations from "new angles". In comparison, less effective managers and problem solvers, seem to interpret everything from a fixed standpoint. Their actions and behaviors are often rigid and inflexible and a source of conflict. The understanding a manager has of his organization has considerable power in the directing of his actions and attentions direction as opposed another. As an example, there are those who see organizations as if they were machines designed to achieve predetermined goals and objectives, and which should operate smoothly and efficiently. These managers tend to organize and manage the organizations in a mechanistic way, forcing their human qualities into the background.

The effects of mechanistic management on the workers have been abundantly debated. The worst case, Ford's assembly line, resulted in high turn-over rates and difficulty in making workers accept the new technology. This type of management of the work routine is not possible in the chemical industry, but the separation of thinking and execution, defended under the principles of the scientific management of Taylor was widely employed. The manager of the Camaçari plant tended to have a mechanist view of the organization.

Baum (1987) points to the fact that there is a tendency, in professional education dealing with large organizations, to focus on the substance of problems that emerge in management and on analytical methods for solving them, based on rational assumptions about their nature, while the psychological drives and early childhood experiences with authority, that are fundamental elements in the relation among individuals in the work place, are neglected. This neglect is deeply related to the very nature of the bureaucratic organization that is constructed as a rational order to address rational problems. Baum points out that Weber's[73] (1967) classic definition of bureaucracy describes its typical social characteristics: "work is divided into parts and allocated among relatively specialized workers. While responsibility is thus dispersed, authority is centralized, so that a relatively small number of administrators hierarchically manage the work of a relatively large number of subordinates. Because the chain of command may be quite lengthy in a large organization, codified, impersonal rules replace close personal supervision as the regulator of quality and effort". Indeed, the discourse of the manager of the Camaçari plant fitted very nicely into this definition. He tended to believe that to manage people's psychological needs was absolutely not his responsibility, and that impersonal rules and job descriptions should suffice to make the workers that had a good will to work to find out about his/her own tasks. But, as Baum points out, an invisible but powerful psychological structure accompanies the social structure of the bureaucratic organization. People unconsciously attempt to reduce anxiety relating to others, and fear loss of support or punishment for transgressions, especially from those in positions of authority, through unconscious transfer of assumptions from infantile and childhood experiences. Baum points out that educated adults tend to make largely inaccurate assessments of social relationships in the bureaucratic organization, and spend much time and effort focusing on human relations inside its borders than on organizational goals. He concludes that in order to improve

[73] Weber, Max. From Max Weber, edited and translated by Hans H. Gerth and C. Wright Mills. New York: Oxford University Press, 1967.

organizational productivity and the quality of bureaucratic work, it is first necessary to make this psychological domain visible, so that workers can recognize the unconscious thoughts that weigh so heavily on their actions[74]. To transform the work for the sake of the organization into a psychologically rewarding activity is one of the main tasks of the manager. Excessive faith in the bureaucracy prevent the manager from identifying such needs. The failure to perceive these needs, though, as the comparison between the manager of the São Paulo plant with that of Camaçari plant indicates, allows us to assume that the apparent lack of sensibility in regard to the human needs inside the organization correspond to a lack of educational capital required for the management job in the modern economic market.

Why is it that even in a time in which the undesirable side effects of this split of the worker's activity was already widely debated, the manager of the Camaçari plant failed to move away from it? Although it is quite common, in business oriented literature, to refer to the success or failure of a manager in the terms cited by Morgan, as a mixture of experience and natural ability, I shall put a heavier weight in here on the formation and acquisition of an adequate body of knowledge. The 'natural ability', more than anything else, is the incorporation of a habitus, a socially constituted nature[75], that allows for the adjustment between disposition and social position in a way that the exercise of a dominant position appears as a natural consequence of a natural talent. The disposition by itself is not enough to assure the success of the manager. It is necessary for him to exihibit some competence as player, that is, the capacity to transform a 'possibility' into a concrete fact. Some skills as players are required to understand the importance of continuous education. A poor investment in the

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74 For an at length discussion of the impact of bureaucratic organization in the personality of the workers, and on how the affected personalities, in return, affect the performance and functioning of the bureaucratic organization, refer to Baum, H. The Invisible Bureaucracy. The Unconscious in Organizational Problem Solving. Oxford University Press, New York, 1987.

75 Bourdieu, 1987.

construction of one’s educational capital is what makes it hard for the managers to look at situations from a variety of angles. Natural ability has less to do with adequate management than the possession of intellectual tools to competently evaluate situations.

As an engineer, the manager of the Camaçari plant learned the basics of business management in the short and superficial courses offered in the engineering program in college. As he himself put it, the new technologies were much more in the focus of his interests than all the abstract discussions on human resources management. This lack of interest in human resources management and on the reengineering programs was due to his belief that they were just one more fashion, like the many others he had heard of in the past. For lack of enough tools to think through the problems he was experiencing in the plant, the manager could not look at the situation from "many angles". Because of an excessive faith in the bureaucratic organization (possible due to a lack of understanding of its limits), a vacuum of power was formed in the organization, opening space for the development of alienation, putting at risk the quality programs and the ability of the company to compete on the PVC market.

In the next few pages, we will see how, in the absence of an effort to interpret of the reality of the company, due to the manager's excessive and outdated belief in the strength of the bureaucratic organization to provide the adequate framework for action in the industry, the workers were unable to develop a perspective understanding of their situation within the context of the company that would allow them to experience a feeling of purpose and meaning in their activity. It is important to keep in mind that the understanding of the nature of this process can only be fully grasped in a comparison of the three plants. The facts presented in this chapter are meant to illustrate the reality of one of the plants in this comparison.

3.2 The formation of the labor force for the Camaçari plant

As the industries of the Bahian complex were brought into the region in an attempt to spread industrialization, the area of destiny of these industries was lacking, among other things, a properly educated labor force to work in modern capitalist industrial organizations[76]. As suddenly the demand for skilled labor increased in a state not prepared to provide people with the necessary educational skills, experienced operators and maintenance workers, engineers and all management level workers were brought

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To properly evaluate the impact of the petrochemical complex on the socio-economic composition of its surroundings, and especially the transformation effect in Salvador and Camaçari cities (where those industries were concentrated) it is worthwhile to say that the petrochemical and chemical industries alone were responsible for the production of 60% of the total value of the industrial production in the state. If we include the Industrial Center of Aratu, created in the late 1960s, the participation of the dynamic industries in the composition of the total value of industrial production in Bahia goes up to 80%, in a fast process of transformation of the productive vocation of Bahia state, to be felt especially in the 1970s. Those dynamic industries created a global average in the rise of salaries of 3,818% for the period between 1960 and 1980, against a global average of 704% for traditional industries (wood, furniture, leather and furs, perfumes, soap, candles, textiles, clothing and shoes, food, drinks, tobacco and graphics in general), (Castro, 1988).

Up to 1950, more than half of the gross production value generated in Bahia state was coming from agricultural activities. By 1980 the contribution of agriculture was of 12%, the remaining 88% coming from the transformation industries and modern services concentrated in the metropolitan areas. This redistribution of the relative weight of the various economic activities resulted in a deep transformation of the organization of labor, from which, for this paper, the most significant process is the constitution of a typically capitalist working relations in the segments more directly responsible for the capital accumulation. This process started, and was accelerated, by the opening of Petrobrás (the government-owned oil company) for crude oil extraction from sea platform's in the 50s, the construction of the Industrial Center at Aratu and the first eruption of industrial growth in some industrial districts in the interior of the state in the 60s, and was especially strong from the second half of the 1970s, stimulated by the demands and externalities created by the newly implanted petrochemical complex. But while in the 50s the growth of the percentage value of the industrial production in the composition of the state GNP was largely due to extractive activities, basically the extraction and refining of crude oil (with a relatively small impact on the social composition), in the 70s we can observe, through the census data, rapid speed in the incorporation of the workers to industrial and commercial activities, definitively changing the composition of society. The extractive industry in itself tripled its rhythm of incorporation of the labor force in the 70s compared to the previous period. The transformation industry has a rhythm of incorporation of workers two-and-a-half times faster than in the two past decades and the service sector had a rhythm of incorporation of workers in its activities five times faster than in the previous years. But this is not all. The nature and vocation of industrial activity in the area also changed with the introduction of oil related industries. For example, in 1950s 18% of the total employment in the state was provided by the textile industries, responsible alone for 51% of the employment of females in Bahia's transformation industries. Its participation in the job supply in the 1980s fell to 5%. This fact affected the gender composition of the labor force, for in the 1950s 67% of the workers in those industries were female. This percentage dropped to 47% in the 70s, and by the end of the decade males were occupying 60% of the jobs in the transformation industries, reflecting the new skills and abilities demanded by the new industrial activities. For details on the intersectorial distribution of the employment in urban areas and on the dynamics of industrial growth in Bahia state, see: Castro, Nadya. O movimento operário bahiano nos anos oitenta, presented at the seminar on "Diversidades e dinâmicas regionais do sindicalismo brasileiro". Cedec

into the region especially from the Southeast region, from other petrochemical industries in which Petrobrás or Petroquisa had participation[77].

As those were times of growth, and the demand for skilled labor was larger than the supply, the pay and benefits were extremely attractive. As all the companies in the complex were constructed simultaneously, the basic educational requirements had to be lowered in order to fill all the positions available[78]. But problem with the original basic educational level of the labor force was not the only problem the management had regarding the formation of its work force. Bahia state was, during the years of colonization, the state of Brazil in which slavery-based production was most central to economic activity. The elite, a small white minority, lived from the exploitation of black slavery until 1888. The abolition of slavery was performed in such a way that the ex-slaves were forced, often, by their economic situation, to continue performing the same tasks as before under extremely exploitative working relations. It was quite common in the state to find employees working for as little as housing and food, in a situation in

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In 1960, 14 years prior to the introduction of the petrochemical industries in the state, 60% of all university graduates in Bahia state were employed in the petroleum industry, at that time basically composed of extractive and refining activities of crude petroleum. In the 1960s, there was a significant acceleration of the modernization of the state, and in 1970 the dynamic industries took the lead in the composition of the total value of production in the state, being alone responsible for the production of 55% of this value (in the late 50s, the traditional industries were responsible for 57% of the total value produced). This tendency continued, and in 1980 the dynamic industries produce 80% of the total value of production in the state, from which the chemical sector alone was responsible for 60%. In the mid-seventies, the dynamic industries already employed double the number of people employed in the 1950s, being, by 1980, responsible for 45% of the total number of industrial jobs existent in the state. in: Castro, 1988.

Also as data to express the impact of the introduction of the modern industries in the formation of typically capitalist work relations, it is worthwhile to note that while in 1950 only 37% of the labor force was employed in salaried basis, with the most common form of employment the non-salaried relations of production, in 1980 54% of the labor force was working for salaries. Parallel to this tendency it is possible to observe, in the census data, the professionalization of the positions available in the industry. Castro, 1988.

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According to Agier & Castro, 1989, the workers of the complex are not recruited from the lower class, living under the worst condition of urban poverty. There is a relative homogeneity of the social trajectory of the families of origin of those workers, mostly coming from poor families (but not the urban miserable, living in the slums around the metropolitan belt) or lower middle class. The possibility or not of a complete formal education (up to high school) increases in direct relation to the regularity of the income of the family of origin. The values in relation to work and the aspirations for the future are mostly inculcated, in the family environment, in accordance with the professional trajectory of the father and other family members. Upon entry into the operational career, the degree of satisfaction is defined in relation to expectancies and comparatively with other trajectories observed at the family of origin.

which the working duty was a concept mixed with those of friendship, protection and gratitude, in an environment in which corporal punishment was not exceptional[79].

The employees hired by the complex were generally from a social strata above this, the children of small merchants and public servants with access to some education, or of the small cast of skilled workers from the traditional industries, but nearly illiterate people coming from the very lowest social strata were still be found among the operators of CPC at the time of the research.

The capitalist mentality, the time pressure and the rhythm of modern capitalist production was not a necessary part of the disposition of the labor force, not only among the descendants of slaves but among the others as well. During the time of the parties (festas), from January to about the end of February and again in June, some of the employees would simply not go to work, and instead would party in the streets. Many stories are told on the shop floor about people who were forced to stay in the company for three shifts in a row because workers of the next shift didn't show up for work, and of how the management had sometimes to go to the houses of the employees to force them to return to their duties so that they could release the exhausted (and upset, for having lost the fun of the festas) operators on duty.

Interruptions to the continuous process production are extremely expensive, and the absentee level caused frequent problems for the management. Those in management posts that came from the Southeast recall that during the first years they doubted the labor force could be properly educated to work under a productive process of that nature. Many considered it a mistake to bring such industries to a region of lazy, indolent people, a feature of the labor force some managers attributed to the tropical climate. The problem with the parties was worst in February, at carnival time, when dancing in the streets would last for over a week.

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[79] Castro, 1988, finds, in her comparative studies on the heterogeneity of labor conditions in Bahia state, cases of body punishment as a strategy of control of the labor force in the most traditional arm of the textile industry, especially those based on traditional fibers, existing side by side with the more modern organization of labor.

To discipline the labor force, the company, besides devising some punishment schemes for absentees (such as suspensions, formal warnings and punitive letters to be put in the employees file as a negative point when promotion was considered), instituted a non-absence premium in the form of cash incentive for workers who did not skip working days (this became a problem with the other units later on, and forced the management to institute the same premium in Alagoas years later, to avoid salary discrepancies among the plants). Firing often absent workers was not a choice for the management, for the problem was endemic. It took a few years for the labor force to be properly educated to conceive the need to work daily with a certain pace of consistency and a determined level of productivity. The experience of modern productive relations gradually substituted the pre-modern productive relations and allowed for the progress of the mass-production type of social division of labor.

According to some operators and managers alike, the problem of frequent absences was only finally solved when the affluence of the complex employees and the good work opportunities became known in the surrounding states and a strong migration from the countryside and other cities started towards Salvador city. A few years after the beginning of operations in the complex, the supply of labor in the vicinity became much higher than the complex and the externalities it caused could possibly absorb. And although Salvador city was one of the fastest growing cities in the country, the unemployment level reached extremely high levels[80]. To exchange employees now was a very obvious possibility for the management, and the high unemployment of skilled workers was known by the people in the complex. As one operator put it "once you have a car and a house, the children going to school and your wife used to shopping for those fancy women things, and your family thinking of you as successful

[80] From January of 1983 to April of 1986, the metropolitan region of Salvador city was a national leader in the rate of unemployment, being systematically ahead of all other metropolitan regions researched for the same period, and having doubled the national unemployment average. Partially caused by the crises in the construction industry generated by the recession, in the period between 1979 and 1984 there was a tragic reduction in employment availability by 40%. Castro, 1988.

member, you cannot afford to lose your job. After one gets used to comfort, you just don't want to go back to having nothing". The transformation in the surrounding area affected the power balance inside the plants in the favor of management. The degree of tolerance for the slow pace of acculturation in the new organization of labor was reduced. The economic necessity pushed for a faster assimilation of the needs of the new industries. If before the workers could get away with pre-modern working rhythms, the introduction of new modes of producing gradually destroy this possibility.

The disciplinary strategies and the real possibility of losing one's job[81], created the necessity for behaving according to the demands of the industry. In time, this original necessity became a virtue. After being resocialized (that is, having internalized the logic and needs of the structure and incorporated them into the disposition to act) to see the labor process with capitalist logic, and having experienced this necessity in the course of the years, the lack of preoccupation with time and resources waste became a total absurdity in the eyes of these very same employees. Once the intrinsic time perception mode of capitalism had become a way of comporting oneself towards the world, the employees denied that they could have been so "ignorant that didn't know even that" (operator III)". During the interviews, all the employees that were in the company from the beginning confirmed that the "lack of responsibility of the guys" was the original cause of the non-absence premium, but excluded themselves from such absurdity by saying ..."yes, in the past *they* were all so ignorant. *They* didn't understand the importance of being responsible." Indeed, I didn't meet one single operator who

[81] To give an idea of the influx of people into the region that the complex generated, it is worthwhile to look at the population growth of Camaçari city itself. In 1970, the population of Camaçari was 16.000 people. In 1980, it was already of 76,000, a growth rate of 216% (source: IBGE, Faissol, 1994). By far the fastest growth rate in Brazil for the decade. It is also worthwhile to note that the city in which the population working for the complex was concentrated was Salvador, and not Camaçari, which grew in spite of the intention of keeping the complex at a safe distance from urban concentration. Salvador city's population increased from 1.200.000 people to 1.709.000 people for the period, with a growth rate of 45%. This process confirmed the tendency observed for Brazil in which a circular process that leads to urban poverty is reproduced. Industrialization of the urban areas attracted people from the countryside, keeping the supply of labor ahead of the increase in demand and reproducing a tendency to push the general level of salaries down. IBGE, Faissol, 1994, p.158.

included himself among "them". Now, almost twenty years later, they all laugh at such difficulties, for the incorporation of the needs of the capitalist industry in people's dispositions has been so completely accomplished that it was inconceivable, to the workers themselves, that it would be possible to reproduce the old practices nowadays, even without the non-absence premium. There was a process of expansion of this mode of perceiving reality and behaving to other contexts than this in which it was originally conceived, according to the employees. The standard of time perception, the rhythm and the needs of the industry provide the criteria for the workers own self-evaluation, for their evaluation of professional competency and their definition of a hard-worker. Their present critique of the management's criteria for promotion, their defense of justice and fair treatment, for example, was entirely based on definitions of dedication and consistency that demonstrated how the principles inherent to the industry were now taken for granted. This historical retrospective on the birth of the company confirms the strength of work experience in the shaping of views and practices.

The newest industries in the area, having come to the region years after the pioneer plants, found a labor force already enough socialized for the needs of capitalist production and did not have the need to introduce the non-absence premium from the beginning (in one of my conversations with the managers of other plants, I mentioned the non-absence premium to the manager of a new industry in the complex and at first he thought I was joking, so absurd he considered the idea). Once those dispositions are fully incorporated, they became the foundation for the judgment of action and for the evaluation of the attitudes of others in a much broader context than the work place. In the same way as the transformations of the surroundings affected the balance of power and pushed for the (economic) necessity of incorporating a mode of behaving and relating to others and to the productive activity, the presence of industries transformed the surroundings, by imposing a pattern of behavior necessary to "enter" modernization, to find a job in the dynamic industries and have access to modern

consumption. It was common now to see workers using the same desired standards of productivity and responsibility to evaluate the competence of labor union representatives, politicians, domestic servants and their own children's rhythm at school. In a quite similar way, the future happenings in the surroundings of the complex affected the workers and their relation to their company, and the pioneering educational job of the companies spread outward toward the educational and public institutions of the surroundings of the complex. It was impossible to see, in the young trainees in the operations course, any sign of the behavior said to be so common in the early years of the complex in that region. In a deeper sense, the transformations experienced in time and filtered through the influence of the company as a major field of reference, affected the very way the collectivity of individuals form their internal disposition for action and their very way of judging other people, themselves, and the way they interpret the happenings in their surroundings.

3.3 The myth of foundation

The myth of corporate foundation involves an odyssey of heroic acts and intelligent solutions for the most impossible problems related to technology, and about how the courage and technical expertise of the operators and engineers alike worked to make it possible to run the equipment, beat records installation time and production quantities. The chief personage in all the stories is the first chairman of the holding company, in the times when CPC was only the Camaçari plant. This myth is clearly related to the necessity for the 'domestication' of the foreign technology vital to the autonomous progress of the investments of the technobureaucrats in the spread of the industrialization. According to oral history, there existed a high motivational state among the workers during this early period (although this hypothesis seems incompatible with the high absenteeism level). From the narratives of the employees of

those early years, independent of educational level, it is possible to affirm that the stronger motivational elements were all related to the activity itself, and not to peripheral elements such as pay, benefits, work conditions and etc. Achievement, responsibility, the work in itself and the recognition earned on the basis of a competent performance were the key elements in their stories.

Through those stories, the workers explained that when leadership is good and capable, the community works integrated to produce extraordinary results, and that in this type of environment satisfaction is a part of the work routine. The early years of the complex no doubt provided the happy union of many ideal aspects, such as the possibility of meaningful activity, added to excellent pay and benefits. This may make one wonder whether pay and benefits do not have the same strength in enhancing motivation as the aspects more centrally related to the nature of the activity in itself. I deny the strength of the peripheral elements, such as wages and salaries, social security, professional status, work conditions etc. as long-term motivational enhancers on the basis of the conclusion of the comparative observation of the three plants[82].

As for the early 1970s in Bahia state (an area where economic activity was based around traditional industries, enormous concentration of the ownership of land,

[82] Myers, 1970, concludes that the peripheral aspects of work function much more as dissatisfiers (when they are inferior to expectations) than as satisfiers. The São Paulo plant's wages were not significantly different from those of the other plants (and the benefits were exactly the same) and it was unusual to hear any complaints in regard to these issues. In Alagoas, where the income earned at the complex was considerably higher than the employees could earn elsewhere in that region (as were those of the Camaçari complex in its early years) there were a systematic and constant complaints about the company, the salary and the benefits on the shop floor. In Camaçari, at all hierarchical levels (including the plant manager), there was sharp dissatisfaction with the salary, benefits, system of promotion, career designs, quality of instruction, quality of information, privileges, relationships among areas, consistency of actions, quality of meals and time breaks, quality of transportation, physical layout, work rules, equipment, proximity with other plants, distance from the city, among others After the introduction of the quality programs, and the beginning of a more intense and systematic participation in the organization of the activities and the functioning of the communications system, the tendency to complain was perceptibly reduced. According to the person in charge of the analysis of functions and salaries of the holding company, although the São Paulo plant had a recent adjustment to the market (it was below market average for three years), if we use the purchase parity power index for comparison, the salary of the São Paulo workers is still below that of the other factories in relation to its purchasing power, especially if we consider the much higher price of rent and food in that city. Using the same index, the salary of the workers of Alagoas had a higher purchasing power in the region, where land prices and food were significantly less expensive. Transportation costs were also lower in the region of the two plants in the North. The cost of clothing, though, was higher in Bahia and Alagoas in comparison to São Paulo.

organized to produce a monoculture of cocoa for export, and sharp income concentration), the complex looked like an oasis of progress. The productive technology was among the latest and labor relations quite modern by national standards. As the complex was idealized as a strategy of bringing industrialization, diversification and modernization to the region, and as a broader project of national development, the feelings of being participating in a pioneer undertaking described by those related to the complex were justified in terms of the vocation of those industries. Unlike the private enterprises, the companies in the complex were associated with the nationalist project of freeing the nation from dependency on foreign technology and expertise. The technobureaucracy trained in the ranks of Petrobrás were the elite of the best universities, selected through rigorous and competitive entrance examinations, and who had received constant training and professional upgrading within it. The operators felt closely associated with this group and shared the goal of providing the country with an elite capable of conducting the process of industrialization and economic development under the auspices of the state[83]. To participate in the construction of, and production at, the complex had a meaning broader than the work in itself. The operators were working closely with the engineers to 'domesticate' the technology, and the existence of an unusually high degree of commitment and dedication to the complex and its companies can be perceived in the narratives of the operators and engineers alike[84]. This situation was to change with the privatization of

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[83] In the first chapter, the possibility of higher motivation is associated with the adequate political climate of the post-cold war period. Although the described situation took place before the end of the cold-war, the fact that the Complex was constructed under the auspices of the state blurred much of the perception of antagonistic interests between capital and labor, and allowed for a high identification between the labor activity and the nationalistic project of development.

[84] Those years were the years of dictatorship, and the repression of the labor union movement was in its strongest period. The choice of a development strategy, organized around large State investments and income concentration with the political stability assured by the advances of the military in the political sphere, was justified, in the government discourse, as a need to contain the advancement of the left wing movements in the country. It should, in theory, have caused the opposition of the workers excluded from the national project of development. It did not seem to have this effect, though, in the companies of the complex, in which the possibility of participating in this national project, added to the higher economic benefits earned at the complex, generated a high degree of

the raw material producer and the strengthening of the participation of the private-sector partners in the industries of the complex.

As at earlier times the installed capacity of PVC production was smaller than demand on the closed domestic market, the product "sold itself", as an engineer put it (other companies in the complex went into operation with the market tending towards saturation). As the product was scarce, clients were much less demanding in matters of quality and specifications of the final product. As quality standards were lower, not only in regard to CPC products but from the competition as well, the clients installed in their own factories straining machines to separate the usable pellets from the impurities and had a system of calculation of the price of their final product that covered the cost of keeping a large inventory and for the waste of unusable product.

According to their information on that period, whatever CPC produced was sold without any marketing effort. The operator's achievements in terms of productivity records were celebrated with barbecue parties in which all the employees participated. The first chairman used to talk of the operation as the heart of CPC, and since the profits were very high, and the salaries a rather small portion of the fixed costs in a capital intensive enterprise, the company had a very aggressive salary policy, and kept the salaries and benefits up with those of the best paying companies in the complex. Besides productivity, much social recognition was granted to the workers as gratitude for their successful learning of the process, allowing for a considerable independence from the technical assistance of the foreign partner.

Besides salary and official benefits, because the achievements of the operation were a source of excellent extra profitability, workers were allowed a series of informal benefits, such as the possibility of the inclusion of relatives other than the nuclear family under the medical insurance, favorable company loans and etc. According to the

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commitment to those companies. Since its foundation, the first episode of conflict, according to the workers of CPC, was after the the big strike of 1985, in which some employees from nearly all companies in the complex participated.

operators, the first chairman was like a father to the workers. He was strong and authoritarian if necessary, but would never leave an employee in trouble when one needed help.

According to many operators working for the company since those first years, the first chairman was a "man of production". He would go through the factory every day, and discuss operational problems personally with the workers. "He would sit on the shop floor and share the bread of the operators", "and he knew everyone by name", were constantly repeated statements from operators when describing this man to me or to younger operators. According to them, when they first arrived at Camaçari the construction of the company had just started. They worked sometimes 16 hours a day, under the supervision of the chairman, to help install the equipment and perform all the tests. The chairman was said to have hardly slept during the months that it took to get the equipment into operation. "It is thanks to him that everything works nicely now. No significant improvement has ever been necessary on the work we did in those days (supervisor)".

The economic affluence of the company in those years is attributed by many workers to the tireless dedication of the first chairman to the company. According to them, he treated the workers like "human beings", and the company was much more "humane" in those days. "CPC was a great family". The paternalism of the relationship between the first chairman and the employees is very clear in their narratives. For nearly all employees, the key difference between the previous situation and the present is to be found in how the management valued human resources. The transition from a paternalist arrangement to that of professionalism is, for the employees, the reduction of a 'humane' environment to a cold, professional one. This change in the management and management's attitude brought about a situation where the workers felt like "just one more machine". The movement described as the shift towards "professionalism" reflects the shift in the holding company's management's attention

from production to marketing and finance, and the delegation of the Camaçari plant management to the present manager.

To exemplify the nature of the shift that occurred inside the company, the workers often noted that many of the young employees, if they saw the new chairman in the streets, wouldn't even know he was the chairman of CPC. This distancing makes the workers believe that the chairman is unaware of the difficulties of the workers and how they struggle for the company's sake, and is another reason for the undue disfavor with which they were treated. The distance between production workers and the holding company's chairman directly affected their sense of pride of being 'the heart of the company', a position that had allowed them special attention in the past.

According the operators, years before the implementation of the quality program, there was a need to implement an accident prevention program. Until the introduction of safety procedures, the number of accidents was extremely high, particularly because the operators were rushing to beat productivity records. Once the first chairman decided to the implement the program, he gathered the employees together and, with a "strong punch on the table" (the story of the punch was repeated in every telling of the story, to reinforce the idea of the energy which the chairman commanded), said that from that day on the company was assuming responsibility for the accidents and that he wanted everyone to follow exactly what the procedures described, even if it resulted in lower output. Some operators insisted on keeping a fast pace despite of the danger, and were fired on the spot, others were exemplarily punished. Instead of provoking a negative reaction from the employees, the operators, at least as they tell it now, were on his side, for, as a good father, "he had to be strong when necessary and did what he did for our own protection" (operator III). There is a shared understanding regarding the attitudes of the first manager as taking the wellbeing of the workers honestly into consideration. For the workers, to take some risks for the sake of the company and

productivity was a way of expressing dedication to the company and of exhibiting their professional skills and bravery.

According to the assistant for human resources of the chairman of the holding company, the first chairman died at work in the beginning of the year in which the prices of PVC started to drop. He died of a heart attack, and as the assistant put it, "the impression was that he was cannibalized so that his qualities could be absorbed by his subordinates", so highly admired was he by the employees. At the time of the research, it was very frequent to find operators attributing the difficulties of the present situation to mismanagement. Many people believed that if that first manager had been still alive, their situation at CPC would not be so bad.

The high level of satisfaction and motivation of the first years could be attributed to 6 basic factors:

1) To the status enjoyed by those working in the complex. In the first years of capital intensive industries in the region, to work at those companies was a sign of high status, modernity and participation in a national development project.

2) To the experience of participating in an enterprise to which one's technical knowledge and intellectual contribution was important. To implant an industry of this complexity involves considerable collective effort. According to those who participated in it, unless operators, maintenance workers and engineers cooperated very closely, it would have being extremely difficult to set the equipment and complete all the fine adjustments necessary for the smooth functioning of the process. The collective effort was fundamental to the 'domestication' of technology, and to the learning of the technical skills. During this period, various alterations and innovations were made in the original process to allow for optimum levels of production. Some of these alterations were made at the suggestion of the operators, at that time working closely with the engineers. A device developed by the operators that allowed the by-pass of a

valve thereby improving the feeding of VCM to the PVC reactors was still proudly exhibited by the old timers.

3) The average income in the complex, that was considerably higher than the average in traditional industries in the surrounding areas, reaching, sometimes, twenty times the income of a blue collar worker employed in the textile industry, for example.

4) The fact that the employees of the complex, during the early years, were considered middle class according to income levels and received preferential treatment from the service industries of the region.

5) The fact that the workers of the complex soon developed patterns of consumption much above those of their neighbors, relatives and friends, enjoying the status of a successful men by their groups of reference.

6) To the higher status that engineers and operators enjoyed within the industry itself during the mass-production era. In the petrochemical industries, according to the senior managers of some companies in the complex, the productive area and the engineers related to it have always had a comparatively higher status in comparison to other occupational groups. The maintenance area, although composed of technical staff of sometimes higher qualifications than the operators, of whom not much technical expertise was required, had a secondary position in those industries which was reflected in their slightly lower salary levels compared to the operators. This tendency was not new in the complex, but inherited from Petrobrás, and was brought in by the employees originally brought over from that company. This was the case with the chairman of the holding company, and the manager of Alagoas and São Paulo plants among many others. The higher status of production workers was directly related to the fact that profit depended on successful operations, in a market where whatever was produced could be sold. This tendency was to be reversed with the economic crises.

The similarity in the organizational structure among the companies in the complex, their tendency to have engineers occupying all the posts of command and the

traditional valorization of technological knowledge was, therefore, by no means accidental. The ways originally learned in Petrobrás tended to be applied to the new industries as well, somehow indicating the perpetuating power of an initially successful arrangement in the next generation of industries. The naturalization power of this original arrangement, perceived as the most natural and rational for this type of industry, was reinforced by the fact that almost every company in the complex was organized on the same pattern. The human resources policy equivalent of that type of organizational structure was based on an authoritarian and paternalistic structure of command, in which in compensation for the power and knowledge concentration the employee could find comfort in the "more human" (as the operators liked to put it), paternalist relationship. I understand from the stories of the operators that the motivation and identification with the company in the early days was inseparably mingled with loyalty and admiration for the first chairman, and to the idea of CPC as a family (with the first chairman as its father), stimulated by the constant celebrations of their success in beating production records and the economic affluence of the period.

In the course of the years, this situation was reversed:

1) With the regional growth that the complex itself initiated, a middle class more related to the white collar jobs and to the service industry developed in the region. The salaries of operators, although still considerably higher than the average income of blue collar workers in traditional industries, were at the same level or below those of the new middle class. The relative sense of economic affluence, vis-à-vis the surroundings, was lost[85].

[85] Simultaneously to the introduction of the dynamic industries, it was developed a sharp tendency towards the geographical concentration of supply of employment in Bahia state. According to the state study 4923/65, in Castro, 1988, in August of 1985, 72% of all existent jobs were concentrated in the metropolitan region of Salvador, the capital of the state that includes the cities of Camaçari and Simões Filho. 87% of this total for the metropolitan area of Salvador was concentrated in Salvador city itself. This tendency reveals the fact that the transformations in the industrial structure of the state had an enormous impact on the "tertiary" sector, increasing significantly the demand for growth in the services' industry and retail sales. Among the transformations observed, there was the reduction of the number of people employed in small retail establishment, as street peddlers, free markets etc., simultaneously with the introduction of modern supermarket networks, and the increase in the supply of jobs in the financial sector, the number of bank branches, for example, increased from 540 in 1980 to 806 in 1984. Castro, 1988.

2) The sense of being at the crest of a wave of progress lost its reason for existence as the technology became outdated. In the nearly twenty years since the start of the production, newer technologies had been developed, and inside of CPC itself, in the Alagoas plant, these new technologies were being employed, requiring more training and refined skills than the Camaçari operators possessed.

3) The proletarianization of the blue collar employees, over the course of the years, outside the complex, was felt by the loss of the preferential treatment they had once enjoyed from the service industries, commerce, private clinics and etc. when they were among the few people in the region with money to spend.

4) The loss of their perception of their own consumption pattern as being that of a middle class[86], partially by the formation of a typical middle class in the area, and partially by the erosion of their income by inflation, the loss of aggressiveness in the company's salary policy and the fact that, as the workers emerged from a low middle class strata, extremely subject to economic fluctuations, in many cases the income of the operators had also to be used to provide aid to the extended family, affected by the recession and demanding more support.

5) The reduction of the status of the engineers and production workers in a market situation in which sales, marketing and finances required the more immediate and fundamental effort for the company's survival.

6) The loss of a sense of job security due to the increase in the supply of workers in the surroundings.

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[86] To give an idea of the speed of the transformation of the socio-economic composition of the metropolitan area of Salvador, it is worthwhile to look at the percentage of people earning a minimum salary in 1970 and in 1980: In 1970, 49.24% of the population was in a class earning less than 1 minimum salary/monthly. 32.32% earning between 1 and 3 minimum salaries, 6.31% between 3 and 5. 5,23% between 5 and 10 and 3.17% more than 10.. As for 1980, 31.13% was earning less than 1 minimum salary, 39.16% between 1 and 3, 12.36% between 3 and 5, 9.6% between 5 and 10 and 7.11% more than 10. Source: IBGE, Faissol, 1994.

Although in the chemical industries the fragmentation of activities was milder than in most other types of industry, the separation between conception and execution allowed for the abandonment of the workers by the management, left the workers completely isolated from the process that led the company into debt, with the investment in Alagoas, and without an understanding of the market movements that eroded their salaries and forced the prices of the CPC product down. Being by the very nature of their participation in the division of labor dependent on the quality of the conception activities of the managers to assure their future employment and living standards, the operators tended, in the cases of nearly all of those interviewed, to associate their present situation with the lack of humanity that came with the destruction of the concept of CPC as a family, and the destruction of the paternalistic relations under the first chairman. The workers experienced all the losses described above without being given information about neither the causes nor a coherent and systematic explanation that would have allowed them to make sense of the new reality. The feelings of and powerlessness were deeply related to this abandonment of the proletarianization workers by the management.

In the early arrangement, the advantages of participating in the petrochemical enterprise called for a readiness to accept the paternalist arrangement with its the inherent power concentration for, in that context, in spite of the concentration of authority, the productive activity in itself was rewarding. And, as the knowledge over the process was still being acquired, the concentration of the decision-making process did not eliminate the participation of the shop floor workers in the creation of a work routine, nor keep them from the highly meaningful tasks, at that specific context, such as leaning about the equipment and its workings. Even though there wasn't an institutionalized process of participation nor a systematically developed system of communications, the celebrations of the achievements of the collectivity provided the necessary connection between the activity and its results. The operators had a direct

channel to the top of the organization, facilitating down-up communication, and as they were responsible for learning the operation of the equipment together with the engineers, they could create a reputation in the company through the quality of their performance. It was in that context that the manager of the Alagoas plant emerged from the blue collar career to that of management.

Also, during those days a discourse in opposition to paternalism was still to be formed in a region that had historically experienced this type of labor relations, both in the traditional industries and in agriculture[87], there was much less awareness, on the part of the workers, of the need to create institutionalized mechanisms for participation (eighteen years later, this demand is clearly threatening the quality of the environment in Alagoas). The sudden socio-economic upward mobility did not bring, immediately and by itself, the opposition to an authoritarian form of political organization of the labor process. A very similar management strategy was exerted, in a different context, by the manager of the Alagoas plant, bringing about sharp political opposition to the concentration of power. While in Alagoas the present problems are associated with the paternalistic concentration of power, in Camaçari the situation was exactly the opposite: the difficulties in the present situation are perceived as being caused by the destruction of those ties. While in Alagoas the paternalist and centralizing power is in the way of a more meaningful work experience, in which the workers can participate in the construction of their activity, in Camaçari it was under the paternalist environment that the workers remember having experienced the most fulfilling work experience and social relations. Camaçari workers remember having experienced more pleasure and satisfaction at work and with work mates in those days at the company than during

87 Another possibility for the existence of deeper loyalty ties between workers and management at that time may be a consequence of the fact that the state was the major stock holder in the complex, and the fact that the incorporation of workers was part of a project of regional development. According to Guimarães, 1987, recent studies point to a tendency, following the trend towards privatization, for an exercise of management that focuses more in the remuneration of capital as a strategy for profit making and enhancement of competitiveness than with the focus on the social preoccupation of the early years.

leisure time. The workers of the São Paulo plant express much of the same sentiment now.

The sense of socio-economic upward mobility of the operators in the early years was very seldom related, according to the shop-floor workers' interpretations, to any other cause than the quality of management and management/workers relations. There was, in the three plants, a curious tendency to reduce all the complexities of the market reality in which the company was located to the internal factors of the company, giving, to those factors, a disproportional weight in the determination of the quality of life of those depending on it. This tendency was also responsible for the fact that nearly all blue collar workers, in describing their relation to the company now, turned to past of the company to exemplify what has changed and why it had become better or worse. This tendency contrasted sharply with that among those in management levels, to evaluate the situation of the company against the tendencies and transformations in the market, reducing considerably, if compared with the blue collar workers, the power of resistance the company has against external factors.

This tendency is directly related to the participation of the two groups in a division of labor in which the relation to the external reality (outside the factory) occur by the intermediacy of one's own cultural and educational background as applied to the routine tasks prescribed under this type of the labor division.

By first looking at the situation inside the company when facing external circumstances, as we did in Camaçari, one does get the impression that the perception the workers have of their dependency on the managers for a meaningful work experience is a mistaken understanding of their situation, indeed it is more determined by external factors. I returned to the plant after 7 months, during which period the progress of the quality programs could already be felt, and could observe that the extreme vulnerability of the collectivity to the external factors a result of the vacuum of power caused by the failure of the plant manager to adequatly conduct the situation.

After the workers were able to form a more or less clear picture of the real situation of the company, and were empowered through the mechanisms of the quality programs, they tended to express much diminished feelings of powerlessness and partially recovered the interest in their activity.

3.4 The present arrangement

The new manager of the Camaçari plant assumed his post, no doubt, at a disadvantage in relation to the managers of the other two plants, for two main reasons: first because for the first time, under his command, the collectivity lost contact with the top person in the organization, who was the one who had most 'fire power', as the operators liked to put it. Used to the previous arrangement in which they could negotiate exceptions and extra-benefits directly with the first manager, now the blue collar workers were locked down by a stiffer hierarchy of command and without easy access to the top. Second, because he assumed the post at a time when the general feeling was that of proletarianization and the loss of economic power.

Compared to him, it is possible to say that, for example, the manager in São Paulo was in a better situation, for the ownership of the plant had changed hands and he was in a position to give the collectivity a new beginning. Although it true that the history of the plant added difficulties to the job of the Camaçari manager, the observation of the way things were done inside the company indicated that the way routine was managed allowed, considerably, for the worsening of the situation.

In private conversations, the middle management of the plant, working under the plant manager, and the general secretary of the chairman of the holding company, in charge of my research, revealed that quite often they themselves and people further down the hierarchy had heard the 'thoughts in loud voice' of the plant manager blaming

the presence of the structure of the holding company for most of his problems. It was not until I visited the other plants that I came to realize the implications of his attitude.

Camaçari was the first plant visited. According to the general secretary, the chairman of the holding company had mentioned, in a meeting with the head of each plant, his intention of carrying out researches to understand why the plants responded differently to the quality programs. The research started and I came to work every day in the company. During the first days, I tried, without success, to talk to the head of the human resources division and get data from her area. I continued on my own, interviewing people and talking informally with employees in the restaurant, on the bus and in the coffee area, while still insisting on seeing the person in charge of human resources. Nearly three weeks after I had started working in the plant, the plant manager called me to his office and said, to my surprise, that he had not allowed the human resources division to help me for he hadn't been formally informed of the research, and considered my presence in the plant interference in its internal affairs. He said that if I wanted to continue, I should get a letter from the holding company explaining the nature of the research, duration length and etc., and then people in his structure would cooperate with me. I got the letter and finally the person in the human resources division agreed to talk to me. I expressed my intention of looking at her hard data on the population of the plant, basic educational levels, family composition, number of dependents, speed of promotions, and a comparison between the salaries and benefits of blue and white collar workers. She answered that those were very sensitive data, private and confidential, and that she didn't think she should show them to me, and also that due to a problem with the computer the data was partially lost and they could not retrieve it (I was to learn later, through the social service specialist, that the data were there and they were using it daily to evaluate the requests for medical benefits, promotions, and salary increases).

There was strong resistance to the research imposed from the top, but it was possible to get the permission of the managers of the industrial area to join the operators in the shift. Only then, after nearly one month in the plant, was I given the safety equipment required, by the company's regulations, to move around the industrial area.

Parallel to the observation of the shift operators, I proceeded with interviews with white collar workers and middle management. After a little trust was established, I was told an enormous amount of gossip and negative information about the company, the top management, the implementation of the quality programs and how alliances were negotiated among people creating power feuds and endangering cooperation, communication and the flow of information among the areas. One middle manager, describing the situation, said many people would "sit on piles of paper" if its circulation would help the work in an area of a different political faction.

The structure was extremely rigid, and constant conflict arose from the debate on under whose responsibility was a given job. There was a strong attachment to the individual functions of each person and each area, and tasks that involved interfaces of areas were likely to need a long time to be accomplished.

This situation contrasted sharply with the other two plants. I returned to the plant manager for a possible explanation. According to him, since the first manager left, the holding company should have moved away from the plant to avoid the mixing of spheres. He believed there was no reason for the holding company to be in the industrial area[88], and that the simple presence of the chairman, having in mind the

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According to the law, people working in high hazard areas and under exposure of dangerous chemicals must receive a complement in the salary as compensation and are allowed to apply for retirement five years before normal retirement time. The manager of the plant used this as an argument against the presence of the holding company in the area, saying it should be in São Paulo city, closer to the financial institutions and better services. According to the chairman, this debate on the moving of the holding company had been continuing for quite a long time. Although it is true that, at a first sight, it seemed better for the holding company to move away, it was not practical. As the company was born in that area, all the employees were established in that city and the factory had built facilities to accommodate the holding company in the past. Moving away would involve big losses of personnel, for many of CPC's employees spouses were working in that region, implying high costs in indemnities and training of new employees, besides the waste of the facilities and the investment necessary to purchase a new office for the holding company. According to the general secretary, this issue had been discussed over and over and due to the

importance the collectivity gave to contact with the first one, made his job quite difficult. In regard to the implementation of the quality programs, it became quite clear that he didn't think they were important enough to upset the whole working routine. According to him, as each new chairman takes over the holding company, 'novelties' appear. The collectivity puts considerable effort into implementing the changes, and when the chairman changes again everything returns to the same as before and the effort is wasted (his position in regard to the importance of quality programs was to change a few months later).

His own assistant was following the movement towards implementation of the quality programs in other companies and in the bibliography, and understood the irreversibility of the trend. Some of the other middle managers also understood the importance of the programs. According to the assistant, a young engineer (in his early thirties), the engineer designated to implement the quality programs was 'fighting alone'. The manager of the plant, on the order of the holding company, designated an engineer of his ranks (obviously not one of his favorites), to study what quality management was about and to carry on the necessary changes to implement it.

It was not a secret in the plant that the plant manager regarded the quality program as just one more fashion, brought in by a chairman who, like the two others, would leave soon, hopefully without messing with the company's situation as the previous one had done. According to the engineer in charge of implementing the quality procedures, it was difficult to convince his own colleagues to proceed with the necessary changes in a context in which everyone could feel the lack of commitment at the top. Without the involvement of the plant manager, it was difficult for the engineer in charge of quality to proceed with the necessary integration among the areas, divided into feuds of power, without having any authority to push them to move.

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company's present situation and the costs involved in moving, it was agreed that the chairman and his structure was not to interfere in plant and vice-versa, and that each should cooperate to make it easier to stay physically close.

According to the same engineer, the very first move towards quality, according to the bibliography and the experiences of other companies in the complex, was to have the top person of the organization committed to it. The commitment of the top person has the strength of 1) defining the desirable patterns of action for middle management and others lower down the hierarchy and 2) setting the basis for rewards according to the expectancies of the progress of the quality programs. The second step is to have the top person in the human resources department involved in the planning and execution of the implementation, with a clear policy for the management of human resources in mind. The human resources division at Camaçari, though, was functioning more as a personnel section, in charge of payments, firing and hiring, promotions, and social assistance. The person in charge of training said many of her attempts to cooperate with the implementation of the quality programs and the person in charge of them were aborted by her own boss and the bosses of the other areas involved in the cooperative training programs she had elaborated. Strategically, it was clear to the middle management that to become too enthusiastic for the quality programs wasn't a wise choice.

At that state of power disputes and feud formations, unrequested commitment to the quality programs could be associated, inside the plant, to an undue demonstration of loyalty to central management. The strategy of the plant manager seemed to be to allow for the reproduction of problems in the plant in an attempt to force the holding company out of the setting. Indeed, in a face-to-face interaction situation, he privately expressed his concerns with the internal matters of the plant as a function of the holding company's presence to key people in the plant and in the holding company itself. As private conversations didn't remain private for too long in that plant, soon everyone knew about the remarks of the plant manager. Indeed, the political games escalated to such a state, that someone, obviously attempting to put the plant manager in a difficult position, started a rumor that said the plant manager had leaked the

information that he had heard the counselors and the stock holders were planning to change the chairman. The news generated quite an excitement, and for a while threatened the position of the plant manager and jeopardized some of the policies of the chairman.

A few meetings had already occurred in which the plant's manager was to give the guidelines to middle management on the implementation of the quality programs, but there was no systematic follow-up of the pace of implementation and even less on the attempts to promote behavior changes that would lead to a higher level of workers involvement with the program. One of the younger managers, an enthusiast of the quality program, elaborated an instrument to guide the discussion of the performance of the employees under his command and evaluate their own actions and his own, divided into eighteen items. Each member of the area would self-evaluate him/herself and the boss, and they would discuss their mutual evaluation and give each other feed-back aimed at improving communication and human relations in the area and tuning their actions with the objectives of the plant. Before he presented it to the plant manager, he showed me the draft on our way to the company, as we traveled in the same bus. On the way back, when I asked him about how the plant manager reacted, he said he was told that for an engineer, he was surely too enthusiastic of 'philosophy', and that he was to return when he had figured it out precisely how his plan was going to impact on the results of the area - in concrete figures.

This was not an isolated episode. Indeed, the plant manager tended to value impersonal indications of productivity, concretely expressed in numerical terms, more than the human aspects of the productive process. He described himself as a man of technology, always following up technological innovations in the market, especially information technology. He compared himself to the manager of the Alagoas plant describing the other as a 'man of production', who enjoyed getting involved in all the details of the plant routine, while he had an eye to the outside (the comparison had the

intention of downplaying the involvement of the Alagoas manager in the internal business of the plant as the transformation of a limitation in a virtue - his only possibility for showing some results, for as he had emerged from the blue collar ranks, being originally an operator, he was unable to understand the world of modern technology). When asked to what he attributed the fact that the employees of his plant expressed, in the questionnaire survey, the lowest degree of satisfaction with the company, the salary and benefits, he blamed the constant changes in the policies of the holding company, the erosion of the salaries by inflation and the reduction in benefits. His answer to the fact that there was a high indication of dissatisfaction in regard to many other issues, such as promotion policies, human relationships, quality of communications, integration among areas, and the amount and frequency in which relevant information reached the areas, he said he delegated a lot to middle management, and that they should be able to answer for their own areas. Besides, he added, he was not a 'baby-sitter', that is, the company was composed of professionals, adults, and if the information didn't reach them, they should ask or look for it.

Although his position in regard to human resources management may seem odd nowadays, at that point, right at the beginning of the transition to quality management, not everyone had grasped the nature of the transformations that were occurring in the industrial organization of labor and the importance those transformations had for the maintenance of competitiveness. During the years of mass-production, this type of attitude in regard to human resources management was indeed prevalent, in a scenario in which compliance was to be extracted by close supervision and coercion. In technical terms, the plant manager was known for being very competent. Indeed, in terms of human resources management, many companies in the complex had very similar problems. Quite obviously some degree of conformity and willingness to cooperate had always been necessary for production, under the mass-production system as well, but there was the largely shared belief that the right employee 'came

ready', that is, having the right group was much more a matter of choosing the right people than of forming the right people in a constructive environment. This approach to the quality of human resources is what justified the high turnover rates of the mass-production time. It was a coercive devise, threatening non-conformity with job loss, and a device that allowed the company to get rid of the 'mistake hiring' to proceed in the 'competitive approach to attract skilled resources from the market'. It is no coincidence that low turnover rates became an indicator of quality management. It is a direct indication that the management has been successful in promoting the integration between human resources and the company, that is, that the management is truly committed to quality.

The slow pace of Camaçari in proceeding with the implementation of the quality production can be attributed to the fact that the plant manager failed to perceive its importance in time, that is, he failed to understand the nature of the transformations and the need to act towards implementing the changes. This failure can be attributed to his lack of cultural and educational capital that would have allowed him to understand the new reality in time to take the lead towards implementation. As he took time to understand and act, many people under him in the hierarchy of the company perceived the importance of proceeding in the direction of quality implementation before him, leading to the questioning of the value of his leadership and to the disseminated idea at the shop floor level that the management of the company was outdated an inapt (an idea often spread by middle managers in "friendly and personal" conversations). I had chances of observing, many times, employees far down the hierarchy criticizing the lack of sensibility of the plant manager to quality related issues (in one of those cases, the operator criticized the plant manager to others and to me in the meals room using exactly the same type of argument I had heard from his boss a few days earlier). Even in the operational ranks such discourses of opposition to the manager were being formulated. One source of information for this critique of the manager were the buses

in which the operators traveled. Buses were shared with other companies in a pool system, and the progresses of the other companies in the new quality policies were known to the operators, as was also known how far the other companies had progressed in democratizing the environment and on their programs of valorization of the workers.

It became clear, in time, that to avoid conflict and confrontation with subordinates, by denying their requests, or to avoid changes, the plant manager tended to blame the chairman of the holding company for the majority of the plant's difficulties, without any attempt to justify his reasoning in relation to the situation of the company or the demands of the market. The workers could easily compare the internal situation at CPC with that of other companies in the surrounding area, and would ask for explanations to the supervisors, who, in turn, would go to the division heads, and those to the area managers, who tended to pass down the impressions he gained from the plant manager, thereby undermining the image of central management on the shop floor.

When of the plant manager was asked his position, he quite often declared his powerlessness to decide or explain the given issue putting the blame on the holding company. One of the issues in which his attempts were clearly not justifiable was that of labor union involvement. Although the policy of the holding was to delegate all the decisions in regard to the labor unions to the plant managers, due to the sharp regional differences in Brazil and the distance of the holding company from the factory problems, the plant managers always placed the blame on the lack of definition in the holding company, telling his own middle managers that the holding company did not have a clear position in regard to this issue yet, that it was under study and that he didn't think it was up to him to take the lead. That was exactly how the message reached the shop floor, giving the impression to the workers that the company was

delaying definition to see who would take the lead in joining the union for future retaliation.

The same strategy was employed as an answer to the operators request for new gas leakage detection equipment. They were told that the holding company would study the issue, and this was the answer to many other requests. The middle management, for example, wanted to hire a professional consulting company to help with the implementation of the quality programs, and were also told the holding company preferred it to be learned through the efforts of the employees themselves (the Alagoas manager hired an outside professional to help in the democratization of the plant).

Due to a deficient communication system and the inadequate flow of information, the workers understanding of the reality of the company and the market situation was only possible in a fragmented and incomplete form. The lack of a constructive effort to interpret those tendencies in the context of the needs of the company, allowed for a much freer interpretation further down the hierarchy, thereby considerably increasing anxiety. The interviews at the shop floor level clearly demonstrated that the workers did not know how the hierarchy of the company worked at the top level and which the attributions of the plant manager were. They tended to, in conformity with the plant manager's discourse, to be with middle management in believing that the management of the holding company was very slow to take decisions and unsure of its position on the most important issues. Too many middle managers, the management of the holding company seemed incompetent to lead the company aggressively, and according to the workers, this lack definition was due to a lack of respect and regard for the collectivity of workers. There was, among the workers, the shared idea that the lack of a clear answer was a strategy to retain information. They believed the company was hiding information because the discourse of the difficulties was a strategy to continue to keep on reducing salaries and benefits while making demands for higher productivity and quality.

In the absence of an exercise of power that allowed for constructive cooperation among the various professional groups and areas, the basic schemes of thought that guide the social organization of industries and capitalist labor relations spread, generating a process of high fragmentation of the areas and professional groups, increasing the sense of conflicts of interest and the sense of powerlessness to work productively towards positive goals.

The middle managers, seeing the company as troubled and mismanaged, repeatedly said to whoever they spoke to lower down the hierarchy that as soon as the national economy gave signs of recovery they would start sending out their resumès. The operators, having their professional future tied to the company and the process, expressed feelings of powerlessness and despair in relation to their futures.

3.5 From signs to symbols

Each factory is a field in which a 'plurality of worlds', (to borrow Bourdieu's words) composes a plurality of logics, practical logics, that correspond to different worlds, that is, to different fields where 'common-sense', 'common-places' are constituted. That is, the factory is the privileged space in which different world-views, from different social classes, encounter each other, a place in which economic, political and social conflict and consensus are constructed upon those differences without a conscious and systematic effort of conciliation. The observations demonstrated that even those who believed themselves to value equally all forms of work, to believe in equality and democracy, could easily exert coercive forms of domination without any awareness of contradiction (as was the case of a Jewish engineer, who many times expressed his belief that all man should be treated equally and be allowed a fulfilling work experience to fully develop personality, and another engineer, educated in a Jesuit School, who believed himself to live up to the moral standards of his education, among others),

reproducing the schemes of domination in which there was no space for the subordinate's participation in the decisions involving their own labor process. Many middle managers recognized the inertia of the system. The majority of them, from technical background, were not prepared for understanding their situation by themselves. In spite of the fact that the company was investing in the upgrading of the management skills of middle managers, providing courses and seminaries, the results were discouraging. Many of those middle managers said they returned from their training full of plans and new ideas, but for some reason it was very difficult to put them to work in CPC. Many expressed the impression that there was no space for change in the company.

Most of the interviewed managers and college educated employees believed themselves to be well intentioned, without prejudices and to equally respect all people. In spite of this, the attempts to democratize the environment inside the company encountered enormous resistance, especially from those in the most privileged occupations. The nature of the difficulty is not being found in the rational refusal of including the lower strata of the company in their groups. The divisions among the different professional groups were not perceived as socially constructed differences, but as based on individuals' preferences and on innate features of personality. The groups of close companionship were formed according to the perception its members shared a lot in common, had common tastes, similar choices of leisure, of reading and similar preoccupations. The attempt to democratize the environment was largely perceived as a hypocritical device to artificially promote socialization among groups who shared little or nothing in common. This tendency contrasted sharply with the tendencies observed in the São Paulo plant. In Camaçari, the fact that distinct groups of professionals worked for the same company did not provide the necessary link of identification among individuals, professionals and groups.

The observation of the groups, the interviews and the informal conversations, allowed me to notice how large were the number of elements that contributed to divide the various professional groups, to reinforce prejudices and to make integration difficult. The splitting strength of the same elements was much less felt in the other two plants.

The color code of the helmets, a sign system initiated to reduce the risk of unauthorized people entering the dangerous zones of the plant, was, in time, transformed into a symbol of the status of the various professional groups. The intention in starting the color code of the helmets and uniforms was to allow easy identification, from a distance, of those present in the industrial area. The operators, with beige uniforms and white helmets, had free access to any part of the plant. The engineers and white collar workers in management positions also used white helmets when going into the plant. The orange helmet was for unskilled visitors (secretaries, assistants and other administrative/white collar workers without technical training or management positions, and subcontracted labor without permission to enter the industrial area. Gray was for subcontracted labor related to the area, temporary workers and engineering students under training. The color code was meant to call attention immediately to the presence of strangers in the industrial area. It was up to the operators to make sure they were in safe zones and acting safely. The maintenance workers wore dark blue helmets and dark blue uniforms. The color was chosen to hide the grease stains, easily made on their uniforms due to the nature of their activities. Security personnel wore white helmets with green stripes and light blue uniforms. Those engaged in activities in the industrial area received industrial boots, and those that had to visit the area but did not work there, social boots.

Following the logic of the social organization of production, and partly due to a lack of program of valorization of the various professional groups, some groups took pride in the colors they used, and for others to wear the uniform was considered to be the same as sticking the sign of social inferiority to one's body. Of all of the uniforms, those of the

subcontracted cleaning personnel were the most humiliating ones. It was a sign that one was at the very bottom of the social hierarchy in the plant. Of all the professions, this was the only one that did not require any level of basic education or training. The salary of this group was much lower than that of the others, and was comparable to those paid in traditional industries. This group had no access to the company restaurants nor transportation from Salvador city. They ate from a packed lunches and commuted to work at their own expenses. The majority of members of this group were women hired in Camaçari city. Cleaning personnel had no career planning and no possibility of promotion, and were not considered work colleagues by CPC employees.

One operator, speaking for a group of operators, reflected on their relationship with the subcontracted personnel, expressed the following opinion:

"in the past we didn't think we had much to do with those people, they would come, clean and go. We didn't even know their names (another, interrupting: and now, do we know...laughs...). We were really proud of being operators, wearing white helmets, for that meant we were trusted to go anywhere in the plant, and the uniforms. The operators were a kind of elite. But now, I am sorry for them. I've noticed we are not really different. We are all just 'proletarians' (in Portuguese, *operários*)".

Following that group was the one from product handling and packing, at the lower level of the CPC hierarchy itself. With low educational requirements and low technical skills, this group was seen as easily replaceable and without any technical expertise that could help the company in any special way. Following the same pattern, the caldrons' maintenance people were the next from the bottom up. Practicing a trade of easy training and easily replaceable, their contribution to the company was also downplayed. The length of formal training and the years of experience in the plant were the basis for the elaboration of the hierarchy of among the maintenance workers. The operators were the elite of the blue collar workers, with higher pay than all the other groups[89].

[89] The working of the power schemes occur through a system of symbolic oppositions that, although deeply related to the structure of the economy, and owing to it a significant part of its reproductive powers, function, in

Each group of professionals exhibited a different set of attitude towards the company. The operators' group was the one with the most clear political ideas and the one who more readily expressed opinions against the company. The pride in their profession, they felt, entitled them to demand more. The subcontracted laborers in general had no opinions about the company and did not feel entitled to make comments, even those working inside the company for a long period of time. They felt that as subcontracted labor, it was acceptable that they could not share the restaurant, for it was for the company's employees, and thought it was perfectly acceptable to eat the packed lunch sitting on the floor outside, inside the toilet (the ladies in charge of toilet cleaning) or on the stair ways.

The group from handling and packing, already at the time of the research knowing that their division was going to be transferred to a specialized firm to be subcontracted again by CPC, directed their criticism at the company in purely emotional terms, as one of them summarized it "We may not be very good for other things and kind of like ...uneducated...they all think we are kind of stupid. But in these years we worked hard. We are honest, and we liked the company and the chance of working here. All I have now I owe to CPC, and I am thankful for that ...I can't complain. But we don't know what is going to happen to us now. And nobody cares if we worked hard or

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legitimizing authority, in a way that is relatively independent from it. Since the origins of capitalism, the concentration of capital in the hands of the capitalist and its function in organizing production, carried the tendency, reinforced later by the theories of scientific management, of concentrating the concept activity where capital was mostly concentrated, and spreading the manual, productive activity, at the base of the social pyramid where capital was more scarce. The system of opposition derived from this basic formula, works, inside the capitalist organization, in the same way as the structure observed in the mythico-ritual systems in organizing the structure of the societies and of the polity of pre-industrial societies. "Bourdieu (1971) analyses a Kabyle structure of this type under the general diagrammatic formula a:b::b1:b2. He notes of its generative capacity: 'doubtless one of the simplest and most powerful [structures] that may be employed by a mythico-ritual system since it cannot oppose without uniting (and inversely), while all the time being capable of integrating in a unique order an infinite number of data, by the simple application of the same principle of division indefinitely repeated' (1971, p. 749, in Sahlins, 1976, p.25). This basic system of opposition, defining one always relatively to the other, integrates the society inside the industrial organization at the same time that divides it into classes. This division, common to all capitalist industrial organization, defines the superior in relation to the inferior, manager/worker::intellectual/manual::higher/lower::white collar/ blue-collar::clean/ dirty::educated/ uneducated::elite/ mass::powerful/ powerless:: rational/ emotional and so on, making each member of the collectivity construct their own trajectories, self-image and ambitions within the limit perceived concretely in relation to the social space allocated according to the logic of this system of perception.

not. And I myself...sometimes the boss came nervous to work, shouted at me, was unfair to me, but I never answered back, and I kept working hard. We have families to support... they should have a heart."

The maintenance workers, while in general less demanding than the operators, tended not to have such a resigned attitude, but also to not feel as entitled as the operators to make demands. The desire to join the operational career was often expressed in the maintenance ranks, and may have reinforced the attempt to demonstrate a certain degree of submission by judging it could increase the chance of transfer. In actuality, very few maintenance workers were able to switch careers. One of them said "I really wanted to become an operator, to be proud of by beige uniform around the plant. This silly blue uniform is telling everyone I am more stupid than they are. I am sure I could do a good job as an operator. I told that to my boss and he said he would see what he could do, but that was more than one year ago".

The association of the color of the uniform with status of the various professional careers became quite clear when I went to the storehouse to ask for my own protection equipment to go into the industrial area. According to the regulations, I assumed I would get an orange helmet, social boots and an anti-gas mask. When I handed the request form to the storehouse keeper, he called the general secretariat room to ask if he could give me a white helmet instead. The argument, that an orange helmet could be offensive or improper for I had an university degree, was immediately accepted and I received a white helmet to keep during my work at Camaçari.

The management of the holding company, pushing for democratization of the company to proceed with the integration among areas and professionals, was trying to reduce to a minimum the status differences within the plant. The badges, previously bearing name, function and a blue strip (access restricted to the administrative area) or red (free access to the industrial zone), had the function indication eliminated from them. Other steps towards the promotion of greater equality, though, encountered considerable resistance.

Up to just before the start of the research, the company had two restaurants: one with a tray system, in which each person got a tray, went to the line and got served at the counter (with two choices of meals), and a French style restaurant, in which a waiter in uniform would serve at the table and the dishes could be chosen from a menu. Those who used the tray system didn't have to pay for it, but those using the French style restaurant had to pay a relatively small amount monthly. According to the person in charge of human resources management policies, the white collar workers and especially those with university degrees would pay to use the French style restaurant, while the blue collar workers used the other system. Higher pay was not the factor determining who used each restaurant. Many of the blue collar workers, especially those who worked in the shifts, earned as much or more than many of the white collar workers employees who preferred to pay for their meals (the average salary of an operator III, for example, was higher that of the young engineers and those with university degree in the human resources division). The restaurants divided those who considered themselves as working in clean jobs (white collars) and those in dirty jobs (blue collars), and the difference was maintained even for those in blue collar careers that did not have a manual activity, such as supervisors, chief operators and panel workers (usually due to the need to be close to the area, they had a small meals room in the productive area itself, but they were periodically taken out of the shift system to work administrative hours, and even on those occasions never mixed with the other group). According to a informal research conducted by the human resources division of the plant, the blue collar workers didn't feel it was appropriate for them to eat at the other restaurant even if they paid for it.

The decision to abolish the French style restaurant generated strong protests from some groups, upset with the idea of having to eat together with 'sweaty people, with dirty hands and faces and without table manners. Given the fact that in a continuous process plant physical labor is not heavy and required only occasionally, the differences

were based upon the nature of the work and the prejudices associated with manual labor. The abolition of the French style restaurant and the gradual elimination of all other elements met so much resistance because they had become symbols of status and power (that were nothing else than objectified symbolic capital[90]), and were, therefore, perceived as amounting to the same as a reduction of symbolic capital. In a situation in which middle management and university graduates were yet to realize that quality production implied the necessity of upgrading their own symbolic capital in other terms, the elimination of the differences were perceived as an expropriation of their powers through an undue effort of "leveling from below".

The different forms of transport offered to the various groups reflected the differing attitudes of the company in regard to the various professional groups and were soon incorporated as symbols of status valuing white collar employees with higher educational degrees, and following the same logic of the hierarchy based upon the nature of knowledge and its application in industry. Much more directly than in relation to the color code of the uniforms, it was perceived as a symbol of the status of the different professions by the workers themselves, the transportation system had been deliberately organized, by the company, in a way that reinforced those divisions.

For safety reasons, the complex was sited far away from large population concentrations, being 50km away from the city where the majority of employees lived. During working hours, due to the distance from the city, it wasn't possible for employees to take care of their private business. To allow them time to take care of these matters, the working hours of the complex were longer than the daily legal nine hours. By working longer days, the employees were entitled to take days off during the week. The trip to the complex took more than one hour each way, with the average commuting time being two and a half hours daily. With the extra time necessary to take week days off, the average time dedicated to work each day, including commuting time, was over

[90] Bourdieu, 1989.

eleven hours. The directors of the company were entitled to private cars with drivers to commute to work and to be at their service throughout the week, with the possibility of also being requested for extra-hours on week-ends. The Plant manager also had a car provided by the company, but had to drive it himself. The area managers had one car between four of them, and took turns driving it to work. The division managers rade in an air-conditioned microbus with the other university degree employees. The blue collar and white collar workers without university degrees traveled in a full size bus without air-conditioning, but with reclining seats that allowed them to nap on the way to and from work. The subcontracted workers had to commute at their own expense if the company they worked for did not provide transportation, which was quite common.

According to the older employees, in the early years of the complex most companies utilized such systems, but lately only CPC and two or three others retained it. The full size bus took, naturally, much more time to fill up, so it would collect employees earlier and drop them of later at home. Also, the microbus would collect people from nearly in front of their homes, but the larger bus would pass only along the main avenues corresponding to areas of the city, making it necessary, sometimes, for employees to walk longer to get to the bus stop or have their wifes or husbands to drive them to the right place. As the day at the complex started at 7:30 AM, some of the blue collar workers were collected as early as 5:20 AM, while those riding in the microbus would start being collected at 5:50 A.M. at the earliest. As they were also dropped off later at the end of the day, the bus passengers had to dedicate one more hour a day to the company in comparison with those with university degrees. Shift workers, due to their different time schedules, traveled in the microbus or in a shared full size bus, depending on the time their shifts started.

Most of the operators regarded this system as unfair, but according to the operators themselves nobody complained until other companies in the complex started to use microbuses for all employees. That is, the naturalness of this arrangement was

questioned only when it was brought to their attention that it could be done differently. According to the chairman of the raw materials producer, the leading innovating company in the complex, they instituted the new system of equal transportation to everyone as a strategy to aid the implementation of quality programs and with the democratization of the working environment, not as an answer to the requests of dissatisfied employees. Once more indicating the key role of management in detecting factors that operate against their objectives and eliminating them. According to a psychologist employed by the raw material producer, in charge analyzing how to improve human resources policies, at first the employees reacted to the new transportation system as if an extra benefit had been granted by the benevolent manager, and not as if finally their equal status with the white collar workers had been recognized.

The first companies to implement such policies managed to create, for themselves the image of innovators with their employees, and of a company which is always ready to put to use novelties that benefit company and employees alike. In the case of CPC, one of the slowest companies to proceed in this direction, the image the employees had of the manager and the company was exactly the opposite: they believed the company resisted to changes as much as possible to delay benefits as a stingy way of saving at the employee's expense. They saw the company as blindly following the lead of the raw material producer when no other choice was finally available to them. The democratization of the transportation system was already an obvious necessity at the time of the research, but the manager of the plant was very slow to push for changes.

In the absence of firm leadership directing the collectivity towards more equal human relations, fundamental for the creation of an environment fertile for the implementation of the quality programs, the basis for the constitution of the status system in the company, freely followed the logic of the acquisition of education capital and its application in industry. The logic of the division between intellectual and manual labor

spread among all the professional groups and served as a instrument of division even within the professional groups themselves. The leader, in this case the plant manager, is the only one holding a totalizing power that would allow a significant transformation. The democratization of relations depends very much on a reform in the sign system that has been transformed into an element in the communication system of the various statuses, adding an undesirable amount of inertia to the system.

The lasting impression I gained from the observation of a process of this nature is that the habitus, as a system of dispositions, tends to generate practices according to the logic of those dispositions unless an attempt to push in a different direction is brought onto the scene, generating new modes of relation. That is, the basic opposition inherent to the mass production type of organization of labor has a generative capacity for reproducing itself in a variety of ways. When it comes to the fight for recognition and professional pride, this basic opposition lends its logic to the strategic construction of the basis of this recognition of the value of one group against others. As this strategic attempt to raise one's position in relation to the other proceeds in a way that is neither fully conscious nor calculated, but constructed through the practice of daily interaction, the result, bitter relations and competition among groups, was not associated, by the workers, to their own actions. Indeed, it wasn't the result of the action of any specific individual, but a part of the actions of all.

In this sense, the anthropology of the industrial organization, by exposing and bringing into the domain of the discourse all of these splitting schemes reproduced almost unconsciously by the collectivity, can destroy much of its effect and contribute to the progress of the implementation of new theories. The effectiveness of this mode of investigation as a consulting job, lies precisely in exposing these arrangements and providing the elements to enable the collectivity to think their own practices, monitor their own actions and reflect upon the type of relations they need to construct to survive in the new global market (this type of use of the instruments of social science as a

science of production implies in using science as an ally for the performance of a job of debatable ethics, that of helping in the destruction of a mode of domination to allow for the implementation of a new one, perhaps more alienating then the other, if the term alienation is used here in line with the thought of the humanist philosophers - (that is, as in a situation in which the nature of one's own subjugation is ignored and in which one works towards reproducing one's own misery).

3.6 The production workers: PVC X VCM

To illustrate how the construction of a 'stairway' of status among professional groups proceeded, with the application of the same basic scheme of perception to an infinity of aspects, it is worthwhile to look at the conflict among the operators of different two areas: PVC and MVC. These observations, and the ones above on the construction of signs and symbols are presented with the intention of exemplifying how a given leadership style affects the organization of the group, in the case of this plant allowing for deterioration of the environment that was on the way to a successful integration among areas. This deterioration of the environment proceeded by increasing conflict and the feelings of lack of direction. In this environment, the various professional groups competed to construct the basis for their social recognition, contributing to the mutual destruction of this very basis.

The basic requirements to join the operational career are the same, in the statutes of the company, for both areas: a minimum high school or technical school education. Before being accepted into the company, candidates to the operational areas take a one-week introductory course, in which the technical aspects of production, safety procedures and the organization of the company are explained. The group then has a three month trial period, during which they have a chance of working both in the PVC

and VMC areas, get to know the supervisors and division heads of each area, and the other operators. At the end of this time they take a written exam and a psychological examination, and those who receive the higher averages on their work in the productive area and at the psychological test are selected for employment and divided between the two areas. It is for the heads of both divisions to divide the candidates between themselves.

Even though at the beginning there are no significant differences in the educational level of the candidates, in time differences are created, as a function of the different productive processes. In the PVC area there is much more physical interaction with the product itself and more manual work. The VCM area deals only with gas, so the routine of the operators is much more related to the monitoring of equipment. The field work of the VCM operators usually involves only the monitoring of valves, draining the equipment for maintenance and giving permission to maintenance workers to do hot or cold fixing in the machines. Due to the danger from the product, the work in the VCM plant involves much higher risks. Besides the health risks to the employees in case of leakage, operational mistakes could blow up the plant, if for example, an operator allowed a maintenance worker to proceed with the welding of a non-drained pipe. In the PVC plant, the work of operators I and II, at the bottom of the operational career, involves the cleaning of the reactors, handling the products at the end of the process, and breaking the 'stones' that were eventually formed inside the reactor by imperfect reactions. These 'stones' sometimes need to be broken by pickaxes and taken out through the mouth of the reactor. It is also part of the work of operators to help with manual loading of the reactors when needed, and to collect the second-quality product that falls into the small canals in the drying area. Due to their interaction with the product, some of the PVC area workers get their uniforms covered with the product, a white powder resembling wheat flour.

It is only by understanding how manual work rates in the world of industry that it is possible for us to understand the irritation provoked by the VMC workers when they ask the PVC workers "what is for dinner?" The joke, apparently innocent, invariably causes an uneducated answer or a sharp silence on the part of the PVC colleague. The PVC workers, according to MVC colleagues, working at the 'bakery', associating their work with cooking, a feminine task, of small risk, that does not require much education or skills and is to be located outside the world of modern industry, in the same way as that of the baker, associated with traditional industries and located at the backward side of the economy. According to the teasers, the PVC workers spend their days putting the product to cook in the oven (the reactors), and have calloused hands caused by the hard labor of taking their bad baking out of the oven. In comparison with their work, that of the VCM area is more 'male', technological and modern. Those features of the process are what makes the managers of each division (according to the workers of the VCM area) agree in placing the "intellectual elite" of the operation in the VCM area. According to the managers, they do tend to place in the VCM area those that seem more responsible and attentive, and those who rate higher in the psychological evaluation, in regard to features of leadership, for in the case of problems, the capacity of making fast decisions and conducting organized action is very important. But as those features are also important in the PVC area, they attempt not to leave that area completely without leaders either.

A unitary sense of class among the blue collar workers tend to arise only in opposition to management or to government, believed by the majority of the workers to privilege the country's elite in its economic policies. If an external threat (to the workers as a class) is not immediately perceived, the distinction among the professional groups tends to dominate the relationships.

White collar workers, by the same logic, are perceived by the operators, in the present situation (not during the early years of the plant) as of a higher status within the

plant. According to the operators, if an office worker (especially a woman) needs for some reason to change the route home one day, and wants to get a lift from the microbus of the university graduates, they don't hesitate to ask, and don't feel constraint in asking, while a blue collar workers feels there is no room for such 'intimacies'.

Inside of the same area, PVC or VCM, there is the tendency to develop a higher identification with the operational activity the higher one goes in the operational career. Also in here, the key element in developing a higher degree of identification is related to the perception of status of the activity in regard to the basic opposition between manual and intellectual labor. As an operator II puts it: 'as an operator one I hated it in here. I spent my days doing little things...transferring tanks, cleaning the lines, reading the compressors and things like that... a lot of moving around. If the mix turns into rocks, it was the operator one who had to get into the reactor and brake it with a pick. As an operator II there is much more coordination work. We help to organize the work of the operators I. Being operator II is like being between the line and the control panel. Being operator II is kind of in between doing the work and coordination".

The panel operator (op.III) says about the operators I: "these guys have many silly ideas. One day someone put a fork into the bag of pellets in the packing area and they really liked it. They didn't seem to think anything of sabotage. But, you know, it has a lot to do with being in the area all day. You can't take them seriously. They work with their hand, and their brains are free to think God knows what. As their jobs demand more from their minds, they became more responsible. Until then, they are just kind of kids".

Naturally, that even in the operational ranks, not all workers have equal chances of promotion. There are those (as the case of two operators that stayed as operators I since the time of the company's foundation) that never get promoted. The decisive factor, in this case, was the human resources division's belief that without eight years of formal education an operator should not be promoted. This 'decision' of the plant in

regard to these two operators was against the written policy of the company that stressed performance as the fundamental element for promotion. This situation was accepted, by these two operators, on the basis of their own interpretation of the incompatibility of their own individual formations and trajectories in regard to the expectations of the industry. Coming from poor families and perceiving themselves as lacking in bargaining power in the labor market, these operators were satisfied to organize their personal trajectories around the search for a salary and stability. They didn't know they were entitled to promotion, and even after the revision of the procedures for the sake of the implementation of the quality programs brought to public knowledge the company's policies that had been kept only in paper, they preferred not to complain in order to avoid exposing themselves. The search for recognition and for a professional career is very much based on a self-evaluation that uses one's educational capital as the standard of judgment. The failure of the human resources division to act in this case, allowing the community to confirm, in practice, that the lack of formal education was a definite barrier to a professional career, confirmed the feelings of non-valorization of the workers engaged in more manual activities. Compared to the careful evaluation of all the workers in the São Paulo plant, it becomes clear that this type of situation was caused by the failure of the plant manager in regard to human resources management, allowing the proliferation of situations that reinforced the schemes of perception which serve as the basis for the divisions inside and among the various professional groups.

3.7 The Employees club

The employees' club of the Camaçari plant was a pleasant recreational facility built close to one of the nicer beaches of Salvador city. The facility included a sports area, swimming pool, auditorium, audio-visual and games room, restaurant and a barbecue

area. The club tended to be full at weekends, and many employees and their families could be seen utilizing the facility.

The opinions about utilization and about the environment of the club, though, were quite mixed. Many of the white collar workers avoided its use, and some of those with management posts felt it to be an obligation to visit the club with their families only to avoid passing down the image that managers were avoiding contact with the rest of the employees.

According to nearly all the employees, though, the space did not serve its purpose of integration. Inside the club, people tended to socialize only with the people they socialized with at the work place, so that new relationships were established with frequency.

Many operators resented the lack of respect for their families from other employees, and a few decided not to go the club for over one year for this very reason. One of them said that since his teenage girls started to develop ‘women’s bodies he decided to stop going to the club because the young operators would stare at his daughters' "behinds" just under his nose, so that he got annoyed of seeing that his daughters could not be relax at the swimming pool without having to deal with some sort of harassment. Many other operators and white collar workers complained of the constant over drinking at club facilities, which made many otherwise 'calm' persons to carry out unacceptable behavior.

In a group discussion, the operators complained of the lack of respect for the wives of men of other groups. Many examples were given of employees of a different area getting drunk and telling dirty jokes to the wives of others, saying bad names, using dirty expressions in front of the children or getting violent during soccer games. From what I could see, some conflict eventually occurred at the club.

Among the employees who used the club frequently, there were many that made a point of going only if the family of a close friend was going also, so that the wife and

children could socialize with people 'of respect'. The divisions created inside the plant tended, in this way, to be reproduced during leisure time at the club. According to many operators, the club was still one of the few choices of inexpensive leisure at weekends, when the good beaches were too crowded. The pollution of the coast had limited the number of clean and safe beaches, to which access on the weekends was made difficult by the bad traffic jams. In comparison with the club at Alagoas, much more people used Bahia's club facilities, but it may be a result of a lack of leisure alternatives. The beaches at Alagoas were cleaner and emptier, so many workers preferred to use public beaches instead of the club.

It is important in here to observe the difference between the employee's relations to other employees and the company's club in comparison to that of the São Paulo plant, to observe how the human resources policy at the plant impacted on these relations. The climate of the plant tend to spread to other situations, so that an inadequate human resources management strategy on the part of the plant manager turned the integration mechanisms, such as that of constructing an employee's club, into an inefficient device. When the environment at a plant is not fertile, mechanisms to enhance the quality of relationships do not attain their goals, and serve, as in this case, merely to confirm the already believed notion that relationships among areas in the plant are not good. The club of the Camaçari plant did not fulfill its role of enhancing the quality of human relationships in the plant, improving the employees level of satisfaction, nor increased the sense of belonging to a community.

3.8 Human relations, the body and the usage of space

Informality was a feature of interaction at the Camaçari plant. The usage of professional titles, such as engineer, doctor etc., was very seldom observed, and respect prefixes, such as Mr., Mrs etc. were also rare, being almost totally restricted to

secretaries in relation to their bosses. The amount of jokes and teasing was also incomparably higher than in other plants, as was also the use of the nicknames.

In the questionnaire survey, the interaction with immediate bosses and colleagues in the same area was rated as highly satisfactory at the plant, contrasting sharply with other answers, which were seemingly in contradiction. It was at the Camaçari plant where the organization of the hierarchy at the top of the company, and the different roles of the various managers in those top positions were unknown to a significant portion of the shop floor workers. It was also there that the company lacked the trust of the employees and where one could observe a clear tendency toward generalized criticism of the company.

The high quality of face-to-face relationships was constructed precisely to protect each individual at the lower end of the managerial career from the exhaustion of their political standing. Being themselves in a condition of powerlessness face their own situations, which increased proportionally to the distance from the top of the organization, the lower end managers constructed alliances and partnerships with the employees to assure the perpetuation of their leadership. A considerable degree of intimacy and complicity existed among chief operators, operators and supervisors. The rules that organized the rotation of the shifts and other routines on the shop floor, for example, were outdated, did not correspond to the needs of the operators and did not give much flexibility for the supervisors. In a situation of powerlessness to promote changes that could improve directly their situations, operators, chief operators and supervisors elaborates different systems, in each shift group, to circumvent the inadequate rules. As one supervisor put it:

"The men arrive at the company with their heads already full of problems they bring from home. The money is not enough for anyone here, wives complain...prices rise every day, but salaries are adjusted only every three months. In the last month before the adjustment, you can buy only half of what you bought two months earlier. They get in here and the situation is what you can see...everything is so

difficult. If the men want to change shifts and things like that, or if they agree with a colleague to double each other's' shifts to have more time to do some other business outside, I let them. As long as the company doesn't have to pay extra-hours and nobody knows about it, it is fine with me. Some of the guys share the ownership of a taxi outside and other things like that. If they are put together in the same shift, they underutilize the taxi. No one uses it when they are at work, and as they are both out together they have to share the usage of the car. With the new law (of six hours shifts), we have a lot of free time to earn some money out of here. The situation is pretty bad in here already. If I squeeze the guys even more, it will be unbearable. You have to be flexible to keep things under control. In exchange the guys do what I ask and help me keep face with the company. It is an exchange; you see...we are all together in the same sinking boat."

This relationship with the immediate boss lost much of the educational function it had in the other plants, and the immediate boss lost much of his authority to keep the rules of the company. The excessive rigidity of the rules contributed to their abandonment in practice, and the lack of channels to reform and to debate, that would allow participation of the workers in its reformulation, caused solutions to be negotiated on the basis of exceptional concessions, personal favors and favoritism. It ended up eroding the institutionally available means of organizing the routine for the lower managers, increasing the feelings that the company was disorganized and lacked direction on the part of those lower managers as well workers. The formal instruments of employee performance evaluation, the annual plans of each area and each group on a shift, became mere bureaucratic circulation of paper of no practical value. The vast majority of the employees at Camaçari answered, in response to the questionnaire survey that the promotion system wasn't fair and was based on the personal preferences of the boss, and not on criteria based on merit. Giving the fact that the immediate bosses had abandoned, in the daily exercise of their activity, the formal instruments of evaluation, it was very possible that they would also lose part of their impartiality, which was supposed to be one of the elements of the system.

The observations indicated to what extent the power system in the company was an integrated system in which a lack of balance on one side tended to reproduce imbalance throughout the structure.

The close association with immediate superior contrasted with a distance from others at the top of the management structure and with those of the other areas. This was different from São Paulo, for example, where there were relatively free and comfortable negotiations among areas and hierarchical levels. Contact with other areas and other hierarchical levels at the Camaçari plant was marked by a peculiar body language and non-verbal forms of communication. The lack of institutionalized channels for the less usual procedures tended to reinforce the different statuses among the professions. The operators or other blue collar workers were quite timid contacting others outside their immediate circle, demonstrating their lack of confidence in the interaction generated by the fact that they held no responsibility for the issues they were sent to negotiate. Upon arriving at the door of the manager of production area to ask for instructions, for example, on the order of a supervisor, an observed operator kept a very low profile, talked in a low voice and did not enter the room, talking to the seated boss while standing in the doorway. This timid and insecure behavior, demonstrating a humble attitude, was easily observable in any situation in which this type of interaction occurred. To exhibit the 'proper' body language was a way to demonstrate one "knows one's place" in the hierarchy of power and status in the company. Different types of attitude, as for example the attempt to discuss given instructions, was, according to some middle managers, a sign that 'you should keep an eye in the guy'. Excesses of confidence meant a lack of respect for the hierarchy and could mean that the 'guy' is an 'agitator', a leader among the blue collar worker who may lead them in opposition to management. The non-verbal communications and the different usages of the body in various situations provided the discipline and the organizational power that the rational, formal system did not possess, because of lack of definition. Due to the nature of

human relations in the plant, the conflicts and the formation of political factions, small indications of loyalty to one group, the adequate indication of subordination to one boss, and etc. gained an importance that was not observed in plants where this fragmentation of the plant community did not exist.

In my contacts with the shift operators, after some trust was established between them and me, these different usages of non-verbal communication became clearer. When my decision to join the operators on a shift was communicated to the chairman of the holding company, he expressed some concern about the fact that I was going to be the only woman in the industrial area during night shifts. Management feared sexual harassment and uncomfortable situations which would make my job unpleasant. But during the whole time I stayed in the plant among the blue collar workers there wasn't a single situation in which I had any indication of this kind of behavior. This exemplary behavior contrasted clearly with the attitudes they exhibited on the buses, in regard to secretaries, and problems with the nurse during the shifts, known to the managers. On one of the night shifts this issue was brought up. I asked the operators why there were no female operators and maintenance workers. They told me there was one woman in the maintenance workshop, but only on the daily shift. They said the law made it difficult for women to work night shifts, and that the job in the PVC area was unsuitable for women due to the amount of physical strength necessary in case of problems. Besides, one added, having on mind the problems with the nurse in the night shift, he doubted management would allow it, for it would be impossible make the men behave. They said when the company hired a young lady as nurse, 'there had never been so many sick men at night', and the amount of sexual harassment was such that the company took the lady off the shift rotation. I confronted them with the fact that I myself had never seen anything like that, and also that female engineers said they had had problems before with white collars, but that the blue collar workers were 'very respectful'. The six men in the field panel room laughed. "Of course, said one of them.

"We are *peão*[91] but we are not stupid. First we do not want to lose our jobs. Second, we know those ladies are not for us. Can you imagine an engineer (such as the pretty lady in the laboratory) hanging out with one of us?. Besides, they are ladies 'of respect'".

"It is like when you are here" (and for the first time I realized that the presence of a researcher in the area affected the collectivity in many more ways that I had first imagined). If you promise to keep a secret, I will show you something". Promise made, they opened the doors of the control panel (that are supposed to be opened only for maintenance), that gave access to the wires and the insides of the machines, and took out magazines, a newspaper and radio, as well as stickers, car catalogs and all sorts of other things.

"You see, he said, these things are not allowed here. We must be alert to the process, but when there is nobody here, we read, listen to the radio and do lots of other things. Some people sleep behind the panel. Sometimes we take turns to sleeping... everybody is so well behaved because you are here. Some pigs have even got manners at the table (laughs). If you were like us, I mean, like the nurse or the secretaries, we would be doing all that. These guys say lots of dirty jokes and use bad words in front of them on the bus. If they complain, it gets worse. But you and the engineers are fine ladies, you studied, are from good families, the men don't feel it is OK to sit around, say silly stuff or be uneducated in front of you."

There is no practical contradiction in the fact that they trusted me enough to show me their hidden objects and reveal their 'wrongdoings' and the fact that they controled their behavior because they 'do not want to lose their jobs'. The rational reason (preserving

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91 *Peão*, the term traditionally employed to refer to the man in the extensive livestock farms that run after the lost animals, is employed as slang in the petrochemical industries in reference to those without power. The term is widely employed in the industry in a variety of contexts, but its meanings are usually associated with lack of fundamental and basic rights due to one's socio-economic condition. It was common for the operators to tease their colleagues in these terms. For example, one complains of a given policy of the company or of the arbitrariness of the boss, and the others laugh about his naivety in complaining, saying to the complainer "haven't you yet realized *Peão* came into this world to suffer"?.

their jobs) is just a bad explanation for a practice they cannot rationally explain. It involves the moral need of paying respect to those who are entitled to it. This 'decision' of whom to 'respect' more or less follows the same logic that legitimizes the basis upon which the social division of labor is constituted inside the plant: privileging those with higher education or/and of a higher social class at the expense of the manual workers or those with less formal education. Body control, good behavior, good manners, and a humble attitude increased the chances of the blue collar workers and others at the bottom of the social pyramid in general to stay in the good graces of the socio-economic elite, increasing the chances of collecting some economic benefits.

But it would be wrong to attribute this purely to economic calculation. Abiding by the rules of the community increases the perception of respectability of the man towards himself. To know how to behave in the most different situations is an indicator of a social maturity also related to the operators own self-images as respectful members of society. The long term experience of tight control which the workers had known under the coercive mode of management formed, for some of them, a self-image, and an image of their social class, as entitled to a sort of treatment that presupposes more tolerance on their part. We can see in the examples of the two other plants that the behavior of the operators in regard to themselves and others of the same social class tended to change as they earned more respect as professionals and as members of the work community. I am not saying here that all people reacted and behaved alike in these situations. There were among the Camaçari plant operators those who reacted against the loose standards in relating to secretaries and nurses, but they tended to be the exceptions, while at the other plants more controlled behavior tended to be the rule, and the 'bad taste jokers' to be the exceptions

A 'culture' of reaction to company values was to be found especially among the young operators in the PVC plant. The young operators referred with disdain to some of the values of the older operators and to the authority of the supervisors. While some of the

older operators attempted to retain their pride in their profession as in the old times, somehow hoping that a change in management would bring the company back to good times, some of the young operators tended to have an anarchical relation to authority in the plant, get around the rules more often than prudence would recommend and avoid the humble attitudes most of the elder operators exhibited. Being at the bottom of the hierarchy in the company and at the bottom of the operational career ladder, and in the area were more manual work was required, they took the necessity of coercive supervision to its extremes, refusing to act in conformity with expectations whenever it was possible to offer resistance. This type of attitude was most annoying to the older operators themselves than to the supervisors and engineers. The engineers shared the idea that once the operator's behavior became a threat to the company and to production, they were easily replaceable. Most of those above them in the hierarchy of command interpreted these attempts to react against authority and against the interests of the company that for the operators was just exploiting their labor, as a personality inadequacy to the type of industry. As the managers had at their reach the possibility to use staff turn-over to adjust the labor force to the needs of industry, the refusal of the young group was seen as an error of hiring, and not as the outcome of an inadequate human resources management strategy. The resort to turnover as a way to adjust the workers to the company is an old strategy of mass-production times, and reveals the extent to which middle managers were unaware of the new trends and theories of management, or of the new needs to guarantee survival in the market. The existence of problems of this nature, that at the São Paulo plant were seen as an indication of a problem to be corrected at the level the of human resources policies of the plant manager, were not connected in the minds of those at Camaçari to the way human resources were being managed nor to the political situation inside the plant.

As the possibility of the lay-offs increased, by the association of the names of some operators to undesirable sorts of behavior in the company, the more those same

operators tended to reproduce the behavior. To accept oppression was, for the young group, proof of weakness. Once the opposition started, the group who promoted it assumed the role of 'intellectual' leadership against the company. To change to a behavior that would increase the likeliness of being well integrated in the company would make them lose face. As the likelihood of losing their jobs became clearer, and taking into account the difficulty of finding employment under the same conditions in that region, many regretted the course of their actions, but believed it to be too late to change. Some of the young operators expressed their opposition to the company largely through non-verbal forms of communication. They wore dirty uniforms, sat in groups around the floor, laying down against each other and moving at a pace inadequate for the proper working of the equipment. It was common to hear the operators III shout over the microphone from the control room and order the young operators to move faster.

In the same way, those who did not want to be associated with this group expressed their loyalties also through non-verbal language, by their readiness to move, fully buttoned uniforms and by attentive eyes to the instructions for the loads under their shift. The group of the older employees and of the young employees who wanted to rise in the operational career structure, though, was also not satisfied with their relation to the company. But they were not willing to give up a good reputation, the pride of the operation as the 'heart of the company" and the fight for acknowledgment. This fight for acknowledgment is a fundamental dimension of the social life on the shop floor, and different strategies are devised to accumulate reputation as a specific form of symbolic capital. As the behavior of the young employees lowered the reputation of the operators as a professional category, the opposition of the other operators to them was bitter and stronger than that of the company. Disputes among operators, developed especially through non-verbal communication, were much more a moral than an economic confrontation. The young operators attempted approximations with the labor

union (although quite disguised), and called for themselves the role of expliciting the exploitation in labor relations and of opposition to an unskilled and oppressive authority, while the other group attempted to keep the pride of the trade. The older employees used the space more timidly and tended to act humbly in the social intercourse with those above them in the hierarchy, while the young operators refused (to a certain extent, for their own perception of their social class made them develop an insecure attitude on the disputes over the truths of the company and of the market) this body language. They talked louder, held their bodies straight and looked straight ahead while walking around the company, as a means confront ing authority.

The lower managers, such as supervisors and division heads, many times expressed their feelings of powerlessness to face the opposition created by the young operators. They did not have access to any sort of organized discourse that could allow them to redirect the criticisms against the company that these operators formulated, especially because many times it reproduced much of the version of the reality of the company produced by the plant manager himself, twisted to fit their strategy of opposition. As the framework that the lower managers used to interpret the company was very much derived from the same source as that of the young operators, the manager found themselves agreeing with operators in regard to their criticism. One of these lower managers expressed it: "the situation of the company is indeed very bad. Maybe if I was twenty years old I myself would feel very much limited by being tied to it. How can I tell those guys they should behave and invest in their future here? What is the future they can have here anyway?"

3.9 The operators and their profession

Contrasting sharply with the high degree of identification with the operational career experienced by the operators in the early years of the complex, to be an operator now was perceived as an unfortunate trap of destiny. Much more than any other blue collar

activities, the peculiarity of the operational career created a specially strong dependency by the workers in relation to the company.

The basic requirement to be an operator is a very general educational level. It is in the daily work with that specific type of equipment that professional skills are developed. In the same way as the company is dependent on experienced operators to run safely and productively the equipment, the operators are dependent on continuity of their employment relationship with the company to keep their living standard. Promotions and salary increases depend on the successful learning of how to operate that specific type of equipment. Promotion in the operational career is based on the cumulative knowledge of the various units of the equipment of one same area. As there are no companies in Brazil with exactly the same process and the same technology, the knowledge of the operators is extremely limited in its applicability. Inter-plant transfers of operators are very rare for this reason[92].

According to the statutes of the company, in the case of a job vacancy at any plant, the employees of the whole group can apply, and a selection will be made from among the candidates. This strategy enhances the chances of promotion as a whole and gives a better utilization to human resources for the most challenging positions. This strategy, however, does not work in the case of the operators. As the position of each valve, each possible leakage and the control point in each unit must be learned before one reaches a position of giving guidelines to others (as is the case of the central panel

[92] Agier & Castro, 1989, in their analysis of the individual trajectories and future plans for the workers of the complex as a whole, note a tendency, observable among the younger operators with more social, educational and cultural capitals, to regard employment in the complex as temporary, as a transitory experience in their lifetime. Most of those workers hoped, in a somewhat near future, to be able to leave the complex and establish themselves independently, by setting a small business. This tendency is nearly inexistent among those with less social, economic and cultural capital, contributing to the degree of heterogeneity of the discourses at the shop floor level. That is, the self-image of the workers and their estimation of their own chances outside the petrochemical industries is an important component of their individual relation to the company and the process, a fact that must be kept in mind is to not over stress the generalizations of the tendencies observed. But given the small objective chances of economic success outside the complex, the old operators tended to downplay the possibility of establishing themselves independently, and said that as soon as these young man get married, they realize that it is not easy to earn that salary outside and "settle down". That is, after a certain time, one is "caught" by the blue collar destiny and comes to accept it.

operators), interplant transfer means that the learning process must start again from the beginning, which means a return to the very bottom of the operational career structure The salary of a supervisor was, by the time of the research, eight times higher than that of a newly hired operator I, at the very bottom of the operational career.

The fact that there was such a strong dependency by the operator on the company stressed the need for conformity especially among the older operators. As for the young ones, in case employment was found outside the complex, the income loss would be considerably less, if any. In their advice to the young operators, the older one's tended to emphasize the mistake of choosing an operational career because of the lack of freedom it implied. As they put it, to be an operator was not a profession (understood as a body of knowledge applicable to various circumstances), but a 'function'. The older operators, although disillusioned with their activity, had no choice but to remain in the company to support their families. As the chief operator put it:

"We wake up every morning and must make an effort not to think. We dress like robots, doing the same thing every day, go to the bus-stop and come to work. In here we move as the process demands, not even knowing why...if you stop to think, the sadness will take you over. You will think why is it that you have to do what you do...we take consolation in our families. It is at home that our daily strife is to find reason...when you see you can provide for you family, you feel fortunate. In times of crises as the one we are living there are many people who can't do even that".

This relation to their activity is interpreted by the younger operators as by this operator I:

"I went to technical school because I thought not everybody needed to go to university. My family is not rich and I wanted to work to help them. When I was selected to take the training program I was very happy. It didn't last long. I look at the old operators and I don't want to become like them. I wish I could change my life while I am young. I have being asking around, but I can't find a job with the same benefits. The salary is not much higher at this point but the benefits, especially the medical assistance, make a big difference for us. If I can find a way, I want to continue to study. There is no future in here".

An old timer says:

"Before, I loved to come to work. CPC was a family, every single person counted. We helped each other and we all wanted to see the company grow. The first manager, he was an honest man. Everybody was compensated for their efforts. We worked hard, but he recognized it. Now, there are only those...I don't know what kind of people they are (at the top). You slave here day and night, it is a vice you know, that we brought with us from the early days, and there is not even a word of acknowledgment. Now it is a 'snake's nest' in here. There is so much hypocrisy. One day, a man who was here from the beginning caused an operational mistake by taking a risk that is forbidden in the manual, and received a letter of admonition. Now he can't take the next exam for promotion. We are all so angry. Everybody takes the same type of risk all the time. If you fail to act, they say you are not flexible, live by rules, and that you are not willing to cooperate. When you act, though, you are on your own. If it turns out all right, you didn't do more than your duty. When it turns out bad, it is your fault. Power turns those guys into cowards. The supervisor knew that procedure was always done like that. Also the head of the division and that of the area, but they don't take any responsibility for anything. Everyone is busy here covering their own backs. In here the 'rope always brakes on the side of the weak'. Nobody trusts anybody. It is a pain to come to work every day".

Also referring to the difference in regard to the quality of management, a panel operator says:

"Before, there were so many good ideas to improve the process here, they came out naturally, because people liked what they did and the company was good. There were many improvements in the process that we made ourselves. Now they come with those stupid programs for us to give ideas (in reference to the suggestion programs) and nobody says anything. I wish they would go to hell. I don't open my mouth. I am not paid to think, you know. You think, give ideas, they make more money and for you...not even a thank you!.

Another completes:

"It is really ridiculous. They put pressure on the supervisors to make us contribute, but nobody does. The stupid supervisor spends the days trying to fill in suggestion forms to increase the number of suggestions given by our group. He is afraid if there are not enough suggestions the boss will think he is incompetent. That's how things are here now...under pressure. You know what? I think those guys (the managers) sell us out. In the beginning, if we wanted any improvement in the process, we had to pay to

the "gringos". We worked hard and made many improvements ourselves. The bypass of valve A4, that was an idea of the C group, increased by 8% the feeding flow of the raw material. It meant a lot in terms of productivity. The Japanese (in reference to the foreign partner, the director of technical area) came in here with a group the other day, together with the plant manager, and looked everywhere in the area. His guys took lots of notes. I bet they stole our ideas and won't have to pay a cent for them".

In relation to the perception of the importance of their function, and given as a indication that they deserved higher pay, was the question of danger. Confirming the tendency observed by Harris (1987), in her comparison between two ammonia plants, among others, automation in the continuous process industries, contrary to what was expected in the past, increases the need for operator care and makes the consequences of error spectacularly damaging. Besides the material consequences, implying enormous losses, operational problems may compromise seriously the environment and risk the lives of those in the area of the factories. In Camaçari, just a little before research started, a short circuit started a fire in the administration building. Due to the peculiarities of the chemicals and the processes involved, the fire department is not allowed to take action at those times. It is for the operators to fight the fire and reduce the risk of an explosion, in an area surrounded by highly flammable gases. In the same way, in the case of leakage, it is for the operators to run to the site when everyone else is running out of the plant wearing their protective anti-gas masks.

The presence of danger was very constant. I myself had the chance, during the short research time (three months in Camaçari), to hear the emergency alarm sound twice in CPC and three times in the factory next door. In regard to the next door plant, which used the deadly phosgene gas in their process, the operators used to joke it had more leakages points than a strainer. They told me that if I felt a sweet and delicious smell of ripe fruit, I should put my anti-gas mask on, check the direction of the wind in one of the various indicators, and run without looking back. The danger not only inside the plant itself, but also from the other factories in the complex, was an element of risk. The large cages of exotic birds seen in the gardens of some companies were meant, so I

was told, to be a safety device in case the alarm systems failed. As the birds have a higher sensitivity to poisonous gases than humans, their unusual behavior or sudden death would indicate leakages and the need to evacuate the place.

Another element that made the operators value their occupation higher than any other in the plants was due to the fact they bore the anti-social tendencies of the shift work necessary to run the plant, while the others didn't. They were isolated from all other activities in the plants, had a separate eating room the productive area, separate toilets and transportation, unless they were taken off the shift for some reason (which implied a considerable reduction in the pay. Shift workers had more than one-third additional income to compensate for shift hours). They needed to be constantly in the area, even when it was under normal operation. In case of problems it was too far to run from the common restaurant to the area, or to wait to use a busy toilet.

During normal operation, the operators' main task is to perform his duties responsibly. In the case of problems, though, they must be ready to act immediately and in a coordinated way.

Their direct relation with the performance of the main productive task of the company and the need for courage in case of trouble contributed to their separate identity as the 'elite of the blue collar workers'. They regarded themselves superior, in this sense, to all other blue collar workers. The nature of the activity assumed, this way, some symbolic aspects directly related to the hierarchical ordering of the professions in the eyes of the workers. But if in these two aspects the operators regarded themselves as superiors, in terms of their relative position on the external market the maintenance men, of more independent skills, and the white collar workers had better chances of employment, except perhaps at that point in time, in which a long recession had considerably reduced employment opportunities all round. Their higher dependence on relation with the company might be one of the reasons for their stronger claims for reciprocity, in terms of the valorization of their tasks. They claimed that maintenance

workers and white collar employees could be easily replaced, while a good operator takes years to train.

Their salary losses caused, partially, by the erosion of purchasing power through inflation and partially by the company's difficult situation, was very much resented on moral grounds. As they had experienced of working for the company at a time when the cost of their wages was trivial compared to the costs of running a capital intensive industry, and with the lack of any coherent or systematic attempt to communicate that would enable them to understand otherwise, the shrinking pay was attributed to the destruction of the idea of CPC as a family and as a devaluation of the risk they had to take to run the equipment and protect everyone else's lives.

There developed all sort of individual strategies of construction and valorization of a professional identity, reacting against the socially constructed barriers that isolated the operators as a professional group inside the plant. Much of the discourse of (especially the old) operators was a form of social valorization. These discourses were developed as an attempt to generate some sort of symbolic capital through the exercise of their activity that would not only allow for the construction of a reputation but simultaneously allow for the development of an individual feeling of pride and accomplishment. Some operators, seen as more reasonable and mature by the management, would attempt to maintain a smooth social relation with all other professional groups as well as with the management. These, seen by most of the young operators as servile flatterers of the management, were those more likely to climb the operational career structure. In the context of Camaçari plant, there were not many points of consensus on issues of merit for promotion, as opposed to the conditions at the São Paulo plant.

Some of the men attempted to improve the image of the operators having as basis the will to cooperate with other professional groups for the sake of quality and productivity, as did the chief operator of the group I was observing, including cooperation with the maintenance workers, who are skilled craftsman of sometimes

higher qualifications than the operators, with whom they needed to cooperate to do a good job. This type of operator was rather rare, for in the majority of the cases the operators tended to define the importance of the operator for the company against the other professionals, blue and white collar workers alike. But even the people who refused to recognize the divisions that created social barriers against other groups tended to see the welders, for example, who performed the simpler of the maintenance procedures, those not requiring much formal training, as belonging to an inferior group. Those believed to be below them in the social hierarchy were those believed by the operators to demand closer supervision when performing their tasks in the industrial area. In regard to the welders, the chief operators and supervisors would always tell the operators to follow them to the mending point, to make sure they wouldn't apply hot welds to an undrained pipe and blow the place up. The amount of supervision required was a measure of the social status of the worker in the plant.

All the workers in the chemical industry, unitl the time of the research, belonged to the same labor union, and had a similar relation with the company: in terms of the general human resources management policies, they were to be equally treated. The distinctions were mostly created locally, by the plant employees themselves. As a comparison with the other plants will indicate, in the presence of positive exercise of leadership, on the part of the manager, promoting cooperation and valorization of all professions as necessary for the success of the company, the social construction of division among professional groups tended not to occur, at least not on such a large extent. That is, in the absence of clear guidelines, the dispositions based on the incorporated distinction between manual and intellectual labor tend to serve as the basis for the construction of professional identities and a status system that allows the various professional groups to protect themselves from uncertainty and react against what they perceive as the cause of their powerlessness: the lack of valorization of their group as professionals by the company. The more one group defined its importance

against the others, though, the more fragmented became the environment, increasing rather than reducing conflict and the lack of cooperation, that further increased the feeling of the lack of professional valorization the various groups felt in the plant.

According to the head of the maintenance area, maintenance workers had, up until quite recently, their own discourse on professional valorization, constructed in opposition to the perceived lack of concern on the part of the management and against that of the operators. The higher pay of the operators was said, by the maintenance workers, to be a function of shift work and not of their centrality to the productive process. They also affirmed the irreplaceability of maintenance workers by creating a discourse that valued their experience with the equipment, and believed themselves to be better off than the operators for their experience was not as tied to the knowledge of a specific productive process. But when the research started it had already been announced that the whole maintenance area was going to be transferred to a subcontracted company, which had considerably affected their mood and shifted their discourse to address the present situation.

Naturally that the managers, especially those that dealt directly with the shop-floor workers, had a clear understanding of the importance of the excellence of the shop-floor workers and of the fundamental role they perform for the survival of the company. The importance of the various professional groups is relatively obvious in the context of any organization. But the fact that there is a real, concrete need for a given professional to perform a task is not necessary for the formation of a feeling of importance concerning the professional experience needed to performing that task. This feeling of importance in the specific context is extracted from the symbolic reality created at the workplace and how it mediates between the given social division of labor in the industry and the understanding of this division of labor. The comparison between the Camaçari and São Paulo plants indicates the extent to which the role of the top person in the organization is important in establishing adequately this relation, showing

how the inability of imposing an adequate framework for the understanding of the reality of the plant on the part of the Camaçari manager allowed for the development of this unfortunate experience of work on the part of the employees of the plant.

3.10 The labor union

The position of the plant manager in regard to labor union affiliation was unclear. Asked his position, he said that, for himself, he had nothing against it, but that, on the other hand, would not tolerate union agitators on the shop floor. He said that as long as political preferences were a private matter for the workers, and did not interfere with the routine of the plant, he had nothing to say. But as his role was to defend the interests of the company, attitudes against the company's interests were taken as negative on whole. He criticized the strong opposition of the Alagoas plant manager to the union. Less than 30% of the shop floor workers were affiliated to the union. The fact that the position of the company was unclear was interpreted by the workers as a strategy to discover involvement. The lack of definition was seen as dissimulation of intentions, which contributed to the interpretation of the company's intentions as suspicious. In the questionnaire survey, the majority (68%) of the employees declared that they did not trust either the company or the union. The distrust of the company made it more important to keep contacts with the labor union, even if the ideals defended by the union were not those of the majority of the employees (in terms of political ideology, as far as I could realize, the shop floor workers were very far from defending socialist ideals, which were the core of the discourse of the union).

The labor union movement contributed to deepen the distrust of the company and of the managers. I don't imply here that they should do otherwise, but that their activities deepened a tendency that was originated and fueled inside the company itself.

Looking at the union's journal, we can see the accusative tone of the discourse in relation to the managers in general, in regard to the union of the companies of the complex, and especially toward the chairman of the raw material producer, at that point also the president of the union of the companies. At the time of the research, the companies were disputing a salary clause on a collective agreement in court. The clause was disputing the inflation-linked adjustment index that the companies had applied for the previous two years. The fact that workers and companies were fighting in court was a ultimate proof of the lack of dialog and good will to solve internal matters in a environment of respect and consideration. In many instances, after the judge declared the victory of the union, I had the chance of listening to operators who said they would rather have lost the cause than realize with certainty that the company was using accounting tricks to expropriate what was theirs by right. At that point many workers said that if the outside situation was a little better they would look for another employer.

There was no systematic attempt, on the part of the company, to provide a discourse of opposition to that of the union. The plant manager believed the union journal published distorted facts and lies, but he didn't seem to believe it was up to him to provide correct information for the workers. The workers tended not to take the interpretations of the labor union too seriously, but had no information to evaluate, from a different perspective, the articles published by the union.

The operators tended to refer to the present situation comparing the present to the occasion of the big strike that involved almost all the companies of the complex, except CPC, in 1985. According to the operators, nobody in CPC even considered joining the movement for the environment was of such mutual trust that issues were solved easily. According to them, the company would take the lead and provide benefits even before the union claimed them. All the complexities of both situations were reduced to the nature of the relationship between workers and management. According to the

management, at the time of the 1985 strike, CPC was probably one of the few companies in the complex that had not been affected by the economic recession that had frozen the domestic economy. Many companies had already seen the market for their products evolve into a situation of saturation and had had to cut costs, while the market for PVC products continued stable and CPC could maintain a very aggressive policy of salaries and benefits. For the workers, the core of the difference between the present and the past situation was to be found in the difference of management styles and on the character of the managers. A few monthes later, during my last visits to the plant, the more systematic efforts to implement the quality programs and the better understanding of the nature of this program by managers and workers alike had led to a more frequent and efficient communication between workers and management, in a way that the workers could understand better the complexity of the situation that had brought them into difficulties. The generalized tendency to blame management had been considerably reduced, and the workers tended to perceive much more clearly the situation of the company and why it was that their efforts and cooperation were needed.

The relationship of the company with the labor union was of mutual distrust. According to the leaders of the union the company ignored them and attempts to hold dialogues were vain. According to the person in charge of negotiating with labor within the company structure, the labor union was formed by radicals of communist orientation, and as their aim was to overthrow capitalism as a system there was no ground for understanding.

As the official policy in relation to the labor union wasn't clear, the attitudes of the employees were mixed. Although in the questionnaire survey the large majority affirmed not to trust either the management or the union, the power balance tended toward the side of management. As these were years of economic crises, most of the employees with families to support judged it safer to avoid a clear association with the labor union for fear of retaliation. The younger operators related to the union more

openly. As the plant manager did not take a concrete stance himself in regard to union membership, it was left to the discretion of the middle management to decide on this issue. As their decisions were much more based on personal preference than on a clear policy, there were enormous variations among the various areas, adding to the confusion of the workers. The chief of security had given orders to the safety personnel to take note of the men they saw talking to union leaders outside the factory gates "just in case". The employees realized they were being watched and spread the word that the plant manager was composing a black list. The head of maintenance area would encourage his subordinates to join the union, for it was their right according to the constitution and a way for them to defend themselves. As for the shift supervisors, the general tendency was to be against involvement in the labor union.

Having in mind that there was now a need to progress towards quality, it was necessary for the plant manager to develop a strategy for negotiating with the union. The union defended the idea that quality assurance was a capitalist to reduce the power of the workers. As the quality program prescribed the recording of every small step taken during production, it would lead to the expropriation of the workers' knowledge and reduce the dependence of the company on a stable team of operators. It would contribute, according to the union leaders, to further empowerment of the management in relation to the labor force, for now the firing and hiring would affect less the productive process. Indeed, it would be true was not for the need, in the new market, for an even more total commitment of the labor force to the goals of the company. Lay-offs interpreted as unfair had the most devastating effect on motivational policies, and layoffs resulting from the need to reduce costs were seen as the most arbitrary and as a betrayal by the company of those who, for years, had contributed to its growth. The management tended to see the crisis generated by the layoffs as thunderstorm, intense for a short while but with no further lasting consequences. It was indeed central to the lack of identification of the workers with the company, for the

layoffs that were not justified on moral grounds, according to the definition of competency in the industry, contributed enormously to the deep mistrust in the manager's discourse.

The fact that the plant manager did not take a clear position in relation to the labor union allowed for enormous amount of gossip and contradictory information to circulate in the plant. The lack of definition made it impossible for the workers to define a course of action by evaluating probable consequences and kept the collectivity at a loss in regard to the manager's intentions. It generated a strong feeling of powerlessness in relation to the company, added to the fear of retaliation from joining the union, that would empower the workers against the management in the case its position was known. The result was an enormous amount of discussion and disputes among the employees on the true risks of joining or not the union, a discussion for which a conclusion was never reached.

3.11 Quality: an economic necessity transformed into a virtue

The adherence to the quality program was also an issue of difficult definition. In the beginning, the formal information, in the bulletins and on the information boards, declared that the company had now decided to implementation a quality program, but concrete steps were not coherently taken and no firm commitment to the program was observed. The initial reaction of the employees to the company followed that of the plant manager, regarding the program as yet another fashion in business management. My return to Camaçari after seven months, to conclude the research and give the final report, allowed me to observe how much the progress toward quality had been made in a relatively short time. At that point, a comparison among the plants was already possible, for the visits to the other two plants had been completed. In Camaçari, the discourse on the new necessities offered the vocabulary for the workers to think their

own situation and to legitimize the critique of the management, a critique that had been stimulated by the recent educational programs.

Although there was still a long way to go for the plant to complete the implementation of quality programs, the workers had realized that through the quality production they would recover power over their productive activity and gain a sense of professional pride. There was a firm and positive argument for the necessity to proceed in the direction of implementation.

The plant manager, who had initially resisted the implementation of the quality program had had time to realize the irreversibility of this process, and invited me to present the results of the research to him and the middle managers working under him. The workers, in the beginning bombarded from above with the quality programs, had spent hours under training and education regarding the quality programs and had become its most enthusiastic defenders. Comparatively, those at the top of the management career structure of the plant had been much less subjected to this training, and more left to research by themselves from the specialized literature. At this point, the managers at Camaçari were being beaten at their own game: They started by blaming the low quality of the workers for their difficulties in competing on the market but were now accused by the workers for not being committed enough to the quality programs, and of being in the way of the progress of reorganization.

The quality programs were recreating the conditions for a reconstruction of the pride of the workers, and giving them more power in the context of the company. They had already realized that through the quality programs they were allowed a more total relation to their activity, and the possibility of being committed to more than 'just money and profit'. Quality production reduces waste, enhances environmental protection, allows tertiary industries to offer a higher variety of products on the market, and bring more 'humanity' to production activities, by developing cooperation and respect for all professionals and the defense of excellence at all levels as a means to assure the

quality of the product to the client. The workers did not have their activity tied up only to the production of profit to a third party. Client satisfaction became a measure of the social contribution of the work process, and a way to recover the meaning of the activity. Professional pride and recognition could now be found through clear standards. In comparison to the São Paulo plant, though, the strategy and the means to proceed toward the actual construction of this identification in the routine of working was still to be provided, and the workers resented the lack of firm leadership adequately creating the basis for the construction of the relationships according to the new theories, and lacked a sense of direction to their effort.

The acceptance of the quality program as a means to restore meaning and pride to blue collar activity demonstrated that the dispute over establishing a hierarchy of the principles of hierarchization, in attempting to dispute a higher place in the hierarchy by means of setting the degree of danger and direct responsibility over the productive process as the standard for status construction within the company, has never seriously threatened the power of the hierarchy of principles based on the opposition of intellectual and manual labor and the superiority of the symbolic capital based on education. It is false the impression that the dominated fraction in that power system is rebelling by denying the categories imposed by the dominant fraction. Observation allows for the conclusion that their claim is more emotional than rational in nature, as a way to express their resentment, and is not formulated as a discourse of political opposition. That is, there was never the awareness of an arbitrary system of classification being imposed upon the blue collar workers, neither by themselves nor by the managers. In this sense, the blue collar workers never ceased to incorporate the instruments of their own domination. The questioning of the principles of hierarchization, if questioning there was, was nothing more than the memories of a time in which responsibility over the technology and the importance of their bravery determined their relatively high status within the industry. As that "memory" was

brought up in their resentment over their situation more as an appeal for recognition than as a threat to the managers, it was never being rationalized as a conscious strategy of political opposition. There was no contradiction at all for the blue collar workers in abandoning their claims based on responsibility and danger and searching for recognition through adherence to the principles of quality production. By accepting quality production, the workers were indeed expressing their perception of their own knowledge as a subordinated knowledge, in need of a larger knowing process (that of the manager) in which their own knowledge could be actualized as a meaningful and purposeful body of skills.

One of the issues that were still disturbing the collectivity was the transference of the maintenance area to a subcontracted company. The workers, now enthusiastic about the quality programs, were questioning the management decision of outsourcing maintenance, for they recognized that excellent operation depended on excellent maintenance and were wondering how much loyalty for CPC outsourced labor force would have. Any management decision interpreted as threatening the quality programs was being strongly opposed. As the organization of more efficient communications system was under way, more information was systematically reaching the shop floor through official channels, serving as fuel to the adherence to the quality programs. But as once more the comparison with São Paulo illustrates the questioning of the decisions of the manager tended to occur only when the reasons were not understood according to the needs of the industry as defined according to the circumstances of the market. In spite of the understanding of the quality programs, the "blue collar hot-line" (*rádio-peão*), was still actively questioning manager's decisions. The was spreading gossip that instilling doubts about the moral of the company. Soon after I left CPC I heard from one member of the holding company that the plant manager of Camaçari had being removed and was now working on a project more suited to his preferences in the ranks of the national partner.

3.12 Information, communication and trust

The blue collar hot line (rádio-peão) is how the workers referred to the informal, mouth-to-mouth flow of information. In the absence of a clear and efficient system of communication providing trustable information, the informal network of communication provided the news the community was hungry for. As it was a mouth-to-mouth communication, the effect was that often the information was exaggerated and distorted. The system, though, was of amazing efficiency in the speed in which information circulated. Information that I had heard as sensitive/secret in the office of the manager, could reach the shop floor in less than 24 hours. Many times the workers asked me if I had heard something about an issue that was still under deliberation and on which no one had authorization to comment. The middle management said these leaks of information directly jeopardized their leadership in the eyes of the workers and increased their weakness within the hierarchy of command, as often the workers had access to information before they did.

The chairman of the holding company already knew of this problem at the plant, for key information regarding the holding company was leaking through the plant to other units. They suspected the copy room employees and the secretaries, who traveled in the same bus as the other employees and had access to key documents. Key information was ordered to be typed on computers by the managers themselves, and photocopy reproduction to be watched. This measure increased the suspicion of the employees and didn't seem to have any effect. Gossip and sensitive information was still circulating and reaching even the shift operators, despite their anti-social hours. According to the manager of the São Paulo plant, whenever the level of anxiety is too high, and power alliances and feuds exist in a company, this problem exists. A whole system of exchange based on sensitive information develops, and "information

exchange" becomes a powerful form of "favor exchange", loyalty gathering and power alliances. It is only eliminated when secrecy is eliminated and the trust of the employees is won by the management. Secrecy, though, still according to the São Paulo manager, cannot be completely eliminated at the risk of creating a permanent state of anxiety, especially in a situation such as that of CPC at that time, in which its survival was not fully certain. The permanence of some secrecy, is known to the workers, and makes this trust very delicate and dependent on a constant effort of the manager to allow the employees to interpret their situation and evaluate their chances within the context of the company. The trust depends on the manager's ability to create the belief that he/she is honestly trying to be as open as possible. This belief only develops after the collectivity experiences, in practice, a sharing of information that is in agreement with the reality they perceive themselves, and that serves for them as an instrument of power for devising their own strategies of action.

In this sense, the mechanicist approach to management, in which the management of human needs is second to technological inputs and reforms in organizational charts and the scope of functions, was, in Camaçari, the central cause of the sense of meaninglessness and powerlessness of the employees. The powerlessness, by not allowing the construction of a positive strategy of action and by not providing elements for the construction of individual trajectories in the blue collar ranks, contributed to the gradual distancing of the workers from their activity and the product of that activity.

The professional pride and the identification with the productive activity that was at the origin of motivation in the past, was gradually transformed into a distant relation between the worker and the company. During the ten years after the death of the first manager, the constant experience of this powerlessness and meaninglessness created a feeling of disillusionment with the activity itself, and the activity worked against the worker like a prison holding them in a highly frustrating situation. Loyalty to the family

substituted professional pride and became a consolation for the daily endurance of a meaningless routine performed for purely monetary compensation.

As the nature of the activity itself, as defined under the traditional division of social work within the industry, does not allow the workers to overcome the dependence on the management for meaning, the quality of the management becomes an issue of high interest to the workers. Thinking by the logic that serves as the basis for the very division of labor that holds them in a dominated situation, the workers themselves defend the need for able management, on whose exercise of leadership they can rely.

Quality production, by awakening the management to the necessity of worker cooperation, brings the necessity for constant monitoring of worker involvement, and requires the employment of managers who, besides being capable of understanding the market and the technology, are also able to exercise positive leadership according to the newest management philosophies. That is, quality production demands an increase in the educational and cultural capital of the managers, to enable them to legitimize their leadership over the labor force through the competent construction of an image of competency that the workers can trust. Quality production, by enhancing the need for sharing information with the workers, tends to reverse the alienating tendency of the capitalist division of labor. But it only works satisfactorily in a context in which communication is efficient, that is, in a situation in which the message is accepted, understood and incorporated as a truth about reality. The efficient work of communication depends on the symbolic capital of the manager, which is the element in this context that endows the truth the manager speaks with communicative power. It weakens the dividing line between manual and intellectual labor, for it requires constant investment in the education of the workers and their technical upgrading. It does not, though, eliminate the necessity for the positive exercise of leadership by the managers, who's even higher investment in the construction of their symbolic capital legitimize their positions in the context of industry. Given the increasing complexity of the market

under the process of globalization, an arrangement that justifies the dependence of the collectivity on the quality of manager who possesses more symbolic capital is further naturalized by the perception of its necessity.

3.13 The mechanicist view of the organization and the alienation of the workers.

The mechanicist understanding of the organization on the part of the plant manager reflected his own lack of adequate capital to define himself as a member of the elite, capable of taking ideological positions to legitimize the manager's domination and to provide a coherent discourse of domination for those under him in the hierarchy of command. His failure to realize the importance of his own position in the reproduction of a system of domination, made it difficult for him to extract the non-economic aspects of production that are fundamental to the full extraction of economic benefits of such power relations.

His inability to convert educational and cultural capital into symbolic capital, the necessary process of social alchemy that ensures the full extraction of the economic capital, motivating the labor force and avoiding the formation of conflicting interests inside the organization, ended up leading to his exclusion from the top of the dominant class, in the form of his dismissal from the position of manager and replacement in a more "technical" job.

As the workers' own relation to the social organization of production occurs through the logic and necessities of capitalism, with its inherent perception of time, space and language, the necessities for meaning for the workers are defined according to the needs of capitalist production itself. The same schemes that serve as a basis for the constitution of a social organization of labor, with its corresponding status hierarchy, are those that serve as the instruments of communication and knowledge themselves. If in the vacuum of a positive exercise of a coordinating power, the dividing power of these

basic schemes of perception spread to many other locations than those they were originally to define, thus creating a complicated status hierarchy among the blue collar workers themselves, it is because these basic schemes of perception are the basic cognitive schemes through which the blue collar and white collar workers alike understand reality. That is, the same cognitive schemes that allow for the acceptance of the power of the managers are those that serve the relation of the individual with himself and with the other. The social identity and the amount of power one feels one is entitled to claim corresponds to the perception one has of oneself in the society in which one lives, a perception created according to the logic of one's cognitive system.

The principles of scientific management and all the ideological production produced to legitimize the capitalist order, work as structuring instruments of domination, for they are structured, providing the conditions for the intelligibility of practices and the principles for its reproduction. The instruments of domination that the ideological production produces, on their turn, reproduce the domination, in a misrecognized form, by producing the structure of the field of social classes through the homology between the field of symbolic production and the field of social classes'.[93].

It is the acceptability of one's own subjugation, which is at the root of the very possibility of participating in that field, that the workers unconsciously accept their fate and cooperate in the development of their own alienation. And in a sort of irony, the phenomenon of alienation develops deeper precisely where exploitation is not fully accomplished, that is, where the manager fails to extract non-economic contributions for enhancing profitability and competitiveness, by failing to work towards integrating the workers with their activity by turning their participation in the social division of labor into a meaningful activity for the workers themselves.[94] The enthusiastic defense of the

[93] Bourdieu,1989.

[94] The transformation of the capitalist organization of labor, with the development of joint-stock companies, is already pointed by Marx, in volume III of the Capital as separating function from ownership of the capital, where labor becomes entirely separated from the means of production and of surplus labor. In this process, Marx sees the joint-stock company as 'private production without the control of private property' and as 'the elimination of capital as

quality programs by the workers is based on their misrecognition of the very nature of this involvement. The end of the excessive faith in the institutionalization of social relations and on the self-reproductive power of bureaucracy, recreate, at the heart of the capitalist system, the grounds for the appearance of a new political orthodoxy inside the industrial organization. In mass production times, the exclusion of the workers from a meaningful work experience was at the root of a strong political opposition to capital (in the form of strong participation in the labor union movement against the capitalist organization of labor) and of the workers alienation. The reintegration of the worker with his own activity, by providing the grounds for a meaningful work experience, reduces significantly the power of the labor unions (as the case of São Paulo will demonstrate), by enhancing the satisfaction of the workers with their own activity.

The variation among the plants demonstrates that no exercise of power in the sense of a planned strategy of coercion and domination by the manager can automatically produce the desired outcome in the labor force. Coercive power, exerted by the middle management in the absence of central direction, is much more likely to produce power alliances, reactions and sabotage at the bottom than compliance. Cooperation and motivation to produce, on the other hand, was more likely to occur in a situation in which authority is exercised more as a coordinating element than as an element of control. As each plant is a field (field here being the geohistorical concept introduced in chapter I) organized around a system of power, the demand of energy necessary for its reproduction increases in a situation of imbalance, that is, in a situation in which the structure of the symbolic field (field here as defined by Bourdieu, as a structure of

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private property within the capitalist mode of production itself', which in some way leads the private property into becoming a property of the producers (by making it possible for the social ownership of the stocks and the deconcentration in the property of capital, opening the possibility for a classless society to develop from within the expansion of the capitalist mode of production). In a text quoted from Dahrendorf, Ralf, Class and Conflict in Industrial Society, p. 20-23, Stanford University Press, 1959, in Collins, Randall, Four Sociological Traditions, Selected Readings, Oxford University Press, New York, 1994. If we follow the logic of Marx thought, we would be now facing completely different forms of social organization than the one on which he based his original discussion of alienation, making it necessary to re-evaluate the question of submission of labor to capital as essentially exploitative, especially in the case of some large enterprises where the majority of stocks already belong to pension funds.

objective relations) does not match the structure of the social classes. Efficient management is the one capable of adjusting the ideological discourse of domination to a social organization of the division of labor that fits best, repressing the political discourse of opposition while exposing less the arbitrariness of the principles that provide the basis for the organization of this division, or reducing the feeling of necessity for a discourse of opposition through the enhancement of the workers' satisfaction. As Bourdieu says, the individuals are more possessed by their habitus than they possess it, so that when the arrangement under which they live is more in accordance with their habitus, it is less likely that they develop an awareness of arbitrariness.

To conclude, it is important to note here that the state of alienation is different than the state of total powerlessness. In a situation in which the main locus of power cannot be located, as in the case of Camaçari, and in situations of clearly coercive usage of power, the phenomena of alienation develops as a sort of unconscious strategy of reaction, that is, in a situation of powerlessness and meaninglessness, the workers, by allowing themselves into an alienated situation, impose a limit on exploitation by demanding an enormous investment of time, energy and resources to implement supervision and surveillance to produce poor results in economic terms. Quality production, by introducing the need for a more meaningful experience for the workers, makes possible the optimization of the investments in the reproduction of the social division of labor, being economically more rational and productive. As all the managers I interviewed agreed, to produce with quality is easier and much more economical.

CHAPTER IV
* SÃO PAULO PLANT

4.1 Introduction

The historical retrospective of the São Paulo plant exhibits enough elements to justify the existence of a high level of anxiety and insecurity. Compared to the other two plants, the number of dismissals of blue collar workers, in São Paulo in the ten years that followed acquisition by CPC, was far higher. The future was unsure and the physical decomposition of the equipment was clear, demanding continuous maintenance work of and repairs in general. Why, I asked myself at the beginning of my stay in the plant, was the human environment so positive and the apparent level of satisfaction so high? Coming from Alagoas, were it took me some days to get a clue to the problems of the plant due to the fear of censorship and retaliation, I started to think that there was some hidden ugliness in São Paulo and that the positive comments were a sort of facade. I soon realized I was wrong. Compared to the other plants, the name of the director of São Paulo was heard much more constantly on the shop floor, with the blue collar worker attributing to his leadership the fact that the plant hadn't been shut down, that they all were so much respected and had so many responsibilities over their work routine. One operator II with over twenty years of experience at the plant put it as follows:

"You should have seen this place before CPC bought it. Many years ago an operator died inside one reactor and all they did was clean it up fast to continue production. On the midnight shift some people still hear to his desperate voice coming from inside the reactor, saying it is the ghost of the dead operator. Accidents were constant. People lost fingers, eye sight, and even legs in this plant. And nobody could say a thing. Lay-offs were constant and the antagonism towards the bosses was strong. It was a dictatorship in here. We didn't have much hope. The family that owned it all started to lose control. Many

factories closed. We were sure we were going to lose our jobs. Then CPC bought it. In the beginning, the feelings were very much mixed. We didn't want to lose our jobs but we knew the plant was old. We thought of hanging together and avoiding as many layoffs as possible. Then came the director. He was so honest in talking about the plant's situation. We didn't expect it. I was expecting conflicts to happen, but nobody stood against him. He said he didn't have much hope for the future of plant, and that lay-offs were inevitable. We kind of knew it, but I expected some conflict. Then he said that he expected the young people without family to try to find other jobs. He consulted us about who we thought were the best people in each area, independent of educational level or anything. He said he needed to make a selection, like the national soccer team, keeping the very best in each position. We cooperated, sadly, and the people who stayed were those that everyone thought were the best. Everything was so fair. We were sad to see friends going, but it was inevitable. And the director worked really hard. He did his part. He made a team of the one's who stayed, and he really respected the opinions of each one of us. He really listens… In the beginning I wasn't sure...no manager had asked what I thought before...now, oh, I really decide what is best in my area, and the director himself will never step in it without letting me know first. He always says: in your area, you are the boss, if I or even the head of the holding company step in here without safety equipment or against what you think is the best procedure in the area, I expect you to exercise your authority upon us. And it is true. He always backed us up in these ten years he has been here. What a difference from before."

What it was that constituted the power and the authority of this man was intriguing me in the beginning. With a much milder style and nearly no surveillance, he managed to produce with profit in a plant with inadequate equipment, had a higher rate of development of new resins in a much more poorly equipped laboratory, and a group of employees that related to the plant as if it was their second home. The answer came from the employees themselves, eager to emphasize that the director was honest, always spoke the truth, and respected the employees. The question became, rather, what is the truth that he speaks, and how by speaking the truth does he get compliance and agreement upon the arrangements made within the plant. Foucault touched the core of the problem in his lecture on the question of truth[95]:

[95] Gordon, 1980, p.93.

"Schematically, we can formulate the traditional question of political philosophy in the following terms: how is the discourse of truth, or quite simply, philosophy as that discourse which par excellence is concerned with truth, able to fix limits to the rights of power? That is the traditional question. The one I prefer to pose is rather different... My problem is rather this: what rules of right are implemented by the relations of power in the production of the discourses of truth? Or alternatively, what type of power is susceptible of producing discourses of truth that in a society as ours are endowed with such potent effects? What I mean is this: in a society such as ours, but basically in any society, there are manifold relations of power which permeate, characterize and constitute the social body, and these relations of power cannot themselves be established, consolidated nor implemented without the production, accumulation, circulation and functioning of a discourse. There can be no possible exercise of power without a certain economy of discourses of truth which operates through and on the basis of this association. We are subjected to the production of truth through power and we cannot exercise power except through the production of truth. This is the case of every society, but I believe that in ours the relationship between power, right and truth is organized in a highly specific fashion. If I were to characterize, not its mechanism itself, but its intensity and constancy, I would say that we are forced to produce the truth of power that our society demands, of which it has need, in order to function: we must speak the truth; we are constrained or condemned to confess or to discover the truth. Power never ceases its interrogation, its inquisition, its registration of truth: it institutionalizes, professionalizes and rewards its pursuit. In the last analysis, we must produce truth as we must produce wealth, indeed we must produce truth in order to produce wealth".

That sets us thinking in which way was the truth spoken by the manager of the São Paulo plant superior to the truths spoken by the managers of the other plants, and how did it constitute its own efficacy. What constitutes the efficacy of the discourse of the São Paulo plant manager in comparison to the others is the fact that he departs much less from the *doxic* mode of knowledge[96], so that his discourse exposes much less the arbitrariness of the arrangements within the plant, opening much less room for the constitution of a discourse of opposition, legitimating the orthodoxy that was to his advantage to inculcate. And in some sense he goes even further than that. By delegating authority and respecting himself the authority that he bestowed upon the

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"Every established order tends to produce (to very different degrees and with very different means) the naturalization of its own arbitrariness. Of all the mechanisms tending to produce this effect, the most important and the best concealed is undoubtedly the dialectic of the objective chances and the agent's aspirations, out of which arises a *sense of limits*, commonly called the *sense of reality*, i.e. the correspondence between the objective classes and the internalized classes, social structures and mental structures, which is the basis of the most ineradicable adherence to the established order. Systems of classification which reproduce, in their own specific logic, the objective classes, i.e the divisions by sex, age or position in the relation of production, make their specific contribution to the reproduction of the power relations of which they are the product, by securing the misrecognition, and hence the recognition, of the arbitrariness on which they are based: in the extreme case, that is to say, when there is a quasi-perfect correspondence between the objective order and the subjective principles of organization (as in ancient societies) the natural and social world appear as self-evident. This experience we shall call doxa, so as to distinguish it from an orthodox or heterodox belief implying awareness and recognition of the possibility of different or antagonistic beliefs." Bourdieu, 1977, p. 164.

workers, he is allowing them to have the experience of exercising a function that is in the scale of values of the capitalist society ranks above the ones they were traditionally forced to conform to.

Although the blue collar workers are, by the historically inculcated necessity of the capitalist society, inclined to execute a task without reflecting upon it, and to obey commands rather than give them, they know things can be different and that they can be employed in nobler tasks, that value their own work experience and their thinking capacity. To delegate authority is to raise the blue collars activity in the value scales of the industry. Instead of mere executors, now they are called on to manage their own activities. In the present situation, the worker can have a firm sense of achievement, of being meaningfully contributing to a collective project through his own unique professional skills.

For their thinking exercise, they need amounts of information that traditionally didn't reach them out of the belief that it would be a waste anyway, for it was beyond the blue collar capacity to adequately use such information. In this process of delegation, the blue collar workers experience a sense of upward mobility in the sense that now they possess some of the capital most highly valued in the industry: a valued knowledge with power to impose itself as a valid knowledge about the productive process - a knowledge that allows its holder to accumulate symbolic capital, in the form of acknowledgement of his or her competence - a knowledge with speaking power through which the workers can construct an image of competence that empowers them in the context of the company and gives them a face: they are not just one more blue collar worker, but a specialist with important skills. As managers, they also know some of the truth of the market, the needs of the company and the administration of labor routines, and more than that, they are listened to in their attempt to improve the company's competitiveness, having their knowledge valued where before only the pace of their manual work counted.

As in the case of the managers, "self-motivated" individuals according to the requirements of the roles prescribed in the business literature, the now enriched workers, in terms of their possession of some symbolic capital, are motivated to produce and to protect the company's interests, of which they are also, now, guardians.

The fact that they are satisfied with less than the managers is not perceived as an unfair allocation of the power in the company for it is naturalized, in their own eyes, by the fact that they possess much less educational capital and need the managers to properly interpret the reality for them. In the eyes of the workers, the plant director was as generous as allowed under the circumstances, once the basic division of labor (that puts blue collar workers performing manual tasks and white collar workers thinking tasks primarily, educated workers in top positions, females out of the productive area, etc.) within the plant is out of the scope of the questioning, largely unthinkable, given, obvious and natural.

To say the truth and to act right is the strongest instrument of domination for the manager within the context of the industry. As shared categories of truth, right and justice are more legitimate the more universal and less arbitrary they appear (in the eyes of the group), the values cultivated by the group, the defense of those values, have an enormous power of legitimating the leadership of the manager. The truth as a strategy of domination is effective because by appealing to the indisputable it does not raise the opposing political discourse, for there is no political discourse against the value of truth and justice. As the dismissals for the sake of the survival of the company were justifiable according to the truth of the market and performed in the most fair way, valuing competence and dedication (and economic needs) of those involved, the most highly valued features of personality in the industry by the workers themselves, opposition to it would have been the act of a mad men.

Serva, 1992, indirectly explores the issue of the agreement upon the truth in the modern organization in his analysis of how the imported management methodologies

were transformed into a myth in Brazil. As in the myth, the imported management methodologies had the power of transforming history into nature, that is, of transforming the elements that are historical, products of human action, into a natural order. These methodologies do not generate an explanation of the phenomena, but lead to the ascertaining of a reality. The transformation of the methodologies in myth leads to an unconscious operation of causality, in which the form provokes the appearance of the concept. In this process, a truly ideological operation is processed, in which the incorporation of management methodologies serve as the justification for a given type social organization.

Pena, 1985[97], reconstructs the context in which those methodologies were introduced in an attempt to rescue the original meanings. According to her, the introduction of imported management methodologies started to be systematically pursued by the Sociedade Auxiliadora da Indústria Nacional (Society for the Support of National Industry), formed in 1827, and later, by the Brazilian Industrial Center (Centro Industrial do Brazil) formed in 1904. Analyzing the discourses produced by the managers and by the leaders of both organizations, Pena concludes that their discourses served less the organization of labor in itself (of clear Taylorist inspiration) than as discourses of legitimation of the industrial order by the industrial bourgeoisie, in their process of political organization against the land aristocracy. The so-called scientific management methodologies provided the logic elements for the formation of a discourse on the necessity of industrial development, and the language for the class identity of the industrial bourgeoisie. Industrial development is defended as the natural course of the progress of nations.

Foundations and Institutes[98] are created to study and divulge the new methodologies. According to Serva, the appeals of universality, neutrality, rationality and modernity

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97 PENA, Maria V.J. A Introdução de Ideologias Gerenciais no Brasil. Revista de Administração de Empresas, Rio de Janeiro, FGV, 25 (3):23-30, jul./set. 1985 in Serva, 1992.

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contributed to the formation of the myth of management methodologies as the scientific discovery of inevitable laws of social progress. According to him, the solutions of imported management technologies have been presented, from early in the century, inside and outside the organizations, as technical solutions, products of science. Based on the concept of rationality that privileges the human capacity for carrying calculations and choices according to previous evaluations of the consequences of action, a concept of rationality developed in Occidental Europe from the XVII century, the management methodologies appear as real products of scientific development, offering a real possibility of a management action that is rational, that is, that increases efficiency and efficacy. The adequate choice of methodology and its correct employment would assure the elimination of errors and problems in the utilization of means, allowing the organization to attain its goals more efficiently thanks to the rationalization of the procedures.

This efficiency is measured in relation to the attainment of the goals of the organization, which is defined as the realization of the tasks that oriented its creation. The efficacy is measured, preferably, in terms of quantitative indicators: volume of sales, market share, profitability, produced volume etc. The meaning of everyone's effort, that is, the attainment of pre-established results, depends on the concept of rationality for its full actualization. The idea of rationality[99] is closely related to an

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As the Instituto de Organização Racional do Trabalho (Idort, in 1931), the role, established by law (Decree n.579, 30/July/1938) of the Departamento Administrativo do Serviço Público (Dasp) of promoting the import of management methodologies, the Foundation of Fundação Getúlio Vargas (Decree 6.693, in 1944), and the creation of superior schools of Business management, A Escola Brasileira de Administração Pública, in 1952, the Escola de Administração de São Paulo, in 1954, and those of Federal University of Bahia and Rio Grande do Sul. To increase the efficiency of those schools, exchange programs and international agreements created the link among the schools above and Michigan State University and the University of Southern California, with intense exchange of students, professors and resources. Serva, Maurício. Contribuição para uma teoria organizacional brasileira. Revista de Administração Pública, Rio de Janeiro, FVG, 24(2):10-21, fev./abr. 1990, in Serva, 1992.

[99] The question of the rationality is one the main themes of the questions that involve knowledge. Since ancient Greece, reason has been a central theme in the philosophical exercise. From the XVII century, occurs a transmutation of the concept of reason, that becomes normatively reduced to the capacity of calculation. A considerable dissociation from the scientific and philosophical knowledge occurs, and the understanding of rationality becomes largely associated with what can be understood through science, the quantification of nature, the

evolutionist understanding of modernity, in which the future of underdeveloped societies is at the present of the developed ones. The copying of the models developed by the developed societies are interpreted as a step toward the future, promoting the advance toward modernity (Serva, 1992).

Weber affirms that capitalism appeared through the development of permanent and rational enterprise, of rational accounting, of rational techniques and rational Right. To all of those items, it is necessary to add rational ideology, rationalization of life and rational ethics of the economy[100]. Various studies on the ideological dimension of instrumental rationality in the later-developing countries confirm the role it had in shaping agreement upon its universality and making indisputable the principles upon which it rests[101]. It is important to note, though, that the ideological functioning of instrumental rationality is by no means exclusive to the later-developing nations. A large part of the strength of this logic of thinking in later-developing countries comes precisely from its incorporation as a *doxic* mode of knowledge in the developed countries as well.

The shared understanding of organizations and of modern society based on the above factors is fundamental for the acceptance and legitimation of the power of the managers in the three plants. It is also true that the view of the organizations as whole composed of interrelated parts integrated by a coordinating element, the manager, legitimizes his position by attributing to it a central role in the reproduction of the group.

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utilitarian calculation of consequences, the apology to mathematical structures, contributing to the construction of a society that privileges the technical aspects as no other has ever done. Serva, 1992.

100 Weber, Max. Hist¾ria Geral da Economia. In: Tragtenberg, Maurício, ed. Textos Selecionados de Max Weber. 2 ed. São Paulo, Abril Cultural, 1980, quoted in Serva, 1992.

101 Guerreiro, Ramos, A. A nova Ciência das organizações. Rio de Janeiro, FGV, 1981, Marcuse, Herbert. A ideologia da sociedade industrial - O homem unidimensional 6 ed., Rio de Janeiro, Zahar, 1978; Habermans, J. Técnica e Ciência como ideologia. In: textos escolhidos. São Paulo, Abril Cultural, 1980; Motta, Fernando C.P. Teoria das organizações: evolução e crítica. São Paulo, Pioneira, 1986; Pereira, L.C. Bresser. A sociedade estatal e a technoburocracia, São Paulo, Brasiliense, 1982, among others. In Serva, 1992.

Most of the schools of management that provided the logic foundation for the mass-production type of organization were developed on the basis of a functionalist view of these organizations that is teleological and ahistorical[102]. They were created and existed to pursue pre-stablished goals, and if properly managed could do so interestedly and in a state of equilibrium. This gave to these theories the appearance of scientificity, and created the belief in the possibility of organic integration within the walls of the organizations. The belief of the necessity of this type of organization led to a blind faith in it and to the neglect of the role of management in creating this integration. These theories tend to ignore the fact that organizations exist in a broader society troubled by class conflicts, inequalities, racial problems, nationalist ideologies, labor movements, gender discrimination, religious conflicts and many other contradictions that affect differently the collectivity of employees that participate in it. The understanding of the limits of these theories in their interpretation of the needs of the modern organization allowed the managers who are abreast of the new theories to address the broader concerns of the collectivity under their command, overcoming the limitations of previous management theories, at the same time in which they can utilize those very theories to legitimize the present order.

It only became clear to me after the analysis the situation at the São Paulo plant that the role of leadership in promoting integration with the company's interest is indeed quite central. The power of external circumstances, apparently uncontrollable in the example of Camaçari, can be considerably diminished according to the skills of the manager, for the logic of the market that the manager is following when taking his decisions is indeed the same as that accepted by the workers, being a matter of leadership competence to reduce the impression of arbitrariness on the decision

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102 According to Séguin, F. & Chanlat J. (L'analyse des organisations, une anthologie sociologique. Quebec, Préfontaine, 1983) In Serva, 1992, the functionalist paradigm is common to the classic school, the Weberian theory of bureaucracy, the school of human relations, the theory of vicious cycles and the systemic school of management.

process and garner sympathy for the decisions taken. The democratization of the factory is the most powerful ally allowing the manager to proceed with the quality production implementation. As the needs of the market and the values derived from it are indeed deeply incorporated by the workers, the apparent weakening of the position of power, by giving up coercion, is what opens up the possibility of a much more total commitment of the labor force to the needs of the company. By opening up the working environment to employees participation, the manager assures their commitment to the rules, for those rules were produced by the workers themselves, and increases their responsibility over the results without fear of anarchy, for the workers understand the need for rationality in the processes and its results through the same logic as the manager.

The creation and reproduction of an environment in which the alienation of the workers finds a fertile path to develop is also directly related to the exercise of authority of the manager. That is, the eradication of alienation does not depend either on the destruction of the ideological discourse that binds the group together or on the overcoming of capitalism as a system. Alienation is much more a side effect of rigidf bureaucracy, in which power is impersonally exercised and in which the principles of fragmentation of activities are taken-for-granted than a necessary side effect of the capitalism as an economic system. Kohn & Schooler (1973) isolate the substantive complexity of work as a key element in understanding the different ways different occupations affect man's psychological functioning. In this sense, rigid job descriptions for shop floor workers, lack of freedom from close supervision and routinized flow of work create the most undesirable outcome in terms of satisfactory psychological development.

Myers (1964), in his article on motivation, concludes that the factors more clearly directed at enhancing motivation are those related to matters associated with self-

actualization of the individual in the job[103], from which the greatest satisfaction and the strongest motivation are derived from achievement, responsibility, growth, advancement, work itself and earned recognition. He notes that the work itself appears as a motivational element even for assembly line workers, when the environment is adequate. This is the same situation encountered in CPC São Paulo, where even the occupants of the lowest jobs in the hierarchy were able to extract satisfaction from their job. This is hardly a matter of individual preference for given types of job. As indicated above, the satisfaction with low status/ manual work is to be understood in relation to the individual perception of his/her position in the capitalist division of labor as a function of the experience of concrete limitation of a class of limited educational and cultural capitals.

Part of the success of the plant manager at São Paulo was due to the fact that he recognized the conflicting nature of the management/worker relationship in Brazil, and did not attempt to push for the implementation of imported models incompatible with the reality in the plant. From the imported models, he borrowed selectively, borrowing the idea of the necessity of democratization of work relations and employee participation, but not taking the ideas that defended the need for implementing shared values, company mission, company's song, and other strategies to create a sense of community. Those ideas, known to have created a feeling of communality in some Japanese companies, in the Brazilian context would have probably generated a feeling

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[103] Myers demonstrates, for example, that matters peripheral to work itself, such as pay, supplemental benefits, company policy and administration, behavior of supervision, working conditions, and several other factors traditionally perceived by managers as motivators of people, are found to be more potent as dissatisfiers. High motivation does not result from its improvement, but dissatisfaction does result from its deterioration. He also notes, in an observation that very much converges with the findings described in this paper, that in an environment in which there is no space for satisfaction derived from work itself, the tendency of workers to express dissatisfaction with matters peripheral to the work is much stronger than in a situation in which workers are satisfied with their work. That is, workers tend to ignore negative factors peripheral to work when they find their jobs motivating. This is precisely the case of the São Paulo plant. Camaçari and Alagoas, in different degrees, exemplify the opposite case, in which workers, prevented from meaningfully performing their jobs, tend to concentrate on the critique of the company utilizing peripheral matters such as pay, benefits, etc. to substantiate their critique and fuel their dissatisfaction in relation to the company.

that the manager was trying to "brain wash" the workers or was attempting to maneuver them. The historical bitterness of capital/labor relations in the country is too present to allow for the implementation of those strategies. It was known to many workers in the studied company that Japanese management employed various strategies to create a cohesive community in the work place, and those attempts were clearly perceived with disgust by the workers.

Roche & MacKinnon (1970) find that meaningful work is extremely effective in enhancing motivation. According to them, from the workers' point of view, a job is meaningful if it involves him in the identification and solution of the problems that affect him. It is motivating work in the sense that the worker is highly motivated to solve the problems that touch him personally. "The motivated worker characteristically can assume a part in the managerial functions associated with his job; he can share in planning, organizing, and controlling the work he does. “His growing understanding and achievement, and especially his increased mental stimulation, combines to boost his morale and his company's profit" (Roche & MacKinnon, p. 80). There is no need to attempt to introduce alien values and management strategies to create this motivation, as the case of São Paulo illustrates. The necessary work of legitimizing the unequal allocation of power and status inside the organization is already incorporated in the workers' disposition prior to their entry in the company, and it is not part of the manager's task to convince the workers to accept this different allocation of power and status.

Legitimacy is constructed, in industrial relations, by reducing the awareness of subjugation and allowing the schemes of power to work through its more subtle and effective ways, that is, through the consciousness of each individual and their desire to do the right thing, on one side, and the ability of the leader in attaining the desired results in the market, thus proving his competency as a leader, on the other.

It would be mistaken, though, to assume that the director of the São Paulo plant consciously elaborated his strategy of action having all the steps that brought about his legitimacy as leader as part of a plan. As a man of that industry, his values are, in large part, the values of the group. He believes that in managing the way he manages he is being fair, doing a good job and valuing the people who work under him. He himself is not fully aware of the conditions upon which his legitimacy is build, for he is as much possessed by the values of the group as the others. He does what he thinks is the right thing, and his success is for him not due to his extraordinary ability to manipulate and control others, but due to the conscious exercise of democratic management as a form of valorization of man. Part of his strength is derived precisely from this sincerity of belief. The others believe in the truth he professes because he truly believes in it himself.

The "ideological" type of argument, that transforms managers into hungry defenders of capital, fails to address properly the effect of leadership on the collectivity of the industrial organization for it fails to understand the much appreciated "purity" of intention, which is a constitutive element of the appreciation and recognition of the leader. Added to this, the perception of the manager's superior skills, promoted by the ease with which he divulges information and provides an infinite number of coherent explanations to the most different problems, reinforces the agreement on his merit to be in the top position in the organization. Merit is accepted by all the interviewed employees in the three plants, as the most fair principle for the construction of the hierarchy inside the organization.

As the head of the human resources division put it,

"When I look at the bibliography on human resources management, I think of what we do in here and I can see the manager does always the right thing, It is like in the books. It is so neat to work with him. He wants to be always up-dated; we exchange a lot of bibliography... Before deciding something that has to do with human resource management, he talks to me first. I am his right arm on these issues, you know. We try to agree on things. He always takes so many things into consideration at the same time, It really amazes me".

4.2 Origins

According to the coordinator of the general services division, in CPC São Paulo since 1973, the acquisition of the plant by CPC wasn't the first time the plant changed hands. When he joined it the plant belonged to Geon Brasil, of which the multinational G.F. Goodrich owned 49%. Although nowadays the plant is seen as producing on an uneconomical scale, at that time it was considered a reasonable size. The Matarazzo family, a smaller stock holder, bought the shares of Goodrich in 1979. Changes in management had been frequent, but from the standpoint of the employees it had never changed much. He arrived at the plant as an office assistant, at the very bottom of the white collar hierarchy, and reached the position of division coordinator through a slow process of promotion. During the Matarazzo years, there was no career planning, no benefits policies and strong opposition to involvement in labor union activities, just as it was before they acquired total control. Until CPC acquired the plant, there was no accident prevention system and the number of casualties was very high.

CPC acquired CPC São Paulo in the last months of the administration of the first manager, who was very concerned with safety issues and brought the immediate implementation of safety procedures to the plant. According to him, and other old timers, the implementation of the safety programs was slow and the education of the workers took a long time. They tended to regard the safety equipment as an extra burden in the daily routines, and the exercise of their activities without the equipment was many times bragged as "twork for a man", as a cultivation of masculine values according to which concern for safety was understood as a lack of courage. The period of adaptation to the new owner and new manager was somewhat slow and caused considerable tumult and agitation.

According to the plant manager, he was working at Camaçari when he was invited to join the group that was to evaluate the acquisition of the São Paulo plant. Upon visiting the installation, he advised CPC against the acquisition, for the equipment was too old

and the scale impossible to be adapted to the needs of the modern market. Even against his recommendation, the acquisition was performed and he was designated manager, without knowing yet if the plant was to be kept in operation or closed. He was told to do the best he could, and if finally the plant could not operate in profit, it was going to be closed.

According to the employees, the manager arrived at the plant saying exactly that. He couldn't assure anyone that the plant was going to be kept running, and that he had been given the mission of trying to run it at profit. The company then had about 300 employees, with 36 operators per shift. Compared to the other plants, this number was absurd. Camaçari and Alagoas had 12 operators each in one group each shift at their PVC plant, yet had a much higher productive capacity. CPC São Paulo had a total capacity of about 5% of that of Alagoas, which is 220 thousand tons/year, middle size by international standards. The manager said he had no hopes of being able to run at a profit the area containing the smaller reactors, and that would have to be deactivated, and that he was going to concentrate on the areas that had more potential.

According to manager, the initial reaction was strong. Many feared losing their jobs and those who thought they could stay were sorry for their fellows. The employees said they looked for help to the union, and realized that in this case if they started a movement to keep everyone's job, CPC would shut down the plant. It was a period of deep crisis and of very low motivation to cooperate with management. There was the generalized fear that a complete shutdown was a matter of time, and that there would be no compensation for their efforts. They proceeded with participation in the lay-offs, choosing who they thought had more merit and should stay and those who should go first. According many employees at the plant since that time, it took some two to three years until the situation changed and the workers felt like getting fully involved in cooperating with the manager. According those employees it took time until "we realized his intentions were good".

This "realization" was brought about by a slow process of involving of the workers with the project of making the plant profitable. There were constant meetings in which workers received a wealth of information on the progress of the plant, on the market they were targeting, on the strategies to be followed and on the results expected. During those meetings, workers were constantly invited to participate in the discussion giving their opinions on the viability of producing giving resins in the reactors. According to the plant manager, the equipment was old and did not react consistently to the inputs. Much more interference in the reaction process was required from the operators, and he needed the cooperation of those experienced men, for they could play the equipment "by ear". The opinions of the workers were taken into account when a strategy of production was to be decided, at the same time, they were informed about what type of resins would increase the chances of profit and their cooperation was invited to think of ways of successfully reacting the necessary ingredients in the equipment.

After every trip to the holding company, the plant manager met the plant employees to communicate his impressions on the chances of the plant and to give new instructions for its future. They decided to proceed towards the production of specialties, and abandon completely the production of commodities for lack of competitive scale. The price of the tonnage of specialty product was nearly three times higher than that of commodities and better suited for production in smaller facilities. The change of degrees in the large reactors in the two others plants, that is necessary every time the specification of the resin changes, causes big losses of time and affects the total volume of production. The much smaller and less integrated reactors of the São Paulo plant could be successfully adapted to constant changes of degree. The higher prices of the specialties compensated for the smaller quantities produced and the plant could serve a market in need of this type of product. In time, the plant found its niche.

The full commitment of the workers to client satisfaction and the variety of the resins produced was to occur after the plant manager had successfully negotiated with the holding company the separation of the commercialization of the products of the plant from the commercial and marketing department. Due to its small scale and the features of its clients, the São Paulo plant did not enjoy preferential status in the commercial office, which was busily attending to large clients willing to purchase large quantities. The negotiations for sale of the products of the São Paulo plant was not a priority for the marketing department and the constant complaints of clients were threatening the image of the plant. The holding company agreed, after some negotiations, in giving the status of director to the plant manager and increased his powers to negotiate directly the sales of product with the clients.

After accomplishing this, the workers of operation, storage and maintenance areas were taught about the specific features of each client, the type of final product for which they needed the resins they were purchasing, their chances of buying from other producers, and why they depended on specific features of quality for their product. The operators knew, for example, that in a given reactor was processing the raw material for a flooring maker, who was marketing his final product for outdoor use as well as indoor, and counting on specific features of durability and color resistance. In some cases they knew that the size of the clients' company was small, and that the continuity of the client/supplier relationship would depend on the client's success to market his own product. The future of CPC was linked to the future of its various clients in a way that was very clear at the shop floor. In other cases, production aimed at the fashion industries, which depended on the flexibility of the raw material for comfort, in shoes, clothing, and etc. in such a way that each client had very specific needs and sometimes bought only in small quantities. PVC production at CPC São Paulo became, as they put it, "tailor made".

4.3 The plant manager

In expressing his views on the relationship of the workers with the company, the manager of the São Paulo plant said he didn't believe in magic and in the theories that claim a proper organizational culture will solve all problems.

Contrasting sharply with the manager Alagoas, who believed it to be legitimate to demand a high degree of commitment to the company from the employees, the manager at São Paulo repeatedly said that the main commitment of the workers should be with themselves and their families. As he put it:

"I don't expect anybody to be loyal to the company on principle. Everyone here, including myself, work for CPC, first of all, because of money. We are loyal to ourselves, and we work because we need to support our families. This is a fact. I wouldn't stand on here defending the idea that the workers should be loyal to the company because the company is not loyal to them. The company exists because it makes money and it will continue to exist as long as it continues to do so. It is very hypocritical (the discourse that claims loyalty) as we all know how these things work. The blue collar workers may not have much culture but they are not stupid. What we have here is a deal. We must keep the company profitable so we can all benefit from it. If you ask me why people here are happier than in the other plants, I must say that I don't know. I know I try to be open and have clear standards for everything. It is not in my interest to fool anyone...When I arrived at the plant there was a lot of excitement about the relation between CPC and the labor union. The employees asked me what I thought of them becoming affiliated to the union. I told them they should be members of the union. When it comes to a situation of conflict, it is the union who will take their side. If it exists legally it is exactly because it has a social function. They didn't believe me. Then, to prove I meant it. I invited the labor union representatives to the company premises, offered them a microphone and let them talk. Those who wanted to could join on spot. I have no intention of getting in their way when it comes to defending their rights. In time, they came to realize that working together to make the company profitable was much more in their interests than participating in the labor union movement or antagonizing the company. Many dropped their membership after a while to save the annual fee. They are all adult men and women and know where their best interests lie."

4.4 The operators and their function

The operators at the São Paulo plant were as much dependent on the continuity of the work relationship with CPC to maintain their living standards as those of the other two plants. But in regard to the dangers, as they were not in an industrial complex and did not produce VCM, the risks involved were more limited. On the other hand, as the engineers noted, as many of the resins were experimental, the amount of residual VCM, the cancerous gas, was sometimes higher than it should be and the exposure of the operators to the gas was not as efficiently monitored as in the other two plants, with more modern technologies. The production of PVC always involves high risks.

Contrary to the situation at the other two plants, though, there was no attempt from the operators to negotiate their merit with the company by means of stressing the dangers inherent to the work or their experience of anti-social routines. The emphasis on a discourse that appealed to the need for professional valorization of the operators by the managers, common in the other two plants, was not common here.

The importance of the operation was defined in relation to the collective project of the plant. The operators tended to stress the trust they earned from the company by their responsible and diligent work. Comments such as the following were common:

"The plant's manager (always called by his first name) can go in peace to Argentina to try to sell CPC's product there because he knows we are here taking care of everything. He tries hard to sell the product and we don't let him down." or "(operator II) before the plant manager left for a trip last week he came to my area to see how things were going. We were having problems with the drying process. I told him he could go and that I would do my best. He told me there was nothing he could do anyway, for nobody knows this area better than me. And it is true. I have quite a reputation for being good at drying". Or yet (panel operator) "In here there are only professionals of the best possible level. When the lay-offs were made, the company kept the best of the team. There remained only those who everybody knew

were the very best. It is easy to work here because there is a lot of respect for the abilities and reputation of others. You really know you can count on the team".

The operator in charge of the caldrons explains how the situation in the plant improved for him：

"I have been here for twenty eight years. I didn't have much chance of studying and I was never good at talking to people. I liked to be quiet in my little corner. In the past there was a rotation system. It was hell. I'm not good at some parts of the process. But I am good in here. When the layoffs started, I thought I was going in the first bunch. Each group performed a self-evaluation. My colleagues pointed out that I am honest and hard worker and that I was good at the caldrons but weak on other points. Not many people like the caldrons, you now. You stay alone almost all the day, some people think it is monotonous, but I am comfortable here. I stayed. The boss said he would rather not rotate me and keep a happy and competent operator only in the caldron area rather than send me out and force the others to go where they don't want to. Of course on the other shifts there is still rotation to that area, but in my group I am permanently in charge. The young guys who need to know the area rotate in the other groups. But when there are problems, you know, they always call me. In the past I was looked down as dummy. Now they need me. I am very thankful to the plant manager; only after he came here did people recognize that I have my value too".

An operator III, in explaining his relationship with the company, says he feels rewarded because the company really recognizes the good workers. Asked who is a good worker, he utilized the same type of criteria for evaluation as the others in the plant：

"The good worker is the one who makes an effort to understand the company's situation, its goals, and cooperates to attain those goals. For CPC, the good worker tries not to have a boss, doesn't need someone to give orders...is the one who, when he sees somebody who needs help, moves and helps" and adds: "CPC is now a good place to work, and I am not the only one to say this, the others think like that too. The salary and benefits policy is well defined, has clear standards. Before, it depended on the preferences of the boss. Now I don't fear losing my job. I do my work and I am at peace."

Another operator III, says:

"You may not see why it is so important to work in peace. Before we never knew. The boss had a fight with his wife, came angry to the plant, and a small thing was a good reason to retaliate against the workers. We were very tense. It is not that it doesn't happen now. It may happen. Everyone has the right to be upset sometimes. But now the group is important. The boss is not afraid to make mistakes. If he says something and after cooling down he regrets it, he knows he can come and apologize. Before, a person above you could do the worst thing and could not apologize for fear of losing power. Now, to keep face and not lose power is not so important anymore. The plant manager always says 'only makes mistake the one who is trying. The worst of all mistakes is not to do anything for fear of making mistakes'. When he talks to us, he talks openly about his own mistakes. It makes a big difference".

Asked about their relationship with danger and the need for higher responsibility by the operators over the process, factors that were common elements in defining the operators' pride in the other two plants, the reaction at São Paulo was clearly different. In general, all the operators agreed that danger is a part of the production process, and that in the case of accidents they were the ones to intervene in the situation, but they didn't seem to relate these factors with the need to place the operators above others in the hierarchy of importance of the professions in the company. The relation between professional pride and responsibility was not exclusive to the operation area. According to the operators themselves, the future of the company depended, more than anything else, on client satisfaction. If someone in sales or in any other area acted irresponsibly, the company could lose money by losing clients in the same way as if an irresponsible operator made an operational mistake. Naturally mistakes in the industrial area could have serious consequences in terms of accident and the health of those in the plant. Even then the operators insisted that responsibility was a feature demanded of all CPC workers. The nature of the processes upon which their responsibility was to be applied changed, but there was a consensus that if only operators were responsible the company wouldn't get anywhere. Compared with the two other plants, the emphasis on team work and on the high quality of CPC workers in general was an exclusive feature of the São Paulo plant.

Another difference observed in regard to the relation between the operators themselves and their profession was the tendency, in the São Paulo plant, for the workers to identify themselves first as the employees of CPC, and secondly according to their professional group. As the dispute over the principles of hierarchization of the status of the professions was much milder in São Paulo, the tendency to refer to one's professional group as a first frame of reference for the construction of the workers identity was much more 'blurred' than at the other plants. In the same way, the tendency to downplay the importance of manual labor was much less present. The milder dispute over the principles of hierarchization of status, with the white collar workers defending the higher importance of educational capital and the blue collar employees of practical experience, responsibility and courage, which had been so clear in the other plants, was due to the valorization of the contribution of the manual workers. By constant discourse of valorization of cooperation and professional excellence at all levels as fundamental to the company's survival, the manager could promote the behavior changes and the transformations of values of the group at all levels of the hierarchy. The fact that the manual labor was not placed at the very bottom of the hierarchy as the work of unskilled and uneducated workers, allowed the workers to have pride in their accomplishments in the blue collar ranks without the need to utilize strategies to redefine their pride according to different principles than the official ones.

As the plant manager himself exemplary abided by the rules of the plant, making a point of asking permission and obeying the instructions of operators in the industrial area, consulting with the person in charge of each area before making a decision, apologizing and stepping back when his mistakes were pointed out to him, he made it considerably more difficult for the middle management to strongly impose their own way down the hierarchy and maintain an authoritarian relationship with subordinates. Middle management had constant meetings with the plant manager in the early years of

CPC ownership in the plant, during which he explained his strategy, and on many occasions they confirmed how committed the plant manager was to his strategy of participative management. As the head of production division puts it "we had to make an effort to adapt", that is, in the beginning of the plant manager's term, middle management had to make a conscious effort to change their behaviors in order to be in good terms with the person in power. The results, in time, convinced those in intermediary positions of the virtues of participative administration, and turned them into its most enthusiastic advocates.

The production division at São Paulo had a total of 80 people, divided into 5 groups, taking turns on shifts. There were, therefore, 5 supervisors and 5 chief operators. According to the law regulating shift work, the maximum an operator can work in one week is 36 hours. At the plant they were working 32 hours, and the difference between time paid and time worked was compensated by 8 hours of training each two weeks. The shift table was negotiated with the labor union, as prescribed by law, but different from the other two plants, in which it was designed by the manager and negotiated with the union without participation of the workers, at São Paulo the workers decided on how to rotate the shifts and the time length of each shift (naturally inside of the limits prescribed by law, and after taking into account the interests of the company).

To compensate for the anti-social hours and the effect they produces in reducing the possibility of interaction between shift workers and administrative hours workers, the instruction book for the shift was open for all sorts of messages. At Camaçari, the shift book was to contain information exclusively about production on the previous shift. At São Paulo and Alagoas it could include thoughts on quality, newspaper articles, comments on salary negotiations, and whatever one group felt was important to communicate to the others. There was a conscious attempt to utilize every opportunity to enhance communications.

To compensate for the lack of contact among the groups on shifts, the supervisors and the manager of the division met frequently to arrange training planning in a way that allowed people to meet with a certain frequency. To assure that complaints had a channel to the top, the first one-and-a-half hours of the training day was an official "complaint time". People were stimulated to debate problems in personal relationships, quality of food, salary, rest periods, human resources policies and etc. In the case that the manager of the division could not answer the questions, the person in charge of a specific area was invited as guest speaker to the next meeting. In that meeting, the person was invited to explain the difficulties of his/her area in regard to the issue and ask cooperation and suggestions for solutions. According to the division manager, the amount of complaints and the dissatisfaction with the work at other areas was very much reduced after the people were informed of the 'pains' of the other's labor. Being allowed to participate in the search for solutions also successfully compromised those who complained with the results of the process of improvement. The integration with other areas and the constant contact with people outside the shift reduced the tendency of shift workers to feel isolated from the plant environment and to define their own activity against that of others.

Comparing the operators at São Paulo with those at Camaçari, the head of the accounting division, transferred from Camaçari to the South, said that the São Paulo workers were much more concerned with saving the company's money. They themselves regarded extra-hours as an organizational problem to be solved, attempted not to use taxis at company expense, use front and back of papers, and etc. When the company announced the necessity of cutting expenses, it had a strong impact at Camaçari, but at São Paulo it wasn't felt. He continued to say that Camaçari workers live under the impression that the company is 'squeezing' them, and whatever they can take from the company has the flavor of "revenge", as if by making the company pay for an extra something they were getting justice by their own hands'.

While at the two other plants, and especially at Camaçari, there was a strong tendency for blue collar workers to adhere to the functional descriptions of their jobs and refuse to perform any other tasks, at São Paulo the operators themselves took the initiative of performing different tasks. One operator in the caldron area suggested the construction of a wall to reduce the noise in one point of the area, and built it himself in his free time in the plant. In a period of slow activity, some operators, momentarily without work, were taken to Santos, a neighboring city, to help fix the gas duct that carries the VCM in gas form from the harbor. During periodical stoppage for maintenance, operators perform many maintenance tasks. According to many operators and managers with experience at other factories, this degree of cooperation is exclusive to CPC São Paulo.

4.5 Participative administration and behavior changes

Although the plant manager of the São Paulo plant worked at least half a day at the commercial office, and was rarely more than three or four hours a day in the plant, in the questionnaire survey a much higher percentage of the employees declared to know him personally than at the two other plants (92% in São Paulo, 60% in Alagoas and 35% in Camaçari). The reaction of the Alagoas manager to this answer was of disbelief. As he knew he was there all day, from early morning to late afternoon in the plant, and visited the shop floor constantly, and as he also knew that the manager of São Paulo worked at least half a day at the commercial office, he doubted the accuracy of the survey. The observations and open interviews revealed that 'knowing' the manager was very much understood in relation to 'understanding' feelings and intentions, and in this sense, the shop floor workers at Alagoas said they 'saw' the manager a lot in the plant, but didn't really 'know' him, while the shop floor workers at São Paulo said the plant manager was not 'always' in the shop floor, but they 'knew'

him well. That is, there were enough consistencies in his views and actions to allow the plant's employees to device their own strategies of actions confident of knowing the 'rules of the game'.

As the manager of the production area and his direct subordinate, the manager of the production division recall, the transformations that occurred after the change in the top manager were clearly noticeable in the very way people behaved toward others at the plant. The manager of the production division says that he was known in the plant as the person who 'changed most'. According to him, his formation as a professional was all accomplished inside CPC. He has worked in the plant for 27 years, and started as a technician. After starting work, he continued his studies and graduated as an engineer. As he recalls, in the early years, the system of command was very authoritarian. He received his training for a management career in the company, starting with the first step as a supervisor. According to him, he was taught that a boss must be firm and confident in giving command if he is to have his authority respected. For years, being "tough" in the relation with subordinates was a sign of leadership ability. Shouting, on-the-spot firings and similar strategies of disciplining the labor force were a regular part of the work routine. As he puts it, "Before, that was the right thing. If you wanted to rise in your career, you had to proof your strength in dealing with the men. If your were caught talking too much with your subordinates, you would be looked at suspiciously by your superiors. It was the way things were done. It was not that I liked it or not, it was how things were". They both recall that when the new plant manager came to the work defending the opening of space for participation, they thought they would lose control. According to the area manager, when he heard the idea of 'self-management', he thought the plant manager wouldn't last long, and that the plant would soon be in chaos.

The division manager said it took him time to understand that management could be different than just shouting orders and keeping close surveillance, and that it was very difficult to acknowledge that he was 'wrong all the way'. He says now it is much more

pleasant to come to work, but that the transition was very difficult. It was necessary to establish a trust relationship with the men in which they could believe they could really speak their minds. According to the division manager and the operators in the plant, it took at least three years before people "could relax". The operators enjoyed describing how the division manager changed, giving several examples of how he played 'tough' before. He used the opportunity to say that he was the "living proof of how much a person can improve", and used the teasing of the operators to reinforce the idea that searching for self-understanding and self-criticism is important in the process of growing, through the recognition of one's mistakes and the search for continuous improvement, in an obvious analogy to the principles of "kaizen", the quality motto imported from Japan.

The essence of the plant manager's self-management strategy is that it allowed for complementarity conjunction between a man's needs and the organization's requirements. Through cooperating in the achievements of the plant as a whole, each employee experienced a comfortable feeling of belonging and the possibility of contributing, meaningfully through his or her work, to the collective enterprise. The harmony thus created, though, was fully based on different individual aspirations in regard to power, the scope of their own activity and their position in the status hierarchy. The success of this type of participative administration in creating a lasting state of motivation takes for granted the incorporation of different dispositions by the various professional categories. The self-perception of each worker in regard to their relative worth in the value system of the modern organization sets the limits of individual aspirations according to the amount of education capital they possess. If it were not for the a priori agreement on the naturality of the industrial division of labor, harmonic cooperation could not be successfully constructed.

According to the area manager, part of the success of the management strategy of the plant manager was due to the fact that instead of "pushing a person to adapt to a

job or a routine, he would rather adapt the routine and the job to the person". According to him, people express their talents and preferences during the daily performance of their jobs, and if the structure of the company can be used flexibly enough, these talents can be better employed. As was mentioned before, contrary to what happened in the other two plants, function rotation in the operational shift was not compulsory, and also, the decision whether to take or not the promotion exams was left for the individual employees. In Alagoas, for example, the failure to take the exams was taken as a lack of professional ambition and desire to improve professionally. The pressure for participation in the exams was created by the unspoken expectations of management, and transmitted by various forms of indirect urgings. This process ended up creating an enormous pressure for promotion at all levels of the hierarchy and enhancing dissatisfaction[104]. At Camaçari the operators were boycotting the exams to express dissatisfaction with the promotion system and career plans as a whole. With a different strategy, the São Paulo plant managed both to value the employees with less formal education, and those willing to continue performing the simpler tasks, and reduced the pressure for promotion. Also, by allowing the employees to organize their routines and negotiate their preferences with their colleagues, different stories appeared in the plant that served to reinforce the idea that each employee had had their individuality respected. For example, in the operational ranks, there was a panel operator who enjoyed being able to make the equipment function precisely on

[104] In Alagoas, there were occasions in which I could observe the supervisors and other senior operators telling the younger ones stories on how the refusal to take the examinations led an employee in the past to be looked on with disfavor by the management. Although in theory to take the exams is optional, not taking it was perceived as a sign of laziness, of lack of will power to keep up with one's study of the equipment or lack of desire to contribute to the company through a personal effort of continuous education. The plant manager and the intermediary managers declared to "like seeing all the employees enthusiastic about their careers". The result, though, is an enormous competition on the shop floor, a strong demand for continuous improvement of the training program and the constant frustration of those who are unable to receive promotion after having invested time and effort in the training. Taking too long to move ahead in the career makes the operator that fails in taking the better grades feel as a lower achiever, more likely to feel dissatisfied in the company and badly adjusted to the expectancies of the group. In time, the company ended up keeping only the more career-oriented workers in its ranks. With the aging of the plant and the reducing speed of promotions that it brought about, the company could not provide the continuous chance of upward mobility and dissatisfaction in the lower ranks was already quite clear.

schedule, to within a matter of minutes. To show how good he was in controlling the time of the reactors and the quality of the reactions according to the specific feature of each machine and each mixture, he enjoyed being the first one to step out for lunch, precisely at 10:30 A.M. (the shift started at 6:00 A.M. and the operators could have an earlier lunch if they preferred). To walk around the plant at the precise time was proof that everything was under control on his shift and that he could leave. As the workers could negotiate their routines among themselves, even this sort of eccentric pride found a place in the plant. His story was one among many that the workers told as examples of how each person's talents were emphasized.

Another story they used as example was that of the secretary of one of the middle managers who was always complaining about the lack of organization of the stock room. In her complaints, she would always say that if they would do things differently the stock room would work much better. Breaking a tradition in the industry, as soon as there was an opening as head of the stock room, the plant manager asked her if she was willing to give it a try. It was the first time a woman had been in charge of the storage room full of parts and equipment, and traditionally in charge of someone with a background in maintenance, especially someone with knowledge of mechanics, and well acquaintanted with the equipment and maintenance procedures. According to all in the plant, the result was very stimulating. The storage room was now very well organized, the purchasing list was constantly reviewed, so that wastage was reduced, and the supply of parts had been stabilized. As I mentioned the stories I had heard during an informal discussion I had with the manager, he explained that the problem in the world of industry is that people became too attached to the form and lose contact with contents. "If one tries to avoid becoming limited by the traditional ways created in the world of industry, one comes to realize the obvious", and joked: "as the fact that nobody has more experience in shopping and putting things in order in the house than a housewife...I placed one in charge of storage and the result was fantastic". The same

type of process was what brought the social assistant to be chosen as manager of the human resources division. The plant manager, while taking night classes at a graduate school, realized the tendency, among modern managers, to place human resources specialist directly under his own command in the company structure, utilizing this person as a key element in the integration between the workers and the company. He chose the social assistant for the job for the penetration and credibility she enjoyed among the employees, and by the fact that she was self-motivated to learn. The plant manager himself brought the literature he was working with in the university and discussed his ideas with her, until she was ready to take care of the division by herself.

The workers opinions were heard on other issues unthinkable in the other two plants. Both in Camaçari and Alagoas, pay increases awarded according to performance were clearly upsetting the workers and acting as one more element of conflict in their relationship with the company. Even those who consistently received raises according to performance were against it in principle. The workers deeply disliked the idea of a differential remuneration system, and believed the system to spoil the quality of the relationship among colleagues on the shop floor. Without exception they expressed their views that people performing the same job should be paid equally unless one had more years of experience than the other. Increases through performance were undermining the harmony of the teams and the workers who received them were feeling the need to apologizing for them. According to the supervisor, such a program was lowering the performance of the best employees, uneasy with the idea of competing and showing, therefore, that some of their own colleagues were weaker. They also strongly defended the idea that profit sharing should be proportional to salary and time of employment and not based on merit (this tendency was exclusive to the blue collar worker. The university graduates in white collar activities and the engineers in the factory and in the office clearly preferred the merit system). The holding company was also trying to impose "Management by Objectives" strategy, in which each worker's

objectives were to be defined according to those of the company and serve as an instrument for employee evaluation. In São Paulo, the written instrument served more as a basis for the tuning of ideas rather than for employee evaluation. Instead of pushing for the adherence to pre-established, static rules, the managers of the plant stressed the necessity of developing a "spirit of cooperation" as the best way to attain the desired results[105]. Merit reward was kept in all other areas of the group, and despite of the obvious indications to the contrary, the holding company believed that in time the employees would get used to the system and it would increase individual motivation. In São Paulo the issue was being openly discussed with the workers, who also disagreed with it. The human resources specialist was trying to devise a way of convincing the holding company to let the plant decide against its implementation, and was strongly against imposing it without the workers' consent.

This flexibility in the employment of human resources is very much in line with the search for the flexible organization that comes together with the necessity for higher quality of the final product. The fact that people are given chances to get positions to which they had before been denied access to by a rigid bureaucratic organization and of deciding various issues that affect them personally were elements that contributed to the restoration of the sense of 'humanity' in the plant. The employees perceived the plant as a place in which 'people relate to people', that is, in which the employee is not known to the enterprise by location in the hierarchy but as a person with qualities and talents. The many stories on how the company profited from allowing people to do what they do best reinforced this perception and passed on to the young employees a positive image about the company and a framework by which to understand themselves within the company structure, the expectancies of the group, career opportunities and construct a sense of professional pride. By the way the older employees related to the

[105] See LEVINSON, Harry (HBR/July-Aug. 1970) reprinted in Reprints of Selected Articles: Motivation Series, Harvard Business review, 1970, to see how MBO can affect negatively the motivation of the employees.

company and from their discourse, the new employees could incorporate the value system of the group, the principles of hierachization of professions, and a concrete sense of professional pride, in the plant defined more directly in relation to the participation in a collective project than in the dispute among professional groups, as in two other plants.

The confidence the manager had in pursuing these changes was the result of his own acquired knowledge in respect to these issues. He could defend the ways of the plant to the top management of the holding company according to the logic of the new theories and the examples of companies abroad which had increased participation and satisfaction by allowing a more flexible and participative organization of production to take place. His higher educational and cultural capitals served not only to create novelties in the plant but also to defend those novelties at the holding company's meetings. As he proved his competency but attaining concrete results, he was allowed more freedom for his experiments' in the plant, and more freedom for the plant to relate directly to its clients from the holding company. His symbolic capital increased in the plant, for the employees could see that the competence they recognized in the manager to assume the leadership of the plant was also recognized at the holding by his superiors.

4.6 The program of suggestions, the defense of rules and the safety procedures

One of the steps towards full implementation of quality programs is the creation of channels of communication that allows the workers to improve the productive process. By the number of suggestions formally given by São Paulo employees in the newly implemented program, their motivation to participate in it didn't seem much different from the two other plants (among the three plants Alagoas had the highest rate of suggestion per employee). A more careful understanding of the situation, though,

revealed that this apparent lack of interest in the suggestion program had two reasons: first, as the channels of communication were well opened, a number of improvements were done informally, the formal suggestion process was being reserved for more significant changes or changes that involved financial investment, and second, that a similar program was already in use at the plant and had been for more than two years, so that the suggestions accumulated over the years, at the two other plants, and that were now emerging, did not exist at São Paulo.

The suggestion program in the plant had been originallt devised to reduce the number of work accidents, because the plant was old and the level of accidents was high. The plant now, however, held the record of three years without an accident, a better mark than the other two plants. The supervision of safety was not the responsibility of the managers, but the responsibility of the workers, and particularly the operators. One of the most recent accidents that happened at the plant was due to a secretary wearing high heels and slipping hills in the administrative area on a recently waxed floor. She broke her ankle and the record went back to zero. To avoid even problems of this nature setting back their record, the operators suggested the prohibition of high heels in plant and got the cooperation of the administrative personnel in implementing the rule. On my first day at the plant I was informed by an office lady of the dress code of the factory. She asked for my cooperation in not wearing loose dresses and high heels to prevent accidents, especially if I was planning to go into the productive area. According to her, everyone in the plant was very proud of the 'zero accident' mark, and full cooperation was necessary to keep it.

The freedom with which the operators called the attention of people to the accident prevention rules was made clear during one of my visits to the plant. Around all the industrial area there were yellow lines painted on the floor, some fifty meters before one could reach the production buildings. The yellow line was the closest point to the production buildings one could go without full safety equipment. The building was of a

metallic structure that allowed one to see across many of its subdivisions. I crossed the line once with the helmet under my arm, and only put in on by the entrance door. Three operators called my attention to the rule inside the buildings, all of them being positive that I should not cross the line without the helmet on my head. Similar situations happened in the two other plants, mostly due to my lack of habit in dealing with equipment and rules, but there was never a case in which the operators called for themselves the role of enforcing the company's rules. The participation in creating the rules and the responsibility over the result, I believe, is what is made São Paulo's employees more committed to implementation efforts. According to those working in the plant, the same channel for suggestions on safety ended up serving for all other subjects. As the management felt that the deviance of the utilization of the suggestion system from the strict usage for accident prevention was positive, they allowed free utilization of the written suggestion and of face-to-face meetings for ends other than safety. Even the construction of a leisure area was suggested and approved through the safety suggestion program[106]. Another example of how the existent channels worked in promoting a feeling of openness of the environment was given by the manager of the production area. Three times the meeting of the employees' Committee for Accident Prevention was canceled at the last minute by the plant manager, who would reschedule it according to his agenda. The secretary of the production area manager filed an internal failure written report (one of the instruments devised to

[106] Different from the other two plants, which had properly built recreational areas and employee's clubs, São Paulo's club was just a multi-purpose room with a few tables. The operators suggested the construction of a soccer field on the empty land besides the plant. The management explained that there was not enough money in the budget for the construction. Operators and management agreed, in the end, that the management would give the materials, and the employees would construct it themselves. With the left over paint, they painted some parts of the equipment and the floor of some areas in their own free time. This type of attitude contrasted sharply with the attitudes in regard to the company in the two other plants, in which overtime payment was demanded even for company paid training and educational programs. It was common, especially in Camaçari and the commercial office, to listen to employees expressing the opinion that whatever they did that could improve the quality of their work for the company should be paid as extra-hours, such as learning English or the usage of computer programs. In the São Paulo plant and on the management levels of the other plants, extra-hours contributed to the company were taken-for-granted as a part of the job. The will to contribute is perceived as a necessary inclination of the workers in these two groups.

increase quality by reducing time wasting) against the plant manager, who recognized his failure and promised to be more careful. According to her boss, if a secretary dared to do the same thing in the other plants he believed she would at least receive an letter of admonition.

The feeling that the rules, of whatever nature, are an arbitrary imposition by the company or management seems enough to create a feeling of antagonism against them. In Camaçari, there were occasions in which operators were handling PVC powder without respiratory protection or gloves. According to the engineer, the fine powder, constantly inhaled, could be deposited in the lungs and tissues. As in all the factories there was eventually the problem of residual VCM, the cancer-causing gas, in the final product, the risk of cancer over the course of years was very present. The operators had this information. In the cases I observed the lack of observance of safety rules, which was in the operators best interest to obey, I inquired about the reasons for this behavior. The operators believed that the rules were excessive and a strategy of the management to control all their steps in the plant. Whenever there was no close surveillance, some operators would make a point going against the rule, as a way of asserting their independence and resistance to authority. In the case of the occurrence of an occupational disease or accident in any company in the complex, however, they immediately blamed the management and/or the 'capitalist greediness' saying that the management's worry about the safety of the workers was a facade for the government authorities. On many other occasions, especially at the Camaçari plant, it was possible to observe the resistance to safety rules, especially in relation to individual workers' own health and body. The defense of operator pride, in terms of responsibility over the process and equipment, seemed enough to assure the enforcement of the rules concerning the handling of equipment, though. The discrepancy in those attitudes in regard to safety seems very much related to the environment in the plants and especially the dispute over the principles of hierarchization of the professions. Acts that

could increase the validity of the operators' claim of status and importance within the context of the industry tended to performed, while those that were not directly related the defense of their status in the plant, as the case of the safety rules in relation to themselves, tended to be ignored.

The example of São Paulo demonstrates that participation in the decision-making process and the participation in an environment that allows for the construction of professional pride and individual responsibility, increase the tendency to enforce the rules in all cases: in relation to the productive process, equipment and others, and in relation to oneself and one's own body. The implementation of quality procedures, by allowing the participation of the collectivity in the creation of the rules, enhanced not only the understanding of their necessity but also a commitment to their enforcement. The fact that the workers participated in the creation of the rules eliminated the feeling that the rules were the result of arbitrary deliberations of the part of management in an authoritarian exercise of power.

4.7 The club and the integration activities

The employees' club of the São Paulo plant cannot be compared with those of the other plants in terms of physical facilities. The other two clubs are equipped with swimming pools, sport facilities, restaurants, barbecue areas and etc. The São Paulo's club is nothing more than a large room. Even then, it seems to fulfill quite well its role of promoting the integration of the workers.

The workers organize mixed teams of volley ball and soccer among the areas, that contest the first place through a table of games in which every team gets to play every other team. The club also organizes excursions for the employees with their families, activities for children and wives, music contests and typical parties of the yearly calendar. While I was there, the workers were looking forward having the construction

of a soccer field besides the plant completed to be able to play soccer on a regular basis, and practice sports soon after work. Although the construction was going slowly, because the workers were working on it themselves in their free time, they were already busily organizing the teams in such a way that a proper balance of player's skills among all the teams could be achieved.

During the time of the research, three workers, two from operation and one from the office, especially talented in music composition, were working on a comic and musical performance in which the funny stories of the plants were to be sung to the tunes of popular pop songs. They had their rehearsals outside the plant and who's stories were being included in their songs was arousing the curiosity of all. Many workers said the environment in the plant is like that of a school, in which colleagues have fun together. According to them, the activities of the club provided enjoyable and inexpensive leisure activities for them and their families.

4.8 Participation and the better results of the research and development area

The employees of the research and development area of the São Paulo plant created, on their own initiative, a plan to increase exchanges between the company and universities. According to the researchers, their idea was backed fully by the plant manager. The researchers explained that at that time the production of plastic polymers was, at that point, rather new and the number of researches and published papers on the subject were quite limited. Few universities in the country included the study of polymer materials in the curriculum. At the first national congress on polymers, the plant presented a paper with results of research developed together with São Paulo University (USP) and São Carlos University, produced through a cooperation agreement fully implemented by the CPC researchers themselves. In exchange for the practical testing at the reactors, the universities performed precision analyses. Other

exchange programs were negotiated with other universities, including the Federal University of Rio de Janeiro, which was the only one in Latin America with a research institute for macromolecules. The CPC researchers were given access to the equipment of the research centers and in exchange they provided industrial samples, opportunities for students to visit the industrial area, and cooperated in the research of the universities' specialists and graduate students.

According to the plant manager, after the researchers were given freedom to work, the number of resins developed increased and CPC was able to keep highly skilled human resources in spite of the outdated facilities. Without this choice, the plant manager believed it would have been impossible for the company to hold young and ambitious researchers in its ranks. The researchers expressed a high degree of satisfaction with their team work. According to them, CPC São Paulo offered an exceptionally positive work experience. It taught them how to create and produce in cooperation and how to overcome the limits of the equipment. It also allowed them freedom to perform tests on an actual industrial scale and take into account the very concrete difficulties of producing a specific resin. According to the manager of the division, a young engineer in graduate school, their exchanges with the operators were much more helpful than he had ever imagined. The operators had a very practical relation to the production process, that forced them to conceive research in a much more "down to earth" manner. The researchers unanimously believed that the exchange of ideas and experiences with the shop floor workers was what made them successfully produce marketable resins. It was also the exchange of information with the operators that allowed them to develop less expensive devices, within the company's budget, to adapt the equipment for the production of given resins. The operators, through their experience in dealing with the equipment, had, according to the researchers, a very sharp intuition of problems occurring inside the reactors.

According to the researchers, during a group conversation, the introduction of the quality programs was an important element in the progress of the integration among the areas, which was already being implemented when the need for quality production arose. Before the theories on how to produce with quality called attention to the necessity of integration for the sake of productivity, the integration among the areas was seen as favoring especially the creation of good interpersonal relationships and a positive working environment. For people less sensible of those issues, the need for integration and good communication never really had such a strong appeal. The need for higher quality and the appearance of the quality programs as the adequate way to attain higher quality provided the decisive element in promoting the necessary behavioral changes. According to the researchers, the quality programs were nothing less than behavioral changes and the transformation of attitudes in regard to ways of producing and relating to others within the organization. They believed that the introduction of new technologies, adequate computer systems, outside consultant help, higher investments in training and new organizational strategies helped to produce better results, but were not fundamental. They liked to mention that they were the living proof that "where there is a will there is a way" and that you can do a good job even without large investments.

According to the researchers, the 'participative administration' was being practiced at the plant even before they had heard of the term. They believe that in terms of human resources management policies the plant had distance itself considerably from the group of CPC enterprises. In their contacts with the research and development areas of the other plants they did not feel the same desire to cooperate and produce results. They believed the employees of São Paulo to be much more aggressive in the search for novelties and much less afraid of making mistakes. According to them, the cause of the difference in attitudes was clearly related to the style of the plant manager. The openness with which he dealt with the labor union was given as an example of his good

intentions. The researchers shared the view that only dishonest and cruel managers are afraid of labor unions. In the media and in the recent history of the country, they say, it is possible to verify the extent to which this affirmation is true.

One engineer of the research area described the achievements of the area in relation to the participative administration as follows:

"Before, every one believed the plant was going to close. For the group of CPC enterprises, we were like a cancer. We were receiving a share of the profits at the expense of the other two plants. Now it is different. What brought about the changes were the creative technical developments. We changed from production by suspension to production by emulsion adapting the equipment on our own merit. We changed to larger, 23 m3 reactors, rationalized the utilization of the labor force, reduced costs, increased production and developed new resins with a minimum of investment. The plant manager coordinated the efforts to increase the technical level. And he involved us all (engineers) in this project. The managers were sent to find better ways to manage. The plant manager negotiated the adjustment of the salaries to level of the São Paulo's city labor market with the top administration...and proceeded with all necessary steps to increase the satisfaction of his team. How did he do it? It was by the direct line type of communication, the body-to-body system. We also owe a lot to the capacity of the plant manager for identifying the right person for each job and utilizing what people knew best. On the shop floor there are a lot of people without much formal education, but if you deal with each of them you will be amazed by how much they have learned empirically. The good people were kept at the plant, those who could really contribute to something. The old timers are impossible to replace. The younger operators are chosen according to educational level, but they have a lot to learn from the older ones. It was the plant manager who made everyone understands the value of the operators. We tended to think everything could be solved by investing in new technologies, but sometimes the key to profitability is precisely on learning how to make the most with what we got, and for that we need them. The plant manager made us discover the way to be creative by producing with little. Here we save everything...and it is funny, we like it. We are proud of our difficulties".

4.9 The system of communication

According to the employees, communication about the company and among the various hierarchical levels occurs especially at meetings. There is an annual plan for meetings that defines the minimum frequency at which groups should meet and main

issues should be addressed. The most frequent meetings at that time of my research involved issues related to the quality programs, in such a way that all employees were involved, at least once a week, in a discussion about quality. Those chosen to be coordinators of the quality program's implementation had much of their time in the plant committed to the study and debate of quality questions and problems.

The area managers met daily with the division managers under them, and all of them at least once a week with the coordinators of the quality programs. The area managers and the manager of the human resources area met daily with the plant manager. Once a month there were larger meetings involving the whole area, the middle managers, the area manager and the employees in regard to the progress of the quality programs. The division manager of the productive area met once a week with a group from each shift, and attempted to meet with all the 80 employees in production, at different times, at least one a month (in a total of 5 meetings, one with each group on the shift). There were larger meetings in the company auditorium, and those on the monthly training day of the shift workers.

Besides these, the groups that work together meet daily for the '5 minutes of quality', during which short messages about quality are given by the employees. The daily meetings of the operators with the supervisors and chief operators, usually to receive instructions on the loads for that shift, were increased in length to include the 5 minutes of quality.

There were, besides these methods of communication, the plant journal, the information board and the monthly visits of the employees committees to the various areas (the committee for order and cleanliness, the committee for health and safety, and the committee for the analysis of noise levels and analysis of occupational health risks). Those committees are formed by employees of mixed areas who are put to work together to improve the plant environment. The committees meet on a monthly basis and the positions on them were periodically rotated.

The heavier meeting loads were for those in managerial positions. According to the managers, one of the best instruments to give direction to a meeting was a 'plan of action'. The general goals for the plant over a one-year period were designated by the middle managers and the plant manager, in accordance with the instructions of the holding company. Having this plan as basis, each area then created its own plan of action to establish how that area could work toward the attainment of the plant's objectives. At this stage, how to cooperate with the other areas, and in what way, was also determined and discussed to figure out how to best decide each area's plans. To provide a method for this cooperation, each area defined its relation to the others on the basis of a client/supplier relationship, under which, following the guidelines of the quality programs, the supplier side of the relation had to include in its plan of action how to satisfy the client side, according to the necessities described by that client area. Based on the area's plan of action, each division and in it each employee developed their own plan of action, in discussion with colleagues and private discussions with the immediate bosses. The goals established by this plan serve as basis for the evaluation of results and individual performance, as well as basis for the continuous improvement strategy. But the evaluation of performance aspect in here had less the intention of adding further pressure for production upon the workers than of creating an opportunity for superiors to provide feed-back to the employee for his own exercise of self-evaluation.

According to the employees, face-to-face communications are the most efficient one, and the information board the least efficient.

According to the plant manager, the most difficult issues to be taken up during the previous twelve months in the plant had been the transfer of some areas to subcontracted firms, the need to redefine the retirement policy and the difficulties in establishing an ideal pace of promotion and merit compensation, for there were very few openings for promotion. The same problems were being addressed at the

Camaçari and Alagoas plants, but with considerable variations of attitudes among the plants. In São Paulo the issues tended to be seen as problems in need of solutions, and according to those in management positions the employees did not attempt to use these issues as political platforms for pressing management, as was happening at the two other plants.

According to the operators, the "blue collar hot-line", which was very active in the past, had by then nearly disappeared. As official information reached the shop floor consistently before the gossips, the schemes that existed to operate the hot-line ceased to work.

Another element that contributed to the elimination of gossip was the fact that in the plant there was an "open doors' system, that is, no-one worked closed up in an office and there was freedom to ask for correct information.

The supervisor of the sales department says that she was frequently asked, informally, about the sales figures, because 'everybody understand the impact of sales on the lives of all of us here', and that she was always being encouraged by her superiors to provide accurate information to whomever asked.

4.10 The plant as an open field: the limits of identification with the company

The different ways of functioning of the human resources areas of each plant was partially known to the other plants, as well as the different management styles of the plant managers and their effects on the plant environments. Some problems, though, were common and difficult to solve. As a young female engineer in the research division pointed out:

"Before, in here there were more differences between the areas. With the introduction of quality programs, many minds were opened. There is a tendency for many people to place all the credit for the

quality of the environment here with the plant manager, as if he had supernatural powers to impose his will on others. Many people here only allowed themselves to be fully convinced by the arguments of the plant managers once they saw the need for the quality programs and how they could improve the situation of the company. In this sense, being in São Paulo is an advantage. We are, compared to the other plants, 'where things happen', São Paulo is a metropolis....Things changed a lot in the last year, when the need for quality production became obvious to all...I left CPC once, for, as a woman, I felt people didn't trust my job in the production area. I was happy I was invited to return, after 6 months, and I believe the invitation happened due to the introduction of the quality programs. Now the criteria to evaluate a professional are clearer, leaving fewer margins for prejudice. The quality programs enhanced the quality of the participation programs...I believe it is the possibility of participation that makes the motivation here so high. The bosses give us general guidelines, and we can freely give our opinions. After the goals are established, we have a lot of freedom to move...People seem to think in here that this environment is going to last forever, but I am not so optimistic. In an area like mine, the possibilities are nearly unlimited, but for those who work in the production area, the situation is completely different. It doesn't matter how much effort they make, at a certain point, their career path become like a funnel, only a few can pass through and even those have a clear roof up to which they can climb... Here people almost don't mention salary as a motivational element, and we are all enthusiastic about how much the company has changed and about our constant successes. We proved the plant could be profitable, and we produce more new resins than the other two plants, with worse equipment. In my area, people are going to graduate school, they use the university equipment to test formulations for CPC, they exchange a lot of ideas...people are very dynamic, and for now they don't want to think about it, but sooner or later they will have to move out of CPC. This plant won't be able to produce forever, and we are not learning new technologies here. There is no exchange among the plants. I have never visited Alagoas. I have to think about my future as a professional."

Although in the plant the environment tended to be very positive, the field is not hermetic and the possibilities for the manager to create long term ties is very much dependent on the concrete economic benefits he can offer. Another engineer from the research division, said:

"I like working here, I feel good with the people and the way the work is coordinated, but there are things that I must consider. I will finish graduate school next year, and will lose access to the university's laboratory. I fear if I stay here too long, I will be unable to recognize the different new technologies even if I bump into them. We have other serious problems here. PVC products are being criticized all over the world by environmentalists. In German, vinyl products are not being purchased by the consumers. The

truth is we do have some serious limitations in dealing with environmental problems. We do have problems with residues of VCM in the final product, and other engineers in the group also do. If there were more exchanges among the plants, we would have a better chance of finding solutions, but we don't feel a firm commitment from the holding company in regard to the optimization of the utilization of resources. And those resources are very limited. The area on support for surveillance of environmental issues doesn't have enough specialists nor the necessary equipment. So far, we have being searching for solutions outside of the company's walls, but we must recognize it is far from satisfactory and that the future here is less than certain[107]."

The manager of the production area says: "We take the quality programs very seriously here, and the progress of implementation was made easier by the existence of open channels of communication. The plant manager personally took care of the question of involvement among all levels of the hierarchy and of the quality of communications.. To ease the surveillance of the communication process there are three committees, one central, one for each area and one for each division. People involved in the committees meet with higher intensity to define the needs. The committees are in charge of finding solutions to increase the exchange of ideas and to facilitate the flow of information. But we fell very much isolated from the rest of the company. We have not yet received any information about the Responsible Care program, and I heard that other units are already being involved in it. We do not produce VCM, but we carry other equally serious environmental risks. We work in an urban area, what means that accidents can affect more directly the surrounding communities, and we discharge industrial refuse into the river. It is treated, of course, but accidents and environmental problems here might have extremely serious consequences. Sometimes I have the impression the holding company doesn't include us deeply in those programs because they have no intention of investing in new equipment for this plant. People try not to think much about it, because of a feeling of loyalty for the group of colleagues, but at the back of our minds we worry about the future".

The manager of the safety and environment surveillance area also places the major problem in regard to his area outside the of the scope of the possibility of solution within the plant. According to him, although human relations at the plant are good and there

[107] In an interview with the company doctor, who works for CPC and other companies, in comparison with other factories for which he works, he confirms the impression that CPC people have a higher satisfaction level. Workers attempt to schedule their physical examination for after or before working hours, although they could do it during the day, and there are less cases of gastritis in comparison with other factories, although the general number of cases for all the factories, including CPC, is on the rise. Another element that he cites as an indicator of the commitment to the company is that in CPC it is very rare the cases in which the workers use medical excuses to leave work and/or to get absence permits. In other factories dubious cases are common, while in CPC the requests for medical leave are usually justifiable.

is a tendency, in daily activities, to concentrate on practical tasks in cooperation with others, the professional future is uncertain and makes him question the extent to which dedication should be given to the company. He agrees that before the plant was profitable, everyone had to do their part to make it viable as a business, but the working conditions should be improved by the holding company as recognition of the contribution to the group made by the plant. To cut costs, the number of employees in the area was reduced to the minimum necessary, and it is now difficult to find free time for on-the-job training. He feels that although they do their jobs the best they can, the holding company doesn't help by, for example, increasing the training budget which would allow the technical upgrading of the employees. The on-the-job training tends to be to specific, focusing exclusively on the factory's processes, and this tends to limit the employees chance of finding alternative employment if the plant were to be shut down.

4.11 Management of work, self and profession

The observation at São Paulo brought to my attention the fact that the experience of participation in the decision-making process, on the definition of goal and strategies of action, reduced the fragmentary tendencies of the social tissue (as observed at the other plants) by preventing the formation of power feuds and closed professional groups. The professional identity, that seemed a clear source of allegiance and identification in the other two plants, was at São Paulo substituted by a sense of loyalty for the plant as a whole. The tendency observed in the other two plants of having employees associating almost exclusively with people of the same professional group in their leisure time was not verified here to the same extent. There was still some tendency to develop closer ties among those in the same profession, especially if their age group was the same and if they spend large portions of time together, but such relationships tended not to be exclusive.

Although there was a conscious effort, especially by the management, to promote a sense of integration and democracy at work, the distinction between manual and intellectual workers was still clear in many ways. It is possible to affirm that the harmony of the environment was maintained especially because those differences were maintained. That is, the manual workers had an inherent sense of limits that allowed them to evaluate up to were it was "legal" for them to go in their claims of power at the plant. The sense of respect for the authority of those who possessed more symbolic capital (as a form of higher recognition of value and merit fruit of a higher amount of educational capital) was one of the elements that allowed for the process of delegation to advance without disturbing the order of the plant. Although the limits of what could be said or done by the blue collar workers were never expressed verbally, there was a tacit understanding that their authority was limited to their own productive process. The maintenance of the equilibrium was promoted by the blue collar workers themselves, who considered it treason to the trust given them by the management any attempt to go beyond what was perceived as being their boundaries.

Among the attitudes most clearly disliked by the workers were expressions of distrust in the discourse of the plant manager, on the context of which they themselves defined their professional excellence and pride. His ability to interpret reality and the quality of his leadership was beyond dispute. Any attempt to instigate comments against the plant manager, aroused from the workers a sense of impropriety expressed constantly in moral terms, such as "he gave us so much, he doesn't deserve it", or "he may make mistakes sometimes, I don't know, but his intentions are good", or "he always takes our side. He fights for us at the top, ...in questions of salary, benefits, etc., if it wasn't for him the chairman wouldn't take the lead" (in a sense, it was believed that because the plant manager was so committed to the group they didn't need the labor union, but if they had to deal directly with the central administration the union would be necessary).

The São Paulo plant manager was able to move beyond the stiff hierarchical organization conceived as the relationship between specialized parts linked by lines of communication, command and control,[108] towards more flexibly integrated parts without any restructuring of the formal organization, without changes in the organizational chart or in the human resources employed. By increasing participation, the motivation rose without the need of any major transformation in the conception of the organization. Observing the nature of this transformation, it is possible to qualify the affirmation made in much of the business literature that the modern organization needs to enhance the thinking capacity of the employees. As long as industrial labor remains a necessity (according to the post-industrialist, industrial labor will be gradually eliminated and substituted by machines[109]), and I agree with Kenney & Florida, 1993, that it will remain so for a very long time, the "thinking" capacity to be enhanced on the part of the employees is not the right of free thought, or a thinking that is unconnected with to system of power, but a subordinated thinking, the thinking that is "allowed" to occur. The subordination of the blue collar mode of relation to their activity and the company, depends, more than on anything else, on their own censorship in relation to the scope and reach of the thinking that is required from them. This censorship works as a inner sense of limitation, that arises in relation to the perception the blue collar workers have of themselves within the industrial organization and their sense of dependence on the symbolic capital of the manager to provide the adequate framework inside of which their thinking skills are to be exercised.

Attempts to eliminate the restraints on the circulation of information, that leads the plant manager to discuss with the employees, openly in the corridors, the future plans of the holding company in regard even to such sensitive issues for the employees as

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108 Morgan, 1986

109 As Daniel Bell, the Coming of Post-Industrial Society, Basic Books, New York, 1973; Alain Touraine, The Postindustrial Society, Random House, New York, 1971; Alvin Toffler, The Third Wave, Willian Morrow, New York, 1980; and Catherine Casey, Work, Self and Society After Industrialism, Routledge, New York, 1995.

benefits, instead of creating a sense of antagonism against the manager, which was what the manager of Camaçari believed would happen in such situations, enhanced the feeling of openness and honesty, further legitimizing his authority and generating extra loyalty to him. Naturally that the information was released together with the manager's own interpretation, an interpretation which provided the employees, together with the crude data, various ways of thinking and processing the information according to the logic and needs of the capitalist market and taking in account the need for the company to remain competitive to exist. The manager was constantly providing the framework of thinking by explaining the necessities, decisions and projects in a complex way that included the tendencies in the national and international market, the movements of the competition, the company's financial situation and the concrete possibilities of the plant given the type of technology and its productive capacity. On occasions in which a given issue brought the position of the company into debate, or in the event of a crises of any nature, the calm and confident explanations of the plant manager, even when bombarded with questions, provided him with an opportunity to reinforce the existent arrangement and to renew the feelings of dependency on his leadership.

The ability of the manager to construct his symbolic capital by recognizing the right of expression to others, thus conferring upon them some of rights to this capital, empowered his own discourse about the reality of the plant and allowed it to predominate and provide the framework for all other discourses. While setting the basis for the solution of the daily problems of integration and external adaptation, the discourse of the manager provided the framework for the meaningful apprehension of the activities of the workers by themselves and by others. In this process of leading the community through the process of practical adaptation to respond to concrete economic needs, as defined by the circumstances of the market, the manager created the conditions for the efficient inculcation of an ideology that is the necessary basis for the progress of quality production. In this process of adaptation to new economic realities,

the workers could enjoy a sense of purpose in their activity, what allowed them to usufruct from a sense of achievement and integration to the work community. The traditional feelings of powerlessness, meaninglessness, frustration, anxiety and futility were replaced by feelings of purpose and meaningful integration.

CHAPTER IV

* ALAGOAS PLANT

5.1 Introduction

The case of Alagoas plant is included in here to exemplify how failure in properly addressing the complex problems that affect the collectivity of a plant can lead to a conflict situation, how it is necessary for the manager to possess enough educational and cultural capital to address an enormous variety of unforeseeable situations, and how the implementation of the quality programs offers the discourse and the logic of modernization, recontextualizing discourses and giving the management tools to rethink its own strategy.

Different from the manager of Camaçari, who was still to perceive the importance of human resources policies, and from the manager of São Paulo, who had been working for years according to the principles of participative administration, the manager of the Alagoas believed in the need to create deep ties of commitment with the company, but used a strategy incompatible with the reality he had in his hands. The manager of Camaçari, by not imposing a 'view' of the business, an 'official' view of the relation between the company and the employee and a definition of the ideal employee for his plant, ended up creating a feeling of insecurity in relation to the company's expectancies, opened room for the existence of conflicting definitions and discourses and a feeling, the part of the employees, that the situation inside the plant was oddly mysterious and chaotic. The manager of Alagoas, on the other hand, was attempting to impose a very clear idea of the relation between worker and company, in which this relationship should be of full commitment and involvement of the worker to the company and the plant collectivity, and a strong commitment to quality, order and discipline as way of constructing an exemplary plant. The strategy to impose this

commitment, largely incompatible with the dispositions of the workers, provoked a strong political reaction to the manager's authority.

It is interesting to look at the individual trajectory of this man to understand his choice. He started his career as an operator in the early 1950s, in Rio de Janeiro. He was among the pioneers of the petrochemical industries in the country. As a self-taught man, he progressed very fast in his operational career, highly motivated by the early spirit of the founders of the petrochemical industries in the country. He was known to many of the technobureaucrats of Petrobrás, the national oil company, and to the managers of the Camaçari complex companies as one of the few people who managed to emerge from the operational ranks and went into a management career, as a highly disciplined and capable person.

He was transferred from a synthetic rubber company, a state owned company at the time, to the Camaçari complex as an operator. Under the period of management of the first chairman of CPC, he was promoted from an operational career path to division manager. His introduction to management was processed under the guise of the first chairman, with whom he shared many views. His development as a manager was largely empirical, occurring through the daily solving of problems in the plant. He had been promoted to production area manager when the construction of the Alagoas plant was decided. Under the first manager, he learned to manage by close surveillance, authority concentration, and paternalist involvement with the employees as a way to extract loyalty and commitment. Indeed, in Maceió city, he had served as a bondsman of credit for employees, had lent his name as warrantor for real estate deals for those new in the state, served as a marriage counselor, best man at wedding ceremonies, God father to children and had even lent money himself to the employees. He knew much of the private lives of those close to him, especially the middle managers. After hours, it was common for him to take those middle managers and people from the

human resources division for dinner (causing complaint from his wife and from others' spouses as well).

According to all in middle management positions and the human resources area, he was extremely dedicated to the plant. He got personally involved in the management of all areas, took written reports home from each manager every Friday and brought in written recommendations on Monday mornings. The middle managers agreed he tended to concentrate the decision-making process in his own hands, but did not seem unsatisfied by the fact. There were clearly strong emotional bounds between the middle managers and the plant manager, who seemed to exert a charismatic leadership on his direct subordinates. According to the middle managers themselves, the concentration of authority was justifiable by the fact that the plant manager had too many young and inexperienced people under him (although some of those middle managers had been engineers at CPC for more than fifteen years).

According to my interviews with him, he was strongly opposed to any sort of involvement with the labor union movement, and political movements in general, especially those of left wing orientation. He believed that the ideal employee was one who was fully dedicated to the company and had a life project of growing within it. Involvement in the union movement was believed to be incompatible with the participation in the company on principle, for if the union was willing to overthrow the capitalist system, the employee could not believe in it and contribute to the company as well. He tended to take participation in the labor union movement as a personal betrayal. The experience of a strike and the need to implement the quality programs brought the awareness of the necessity to change. The research started precisely when the first program of democratization of human relations began to show its first possibilities. It was a moment full of uncertainties at all levels of the hierarchy, but there was a clear determination to find new ways. The employees were enthusiastic about the "Pilot Project", as the democratization project was named, but the experience of

years of authority concentration left them quite uncertain of the limits of the new political openness. As consequence of these fears, it was considerably more difficult to access personal opinions at Alagoas than in the other two plants. Group conversations with employees of mixed areas and/or hierarchical levels were very stiff and superficial. There were many times in which personal opinions would be expressed only in private conversation. There was a strong precaution against taped interviews and in regard to the recording methods. Preoccupation in regard to secrecy of the information provided at the interviews was much more strongly expressed at this plant than at the other two.

One clear difference from the way the quality program was being addressed at Camaçari was that, although the Alagoas plant manager didn't have as much formal education, he was constantly searching for innovations and investing in enhancing his understanding of the industry and of human resources management strategies. As with the manager of São Paulo, he was dealing directly with the human resources division, was very much aware of the need to manage people's involvement with the organization and the need to proceed with the implementation of the quality programs. He was also aware of the need to proceed with a process of delegation and participation.

There were, though, in Alagoas, an enormous variety of issues that he didn't seem to fell confident to address. The construction of the plant at Alagoas had been opposed very strongly by the ecological movement, organized originally by the members of the then still clandestine Communist party, and the future employees of the plant had being largely exposed to ideas against the production of petrochemicals in the area and against the capitalism in general.

The region of site of the plant was poor, lacking enough resources to expand public education, urban hygiene, public hospitals, etc. That is, for one side, there was the demand for modern public services and on the other, traditional industries and agriculture that did not allow for the expansion of the basis of revenue collection of the

state and municipal governments. The managers of the new dynamic industries could effectively create a discourse of opposition to that created against these companies, pointing for example to the social benefits a broader basis of tax collection would bring to the state, the benefits of providing modern employment opportunities and of bringing dynamism to the region, which could attract further investments into the area. They could also defend their industries from the attacks of the ecological movement by pointing to the quality of the technology of environmental protection they were employing. The need for a discourse that opposed that of the ecological and left wing movements was clearly felt inside the plant, and affected very much the way the workers related to the management. The inadequacy of the answers of the management to the questions raised outside the plant affected the workers in many more ways than the management suspected. An efficient bottom-up communication system could have brought those issues to the attention of the managers, and there were enough well trained engineers and other experts in the company's ranks to adequately address those problems. The authoritarian exercise of power, though, did not allow for these anxieties to emerge, creating hidden difficulties and unwanted pressures on the shop floor.

5.2 Origins

The Alagoas plant project started inspired by the high profitability of Camaçari and by the evaluation of the holding company that the market for PVC would continue to absorb its production at the present pace (the early eighties). But even before the plant was in operation, worldwide installed capacity for PVC production outgrew the demand for the product, and recession and inflation started to plague the Brazilian economy.

With the price of PVC dropping fast, Alagoas already started operation with everyone knowing that a difficult situation was likely to occur soon. CPC started to have problems with the repayment of the debt contracted for the construction of the plant.

Contrary to what happened at Camaçari, where the company had to lower the educational requirements for admission in order to fill the available positions, Alagoas, going into operation during the early years of the economic recession, had plenty of well-educated applicants to select from. While at Camaçari the people with as little as three or four years of formal education could be found in the operational ranks and in the caldrons area, at Alagoas all operators and maintenance workers had at least completed high school, some technical school and a few even university. Among the university graduates were found, on the shop floor, especially people with degrees in the humanities or pure science, such as mathematics, physics and biology, whose only chance of employment in their area of expertise in that region would be as school teachers, whose salaries were much lower than those paid at the plant[110]. One operator with degree in mathematics said that his brother, with a degree in biology, had a salary 4.5 times lower than his. The brother had been working as a teacher in a public school earning 2.5 minimum salaries (equivalent, at that time, to about 72 US dollars, for a total of 185 dollars) for a period of six years. In CPC the lowest salary, for a just-hired operator, was equivalent to US$380 for those in the administrative time schedule (not on shifts). The shift increment corresponded to a increase of 2/3 of the basic salary[111].

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110 As there are no studies on impact of the new industries in Alagoas, as in those carried out by the Federal University of Bahia for Bahia state, I will base the comparisons with the surrounding on the information provided by the operators themselves. As the case of Bahia indicates, there is a clear relation between the macroeconomic situation and the perception the operators have of themselves in relation to their surroundings and their relation to the company. In deciding to leave or stay in operational ranks, the operators take into account the very concrete limitations they experience, limitations that exist as a part of a concrete macroeconomic situation.

111 Although it is true that the average level of formal education at Alagoas was higher than at the two other plants, I believe it to be only partially an elements that contributed to the sharper political awareness expressed by the employees of that plant, with the 'culture of the plant' being the determinant factor. The majority of the operators (close to 90%) had up to high school education, a percentage that is very close to that of Camaçari (about 85%. The chief difference among the two plants being that while in Camaçari the rest of the employees had less education; in

Alagoas city was much smaller than Salvador, and had much more limited employment opportunities. As the operators themselves put it, in Alagoas either you are a public servant, an employee of commerce, a peasant or an operator. The chemical industries of Alagoas did not compose a complex, and except for the strong opposition against their construction by the ecological movement, their impact in the region was not comparable to the one the Camaçari complex created. There were originally four plants (one has been closed) in a contained geographical area. The choice of an area so far up north, in a state without a consumer market for the raw materials those plants produced, was due to the geographical proximity of the Unites States, the largest importer of CPC products. Together with the plants there constructed harbor facilities to ship the products both abroad and to the domestic consumer market.

Besides the three chemical plants, the other industry in the area is sugar cane mills. After alcohol became a major alternative automobile fuel to petroleum derivatives, many land owners went into manufacturing it from sugar cane produced on their farms.

In terms of salary there was not much difference between the sugar cane mills and the chemical plants (according to the operators that moved from the sugar mills to CPC), but the chemical plants ranked higher in terms of benefits and respect for legislation, especially in regard to safety and environmental procedures. The operators that came from the sugar mills said the difference in regard to the observance of safety procedures was very clear. While in CPC the operators were always in full uniform,

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Alagoas they had higher education). The emphasis on continuous training of a broader nature and the desire to raise the ceiling of the blue collar career was much more a function of the aspirations created inside the plant. In creating these aspirations, the minority of blue collars with university education did indeed play a role, in bringing into discussion the principles of their exclusion from the management career path and demanding a training that would make them capable of overcoming their practical limitations in regard to the type of knowledge necessary to climb the management career. But their discourse found a fertile environment for developing for the emphasis on training, inculcated by the plant manager, made it possible, as he put it himself, "even for an operator one to run the plant". The faith in training and learning as a way to have control over the process and the technology, and the tendency to see the lack of a formal degree as a transposable barrier, was inculcated by the manager himself, through his discourse and active exercise of inculcation and the practical example of his own personal trajectory, climbing from the operational ranks into managerial career.

completely buttoned shirt, boots, helmet and with an anti-gas mask hanging from the belt, and had to use ear and eye protection whenever walking into designated areas, in the sugar mills they were allowed to wear shorts and slippers, and work with unbuttoned shirt (a relief in tropics). Because of this, number of accidents was high in the sugar mills, CPC operators assumed.

To get the plant running, CPC sent experienced staff from Camaçari and from the Southeast region to Alagoas. As the basic educational level of the hired labor force was high and the on-the-job training program quite intensive, basic training was accomplished very quickly. According to the manager of the operational area, if it wasn't for the lack of experience in dangerous or unusual circumstances, even the operators I, at the bottom of the career structure, could perform all the tasks of the more senior posts.

As the plant started to run smoothly and the training of substitute people was finished, the people brought into Alagoas slowly returned to their states of origin. The pace of promotion in Alagoas became very fast. For each supervisor that left, 4 people were promoted. One chief operator to supervisor, one operator III to chief operator, one operator II to operator III and one operator I to operator II. Whereas at Camaçari a very good employee needed at least 11 years to became supervisor, at Alagoas there were people who had been working for CPC for only 4 years already in that position. This situation contrasted sharply with that of Camaçari, where on average, a good operator would take 15 years to become supervisor, and with São Paulo, where the labor force was older and the perspective for promotion was even smaller. In all other areas of the company, when an opening occurred, candidates from all its sections, factories and offices, could apply for promotion. Better skilled office workers could easily gain promotion upon transfer to other plants, if they qualified. In the operational ranks, though, this was not possible. As operational experience is defined in relation to

specific equipment, this type of transfered would result on a return to the beginning of the career.

The situation that developed in Alagoas was substantially different from that of Camaçari, although the results of the questionnaire survey pointed toward some similarities. The responses to the survey indicated that at both plants there was a significant dissatisfaction of the workers in relation to the company, but the survey could not reveal, due to the inherent limitations of this method of investigation, the very different causes for the dissatisfaction.

While at Camaçari there was a generalized feeling of meaninglessness and disillusionment in relation to one's activity, operational career and human relations within in the company, at Alagoas there was a sharp political awareness of the arbitrariness of the company's career systems, which closed the access of operators to the management career, and a clear political opposition to the exclusion of blue collar workers from the management of their own activity and from the decision-making processes of the company. As the educational level at all blue collar ranks was higher than those of the other two plants, the labor force was much younger and there was an efficient system of communication and broad circulation of information about the company at all levels, the blue collar workers were very much aware of their own possibility of participating in the management of the productive process. The incompatibility of the individuals' life projects and aspirations with a blue collar activity performed in an authoritarian environment, brought about a sharp sense of political opposition to the management. As discussed before, the relation to the company is mediated by the perception the workers have of management in a given power structure, so that the quality of both the relation to the company and to the workers' own activity was jeopardized by this type of management. The fact that the blue collar workers came to perceive their own educational capital as being enough to climb the hierarchical ladder beyond blue collar careers, made them question, constantly, their

exclusion. It is important to note, though, that the adhesion of the majority of the blue collar workers to this discourse of opposition to separated career structures was not only a function of their life trajectories prior to entry in the company but had mostly developed within it. The psychologist in charge of the human resources division addressed it clearly when he mentioned that, for some reason, the young people at the plant tended to become more and more ambitious during their process of socialization within the company, and gain confidence in themselves and their discourse, making thereby the situation difficult to manage.

That is, while at Camaçari the homology between the structure of the field of symbolic production and the structure of the field of social classes allowed for the automatic production of euphemized forms of economic and political disputes, thanks to the correspondence between those structures, in Alagoas the structure of the field of symbolic production, based on the superiority of intellectual labor over manual, did not correspond to the structure of the social classes of that plant, for the plant manager himself had emerged from the shop floor, the on-the-job training, as they developed it, was increasing aspirations for higher posts, and shop floor workers, especially those with university degrees, were questioning their exclusion from the decision-making process. The apprehension of the established order as natural (allowing for the formation of a political orthodoxy, that is, the lack of a discourse of opposition, and of the misperception of the arbitrariness legitimizing a political domination) did not occur for the dominated possessed enough educational capital themselves to feel entitled to the right to participate in the dominant faction, which led to the questioning of the arrangement that held them in a dominated position[112].

[112] Although there were many cases in which the operators questioned their institutionalized exclusion from the management career structure, the strength of their claim was partly limited by their own perception of lesser merit in relation to the present managers. A degree in engineering was understood to be the most appropriate to get into the management career, and especially a degree obtained in the universities of the South, with established reputations. The degrees obtained in the easier-to-get-in type of schools, and in programs that were less likely to lead to profitable careers, were perceived as a demerit even during the school years. The very fact that the operators applied for blue collar jobs indicate that they perceived clearly the limitations inherent in their choice of school and career, a choice restricted, many times, by the very concrete necessities of their families of origin. The

The fact that many operators had as many or more years of formal education than the plant manager and some operators had as much formal education as the middle managers presented a difficult to manage situation under the existing style of authority. The environment was even tenser because instead of providing a discourse that addressed the most urgent problems affecting the community, censorship and tight control were the chosen management strategies, thereby increasing the frustration of the operators with their blue collar destiny, and their feelings of dissatisfaction with the quality of management.

5.3 The environment and the company

Upon the decision to bring the chemical industries to such a "tropical paradise-like" environment, the socialist and communist parties organized a very strong opposition movement, and tried to stop the companies from moving into the state.

Indeed, the production of vinyl and similar products was already at the aim of the ecological movement in Europe. Linked to the ecological discourse, was brought to the public attention the fact that those companies were meant to export for the USA, bringing to light the old debate on the colonialist and exploitative relation between USA and Brazil, and strong appeals by the left wing movements for the non-payment of Brazilian external debt to American financial institutions, under the rationale that what the United States had exploited through its colonialist relation with Brazil had more than paid for what the country owed.

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democratization process, brought about by the necessities of the quality programs, was visibly reducing the tension of relations within the plant, as pointed out by operators and managers alike. That is, the higher educational level of the Alagoas plant was clearly not a definite limitation to the management intention of increasing motivation. Also, as the observation of the older operators indicated, the in-time experience of a less substantially complex activity erodes the value of the educational capital of the operators, and increases their perception of the higher relative merit of the managers for superior positions, to the daily ascertaining of the higher flexibility the managers possess for addressing a variety of circumstances. There was no clear awareness of the fact that much of this "merit" is created by the daily work experience itself, that is, that this higher capacity for problem solving is a skill developed in the practical exercise of managerial tasks.

According to the ecological movement's discourse, the United States was such a good customer of Brazilian producers of environmental damaging goods due to a policy of keeping bad industries in Latin America, so that it could avoid the side effects of this type of industrialization within its own boundaries. According to the left-wing theory of an international conspiracy against Brazil, the managers and owners of these industries were linked to the plundering external capital, often through hidden and illicit means, as were the militaries and capitalists during the twenty years of dictatorship. Because of this, they said, the community of Alagoas should unite to oppose their coming to the area.

If for one side the ecological movement was positive, because CPC Alagoas rigorously conforms to the highest international standards of environmental protection, for the other it created enormous animosity toward these industries from the community of the area. As could not be otherwise, the employees of the plant, recruited from the local communities, were also influenced by the warnings of dangers (political and ecological) of these industries. Many of the young operators tell how difficult it was, upon recognizing the good economic opportunities at the plant, to convince their families, especially their mothers, to accept their decision. Some of the operators, still in high school or university when the decision to bring the industries into the area was announced, participated, themselves, through students movements, in the protest against local politicians for allowing (and favoring) bringing the company into the area, and they recognized to have mixed feelings about the company upon entry.

The management of the locally recruited labor force was promised to be complicated from the start. Compared to the employees of the two other plants, the emergency situations in Alagoas created a much more nervous reaction, showing how much affected by the ecologists' discourse were the employees of the plant. One night, after eleven o'clock, the alarms and sirens sounded. There was a power shortage and the process was going to be temporarily interrupted. I was seated in the VCM control room

when the action started. I had been present during alarm sounding situations in the two other plants, but the operators there had acted much more calmly and talked to me while they moved around, giving me the impression that everything was under control. In Alagoas there were many operators running around, the supervisor clearly became upset and would run in and out the control room trying to keep track of the operators' movements. While trying to observe their movements I became, naturally quite afraid. After a little more than half-an-hour after the alarm sounded, the plant manager, the production area and division managers and the manager in charge of maintenance were all in the plant, some wearing pants over their pajamas. After the situation calmed down, at about 2 a.m., I could finally inquire into the causes of the problem. They told me that power shortages were very common in that area, because the sugar cane mills tend to burn their refuse, sometimes affecting the energy cables. According to the plant manager, about once every three months a power shortage happened, sometimes even more often. On these occasions, the job of the operators is to close manually some valves and to try to keep the flow of production going while the generator is started. There had been only a small loss of productivity for that shift, and full production re-started.

The operators said that at such times, some loss of VCM to the atmosphere could happen, but that it was usually possible to resume normal operations. Asked why there had been such a strong reaction to the alarms, they affirmed it to be a function of the risks involved in the situation. I was taken back to the city by the plant manager, who said he always came to the plant in case of problems to advise the workers, and he said he asked the other managers to do the same. The workers, who believed they could take care of such routine problems by themselves, interpreted the presence of the managers in the plant in the middle of the night as proof of danger involved in the PVC production. At the two other plants, the chief operator or the supervisor would have informed the division manager by telephone of the problems, if they judged it to be

necessary, and would have called again after the problem was solved. At the two plants the managers said there would have been little they could have done at the plant during emergency times, because the operators were better prepared to act. Engineers are only required if there are problems to resume operation or if the emergency was caused by a technical problem of the equipment.

That is, the more acute sense of danger the part of the operators was caused by the alarms of the environmentalists, on one hand, but reinforced by the action of the plant managers on the other, demonstrating that even issues apparently unconnected with the leadership are, indeed, at least partially, perceived through the symbolic representation of the reality of the plant, in which the influence of the manager is a dominating element.

5.4 The employees and their surroundings

Especially when compared to São Paulo, but also true in relation to Bahia, the labor/management relations in Alagoas state were historically more bitter and violent. There are various stories of violent clashes between labor unions and the sugar cane plantation owners, both in regard to the workers engaged in agriculture and those performing operational activities in the sugar refineries and alcohol mills.

According to the operators, workers involved in labor union activities, and especially labor union activists inside the sugar cane plants, as well as leaders of workers movements, were sometimes persecuted and even killed by the land owners.

The plant manager and the middle managers also told me many stories about such relations, emphasizing their perception of the chemical industries as an "island of modernity and prosperity in all aspects", when compared to the surroundings.

The operators said that during the period of construction, when the land was being cleared to install the equipment, the remains of many dead bodies were found,

especially under the area where the large storage tanks are now. According to them, that piece of land was used by the land owners to bury their enemies. The operators believed the buried bodies to have been those of union leaders and workers who had disappeared in the past, especially during the dictatorship.

In all of the three plants there were always a few ghost stories related to the past of the plants. In Alagoas, though, the ghost stories served to reinforce the criticism against authoritarianism and conservatism in labor relations. Many operators affirmed that if one went to the tank area during the night shift, it was possible to see the ghost of a dead woman searching for the body of her son, who is still buried under the tank. They say it is possible to hear her voice begging for the unearthing of her son's body. The story clearly expresses the suffering the families of those who felt victims of the traditional authoritarian system common to the region. It was common for the operators, in continuation of their narrative, to mention the caused the company provoked in the families of colleagues fired due to the strike, and to conclude that although CPC doesn't kill people, it is not so different from the sugar cane mills in the way it builds its relations with its employees.

How can one build a state of motivation to produce, or a sense of identification with a company perceived in this way by the workers? From the facts related above, it is possible to see how much more complex was the relation of the workers with the company than a purely economic approach could address. In a situation as that in the Alagoas plant, the high level of dissatisfaction observed among shop-floor workers could not be properly addressed by any approach that ignored the effect of the leadership on the formation of this state of affairs. Many of the negative answers presented in the questionnaire survey were not the result of concrete dissatisfaction with the physical aspects of the environment or similar issues, but a way the employees of the plant found to channel the expression of their discontent with the political situation in which they lived, which, quite naturally, owed a lot to the way the manager

organized the routine of the plant. A movement toward a higher degree of identification, therefore, did not presuppose reforms in the aspects most clearly criticized in the survey research, but a process of democratization under which the problems that appeared on the shop floor would have a channel to top management of the plant, and where it should be properly addressed in a way that allowed the workers to identify positively with the answers provided by the manager.

5.5 The big strike

According to the operators, the movement promoted by the labor union, that led to the strike, started chiefly around the issue of the linking of the adjustment of salaries to inflation, discussing the index the company used to avoid salary losses. After the support of some workers was gathered, and during the strike itself, the scope of the discourse spread to all the previous issues regarding environmental dangers and dubious corporate alliances with the national and international bourgeoisie.

What was it that led to the strike? If indeed the style of management of the head of the Alagoas plant was the same as that of the first chairman of CPC, and the salaries and work conditions of the workers were above the average of others in the area, why was it that the workers joined in a movement lead by the same labor union they judged radical, when, in similar circumstances, the employees of Camaçari resisted the idea of joining a movement of a much broader scale (involving all the plants of the Camaçari complex) and less radical orientation?

Once more denying the possibility of ready-made management recipes and confirming the need for a daily labor of construction of the legitimacy of one's authority through the management of concrete problems and necessities that take into account the internal and external circumstances of the field, the answer is to be found in the incompatibility between the workers' dispositions and that specific type of exercise of

authority. Camaçari started at a different time in the political history of the country, in a region and in a time in which a paternalist arrangement was still well accepted. While at Camaçari there was a very clear feeling of upward social and economic mobility among the workers, in the case of Alagoas the choice of employment in the plant was due to the lack of alternate adequately paying job to match vocational inclinations and future hopes. In the years that separate the construction of the two plants, shop floor activities, whether performed in a modern industry or not, evolved into being perceived as proletarian activities. The end of the dictatorship, the large debt the military government left, accumulated partly for the necessary investment in dynamic industries (of which CPC was one), and their whole model of development that increased income concentration despite the economic diversification it generated, was brought into sharp criticism in the media. That is, the model of development that added an enormous meaning and social significance to the work of the early Camaçari workers was being, in the late eighties and early nineties, associated with the failure of the military model to bring about social prosperity.

The discourse on unionization as an inalienable right of the workers was a common issue in the press and was openly debated in the universities. To understand the situation in the Alagoas plant, it is necessary to understand that, at the educational background of its blue collar workers, were the fight for political rights at the end of the dictatorship, the popular movement for free elections, and a discourse on the opposition to the dictatorship, a discourse that was strongly against the suppression of the labor union movement and for the defense of civil rights. These young men, had, at school, experienced years of fights for freedom of speech and for the legalization of the Student Union. Although the salaries at CPC were above the market average, the authoritative, power-concentrating exercise of authority in the work place brought about the feelings that their most basic right was being threatened by the prohibition of labor union affiliation. As Bourdieu says, in a point originally taken by Marx in the German

Ideology, that "language is real, practical consciousness", "it can be seen that the boundary between the universe of (orthodox or heterodox) discourse and the universe of *doxa*, in the twofold sense of what goes without saying and what cannot be said for lack of an available discourse, represents the dividing-line between the most radical form of misrecognition and the awakening of political consciousness" (Bourdieu, 1971, p. 170). Following this line, I think it would be correct to interpret the strike in Camaçari as derived basically from the work of the labor union in convincing the blue collar workers to fight to avoid further salary losses (that didn't affect CPC workers), that were occurring at that time in other companies of the complex, and inspired by the success of similar movements in São Paulo state, among the workers of the metallurgic industries, while in Alagoas, behind the flag of economic demands, was hidden the discontent with the political organization inside the plant itself.

Once the political discourse mediates the relation between workers and managers, the search for an unthought of submission to the paternalist leaders must be transformed in an exercise of authority that is in accordance with the legal institutionalized right at the risk of being interpreted as a dictatorial usurpation of the collectivity's fundamental rights. Besides, as it became clear from the comments of the workers themselves, the exercise of authority needed to be performed in such a way that it could create a feeling of legitimacy, to open space for the delegation of authority, as the only strategy, under the then current arrangement, to reduce the feelings of powerlessness in a collectivity in which the proletarian destiny was not planned in individual trajectories. The operators' interpretation of the movement, according to a young operator who participated in the strike, was as follows:

"You know, in here it was worse than in the army. The concept of freedom of expression did not exist here. It was a dictatorship of the worst type. We were treated as a bunch of dummies...It happened many times that best way to do something was not the way they (usually never specified as anyone specific, meaning, on most occasions, the usual path, the consecrated routine, "must have been some stupid manager who decided to do something like that in the past and it kept being done like that") do it, but we

were not allowed to say anything. Now, with the quality programs, things are getting better, but for me it is too late. "

An operator I who also participated in the movement put it as follows:

"I was naive. I thought we had the power to confront the manager, because the law was on our side. But the movement got out of control. The union became too radical, and the company became radical at the other extreme, and we found out they (the company) had the power after all... I feel like an idiot. My wife had a baby few months ago and I know I will lose my job sooner or later. She cries whenever she thinks of it... Although the flag of the movement was salary adjustment to inflation, I wasn't unhappy about my salary, I was making more than anyone I know of my age, and the company took care of all the expenses of my wife and baby at the maternity hospital, the best one in town, medicines and everything ... and it still does, whenever my wife takes the baby to check-ups and stuff. I guess I was just silly...It was like going into the street and shouting for elections when I was in school. It feels good to fight for sometimes like that...I would never do it again, I have being working very hard to regain the trust of the manager, but I know I will go..."

Another operator I say:

"The company is not bad. The guys (managers and senior operators) didn't deserve it. I just let myself get carried away; I didn't want to look like I was afraid. The union was right. The company does not have the right to forbid us from joining the union. It is our right, you know. The company should have let us decide, at least. But the company is also right. Those guys (of the union) are so radical. We let everyone down. The (area) manager doesn't look me in the eyes. He thinks I am a traitor. I never meant it. I didn't know things were going to turn so bad in the end. I guess I just didn't weigh the consequences."

The chief operator says:

"We saw it coming all along. The kids were just so inexperienced. It was the same thing in Camaçari. The fellows at the other companies who joined the strike went onto the black list and never again found employment in the chemical industry. They are all worse off than those who kept their jobs. The environment within the company is very heavy. We wish the manager would forgive the kids, but we know he can't, it is not his way. Somehow he loves the company and hates those who go against it. Actually, you may ask, why didn't the experienced guys tryto prevent the kids from doing it? Because, I will answer,

we could not talk about it to the big bosses without pointing out who was getting involved, without getting the guys in trouble. We just tried to take care of it among ourselves. Even the supervisors knew the movement was going on. But they were in a very difficult position, too. They were not strong enough to protect the guys, and if they acknowledged something of this nature was going on under them to the bosses, they would be saying, as things are here, that they couldn't manage the men. Now, the blame is on those who did it."

One operator III described the general feeling in the following way:

"They call us 'collaborators' and come with all this talk of trust and communion of interest, but they don't trust us, you know ... If things here were more open, nothing like that would have happened. The manager doesn't know what is going on till it happens. Everything is kept secret around here. He has all those meetings to improve communication, but who is crazy enough to raise an issue like that? All we talk about in the meetings are superficialities. If we could speak our minds, things could be explained, but no... the bad feelings just go on pilling, I don't blame the kids. They did what they believed was right. But I advised them...don't do it guys... but I guess you have to see by yourself, right?"

One the same issue, the manager of the production area says:

"I am sure that if we gave the guys a second chance they wouldn't do it again, but it would be, politically, I mean, the wrong strategy. If they think we are soft, where is it that we can set the limit? The situation outside is difficult, you know? The company is struggling to keep on its feet. If we relax discipline, then we are done for... Besides, those guys were very irresponsible, and we can't accept it in this kind of enterprise. The equipment is very expensive and dangerous, you know; besides, if they had succeeded in paralyzing the plant as they planned, we could never keep our word to the clients. The losses are not only ours in here. The clients would have had enormous losses if we didn't get them the product on time, and do you know what that means? Next time they will buy from some company that is more stable, I mean, we are pretty stable and we cannot dirty our name in the market. In the present situation, nobody can afford to do so. The clients themselves are struggling. The hard time is for all. You don't buy tons and tons of PVC under precise specifications to produce a given product around the corner. If we don't deliver, the clients have to close their plants, too. We lost a lot of money because of the strike. The union closed the access roads and wanted to come into the plants to start breaking the equipment. The police had to ask the for help of the army to protect the entrance gates. We brought people into the plant by helicopter to avoid damaging the equipment due to a complete shutdown. You know, with this type of process you cannot resume operations right away. Once the equipment is turned off, days of

maintenance and fine adjustments are required to resume previous operational levels. The guys knew it. It was a terrible experience. We didn't let the operators who were in the plant leave. We brought food and mattresses into the plant by helicopter. The plant manager went to the houses of the operators one by one to see who would come to keep the plant running. People were brought in from Camaçari. Some people were afraid of possible violence. We were all exhausted. I, the plant manager and many other management staff stayed in the plant, sleeping here, too, to keep up the morale of those on our side. It lasted for two weeks. In the end, the union was making death threats to the plant manager and his family, both on the union pamphlets and on the graffiti in the company's walls. What a nightmare...Do you see? it is not revenge ... I myself like the guys. The manager, also… But we can't let it happen again. They let everyone down. They know the damage they could have caused...they know the company needs cooperation; we need to be like a team. The plant manager is right. He has a lot of experience dealing with this kind of problem. We (middle managers) are all young compared to him (indeed, the average age of the middle management in Alagoas was considerably lower than in other plants, with nearly all of area and division managers from their late twenties and early forties). I think he knows what he is doing. Besides, if the guys are with the company, if they trust us, what do they need the union for? In a way, they are saying they do not trust us."

A detailed observation of labor relations upon which human relations are built poses some questions to many currently accepted views of this relation in the sociological literature, especially the view that assumes a uniform "management class" existing in opposition to an uniformly defined "blue collar class" within the industry. One quite obvious fact observable inside the plants is that the management does not relate to an abstract concept of a labor force, but each individual manager related to some individual workers, perceived differently from others in the course of human interaction. The young operators who joined in the strike are not a "general concept of blue collar", but individuals with faces, personal dramas, loyalty commitments and individual preferences known to the management. The disciplinary measures directed to the punishment for a joining labor union movement was not devised to affect the labor force as whole, but individuals within it. The management did not distrust all blue collar workers alike. Some were considered trustful individuals, on "our side', "responsible guys who understand the problems we face", while others were not "responsible

enough, mature enough, or simply do not possess the good will to understand our problems" (as the plant manager puts it, himself an operator at the beginning of his career). "Some people here "are poisoning the environment", as a division manager says. For managers, who understand the logic of production from a completely different position than that of sociologists, human relations in their plant are quite concrete. Attempts to control the labor force do not have the abstract connotations attributed to it by some sociological theories. They are concrete steps devised as responses to concrete problems that are understood and constituted within the field according to the habitus of that field. It is because these responses are practical and concrete that their constitutive role in the "culture" of that given plant is largely ignored. Also, as many of the responses to the concrete problems are almost automatically provided by the top manager in accordance with the experiences accumulated in the course of his own personal trajectory, the top manager tends to see those responses as fruit of convictions gathered through his own privileged and longer experience (and of his superior talent, confirmed by the fact that he earned the institutional right to command) the job, and in the case of Alagoas, tended to see opposition as the lack of experience of those who reacted against him.

For the managers, engineers and operators alike, there isn't a capitalist arrangement of the labor force as constituted for the sociologist, as one system among various other possible. The system they work in is the *only one possible.* The concerns of sociologists, therefore, do not coincide with those of management in most cases, for there isn't a class conflict inside the company, "*there are individuals who do not fit the works".* The observation of human relations inside the plant calls attention to the caution needed with generalization. We must be aware of the fact that most of the people within the plant have never read Marx, conflict theories or alike, and don't know managers and workers are supposed to form two conflicting classes with conflicting interests. The abstract idea of "workers", in the case of CPC, existed only for the

holding company. As the managers of the holding company had very little knowledge of what goes on in each plant, they could not help, in many aspects, but delegate to the plant managers the organization of the plants. As the case of the São Paulo plant illustrates, the recognition of the relativity of each organizational arrangement is awakened by systematic contact with different experiences and results. This recognition occurs in the process of organized learning, that is, the means by which the manager increases his educational capital, increasing his management skills. The confidence to delegate, to change and to experiment is earned through the organized and systematic knowledge of similar successful experiences, such as the study of the Japanese and German models by the São Paulo manager. Naturally, all managers in the company, at all levels of the hierarchy, had heard of the Japanese success in managing human resources for constant quality increases, but seldom this knowledge was more than skin deep, did not allow for a systematic and meaningful comparison between the Japanese experience and their own.

In this sense, once more, we can perceive the importance of the educational and intellectual formation of the top manager in the interpretation of the happenings at the plant. Compared to the managers of the two other plants, the manager of the São Paulo plant had a more abstract and theoretical understanding of labor relations in the industry, and a better perspective of his relations to the subordinates. This learned view allowed him to considerably distance himself from the concrete human relations in the plant, and to develop a less circumstantially bonded approach to human resources management. This understanding allowed for more abstract decisions in regard to human resources development strategies that took consciously into account the development of the new theories of business management.

Returning to the issue of the causes of the strike, the post-cold war ideology made the discourse on opposing interests of the labor union sound oddly outdated. Even the young operators with university degree in history (one operator I), and sociology (one

operator II), who were acquaintanted with the jargon and the concepts utilized in the discourse of the labor union, did not employ the same terms in their discourse. The terminology usually employed by the leaders of the labor union movement was avoided by all of the interviewed workers, including those who participated in the strike. As Scott & Urry (1987) noted, "economic change, most notably in the effects on occupational structure connected with the accumulation of capital...is the precondition of disorganization of civil society. The latter, most visible in the multiplication and fragmentation of interest groups - inside and outside of the labor movement - is itself the precondition of disorganization in the state, in the ideal-typical model, instantiated in, for example, the decline of neo-corporativism, the development of the catch-all party, and class dealignment"(p.7). It was clear, from the interviews with the operators, that they did not believe themselves to belong to a sharply different social class than that of the managers and engineers, in a sense confirming the tendency observed by Scott & Urry, and demanded a type of management of their activity different than that the plant manager had learned during the mass-production times. The middle managers, and especially the plant manager (originally an operator), also tended to perceive the different occupations within the plant not as a function of different class origins or different degrees of access to education as defined by the limitations of a social class, but as a matter of individual merit, defined according to individual's history of dedication to learning throughout his or her school life.

Again quoting Lash & Urry, they say that "there is something importantly 'classless' about post-modernism. With its core assumption of the breakdown of boundaries, postmodernism finds an audience when the boundaries which structure our identities break down; that is, during personal experiences of 'liminality' during which identity is unstable..."the partial revaluation of values in conjunction with the dissipation of constraints is associated and contemporaneous with the gradual demise of the so-called 'traditional' working class, arguably contributed to the anti-hierarchical attitudes

which underlay the shop floor democracy from the 1960s in Britain" The extended period of education contributed to the extension of the period of liminality or unfixed identity. In this movement, the importance of activities that allows for self-expression gains great expression. In the Alagoas plant, the element of unfixed identity could be observed in many workers, seeming to correspond well with the above authors' analysis of the anti-hierarchical attitudes in the shop-floor on Britain. The freedom from restraint experienced in the modern educational environment was transplanted into the industrial setting. As the young workers constituted a significant portion of the labor force, they could organize the discourse of opposition as a group, reinforcing each other's perception of the truth of their ideas. In this context, the lack of an organized attempt to redirect views on the part of the management could be clearly felt. A discourse of opposition to those formulated on the shop floor was very necessary to prevent this mutual reinforcement of opposing views that grew stronger the more coercive the environment became.

This process of incorporation of young workers at Alagoas was very different from the one that introduced young workers at other plants. The young elements, brought in slowly in substitution for older ones, did not form a population with common features in numbers large enough to create a community of common ideas. Being socialized in the industry one by one, each individual young worker assimilated the culture of the work place with much less organized resistance. In this sense, the situation at Alagoas was atypical, and the large young population generated the need for a different process of socialization to the work place. The informal acculturation to the work community was creating, for the management, a highly undesirable outcome.

As the introduction of the quality procedures attested later, in opening space for the participation of the workers in the construction of the activities in the industrial setting, and allowing them to share responsibility over the results, the strong criticism against the management was transformed into an energetic contribution to improving the labor

process and human relations within the plant. During the few meetings I observed, in which the assistant to the plant manager, a young, bright engineer, discussed the quality procedures with the operators at the employees club, the argument on the logic of the necessities of the industry and the rationality of the arrangement within the industry considerably reduced the criticism of the operators and destructured their discourse of opposition in relation to the company. The opposition in relation to the plant manager, though, tended to be maintained, and the operators doubted the plant manager was modern enough to assure the adequate adjustment between the plant reality and the needs of the modern market visualized by the holding company.

It is not correct, though, to generalize the strategies and discourses according to occupational groups. In various circumstances different strategies of individuals within the same occupational group could be observed. At the meetings mentioned above, different individual strategies, some aiming at constructing meaningful ties with colleagues, others at obtaining favors from management, were among the various strategies that could be observed. Even though the concentration of authority was criticized by the majority of the blue collar workers, an also large number tended to believe in the necessity of mechanisms of control precisely due to the tendency of resistance against authority observed among their own workmates. Those who expressed this belief in an attempt to be favored by the superiors, not always reached their goal. The area and the division manager tended to evaluate the employees by the concrete results of their work and by the quality of human relationships they could maintain, which pointed to their quality as team workers. Those who, in their intention to flatter the managers, expressed views too obviously in favor of the company and against their colleagues, tended to be viewed with mistrust by the operators and bosses alike.

In all three plants, workers and managers constructed strategies for action according to estimations of concrete possibilities and personal values that were acceptable

variations of the values of the group. But, in the three plants, the elements that were most likely to bring success in a given career varied according to the values of the managers. In Alagoas, much more emphasis was placed, regarding promotion, on a conciliatory type of personality. The operators who were more likely to work seriously for the company without creating conflict with their peers were the one's perceived as having the best reputation. Those who stood against their peers in favor of management tended to be seen as attempting political routes of access to the top of the career, instead of trying to make progress through good work and cooperation. Also here, evaluation according to "sincerity of belief" was a strong element in constructing a good reputation. Older operators, who had diligently pursued their careers and cooperated in team work managed to construct reputations that allowed them a considerable degree of influence with their direct superiors. Some of them, who were inclined toward conservative values (in the eyes of the younger group) of respect for property, family and tradition, similar to the values prized by the plant manager, had earned some degree of freedom from supervision in their work.

To keep order in a non-democratic environment is a time consuming task. Besides the amount of work involved in supervision, it is necessary to devise schemes for having access to the secrets kept on the shop floor. The operators who considered themselves "men of respect" and believed in their own reputation, were, quite naturally, not inclined to perform the dirty job of spying on the actions of the colleagues to point out "agitators" to the plant manager. The management knew well who those men were (the most valuable "responsible guys on our side"). Not so competent workers, usually of the flatterer type, were chosen in strategic areas to pass information from the shop floor. The operators suspected some of their colleagues of performing this job, and watched what was said in front of them. This, of course, helped to spoil the environment and spread mistrust. Various strategies were constructed by the "managers' side" workers, "pro-democratization" workers, the "I mind my own business"

type of worker, and etc. making human relations complicated in the plant. At this point, it is rather clear that those strategies found their reason for existence in the control strategies of the manager. In a more open and democratic environment such strategies would have been unnecessary. It is the experience of this type of environment that makes it so difficult for the majority of the workers to relate to the company as if they had common interests. If it was the case (that workers and company had similar interests) and if the management really believed in this discourse (that was being disseminated in the company's publications produced by the holding company), why was it that the manager was so eager to control the workers through coercive and authoritative means? The incompatibility of practice and discourse, at this level, was clear to the workers. In an environment in which trust is not well stablished, the discourse of the manager does not find receptive ears.

Reflecting how mixed the feelings of the operators were in regard to the company, nearly all of the blue collar workers defended the idea of freedom of unionization, but the majority affirmed that they had no intention of joining the union. This data appeared in the questionnaire survey and was confirmed at the interviews, showing that the problems around unionization were much more related to the structure of the political arrangement inside the company than with the union itself. The very close association of the labor union movement with the most radical left wing movement was the chief element keeping the workers away from it. In the debates on the strike and union issues, even when only the workers at the bottom of the blue collar career were attending, the general tendency was still to dislike the way the labor unions conducted their movement. The workers tended to defend the existence of labor unions as they see them working in the developed nations, searching for a balance between the rights of the workers and the situation of the companies, representing, in the process, the views of the majority of their members.

Many strategies of the human resources division to make the workers conform to the environment of the company had very negative impacts on the shop floor. During the interviews, the fact that the company had not hired people after the three months of training because they 'didn't fit in' was seen, especially by the younger operators, as a sign of the attempts by the management to choose people according to political preferences. In the same way, the fact that there was space, on the formal evaluation sheet, for grades according to the superior's perception of one's cooperation with the team and other subjective impressions regarding the employees personalities, led many of the operators to question the impartiality of the promotion system. It was known to all in the plant that manager had been fired for not 'fitting in'. It would be wrong, though, to generalize the discourse of the young operators to the whole of the blue collar workers. The higher the worker's position on the blue collar career, the clearer tendency for the operators to agree that a person 'has to fit in'. Many of the older operators believed this selection to have less to do strictly with political preferences, than with the needs of the process itself. For some of the older operators, supervisors and chief operators, the constant questioning of orders and instructions, common among the young operators, was a cause of problems especially in the case when urgent procedures.

According to some supervisors, maybe due to their lack of experience in the industry or their difficulty in performing team work, some young operators had problems accepting authority that worried them. Unless an order is negotiated and explained, there was a tendency for the workers not to do it with a good will. For the supervisors, it reflected their lack of understanding of the operational career in itself and the reason why experience is important in it. The supervisors had a more general view of all the details of the process on one shift and a constant supply of information from the other area, VPM or PVC that allows them to estimate the chances of a given procedure based on an intuition that is fruit of experience. The supervisors said that in the plant

they had observed the development of the habit of questioning reasons for all procedures,, or of discussing orders, unless the supervisor was firm. This tendency had made the supervisors discuss the need to show a firmer hand in dealing with indiscipline. The supervisors, the majority of whom had previous working experience in other plants, agreed that the operators at this plant were especially difficult to control[113].

The process of firing workers who got involved in the strike was painful for the collectivity in the plant because, as the number of young operators who participated in the strike was rather large, and the training process for new employees very slow, the research was conducted almost two years after the strike but about 15 operators who participated in the movement were still working at the plant, because all of them could not be replaced at once without serious consequences for the process and safety

[113] In some of the sociological literature (Castro, 1986) there is an assumption that the decision to upgrade an industrial process in terms of technology has as its goal to increase control over and independence from the workers. In spite of the observed problems with control and compliance in the Alagoas plant, the observation of the discussion of the managers in regard to the needs for transformations in the process and/or technological upgrading did include a discussion on the need to control the labor force. The decision to technologically upgrade, further investment in the control of the process, and of the type of training to be taken by the employees, was not, in most cases, done by those in charge of the actual control of the workers, and the need to control the labor force was not a present necessity in the minds of those who actually decide on those issues. Their decisions regarding investment in technology upgrading and process automation, were taken having for basis not the need to control the workers (an issue that is not as problematic for them as the sociologist would normally expect), but reduction in relation to the international competition, quality and productivity upgrading, control of emission of pollutants and the future market needs. If in doing so they generate further employment opportunities, they by no means believe they are becoming more dependent upon the workers, but that the company is providing 'opportunities' to the unemployed in the market, and therefore fulfilling one of its important social functions. If, on the other hand, it reduces the need for human resources employment, they don't interpret it as freeing themselves from potential class conflict, but just as adjusting policies to market needs (defined economically and not politically).

In seeing in the decision to upgrade technologically or to develop new technologies the conscious decision of the management of enhancing control over the workers or of consciously reducing the dependency of the capital on labor, the sociologist tends to downplay the strength of the fragmentation of activities (including the thinking and planning activities) in industry. The processes of decision that for the sociologist appear as nicely fitting into a long-term project of the capitalist class as a whole, are, for those in the world of industry, the consequences of an enormous mass of decentralized decisions (and especially non-decisions) taken by people who have a much smaller universe of choice than the one usually attributed to them by sociologists. And the outcomes that interest most the sociologists, those that reflect directly on the schemes of control, are usually out of their scope of choice of those who actually take the decisions over those issues (in CPC the decisions on technological upgrading and all other technical procedures were taken at the holding company by a group of specialists without interface with those at the plants who actually performed the daily labor of controlling the workers. The political aspects of production were, for those in charge of technology related studies, of somebody else's concerns).

procedures. There was a clear understanding, though, that their remaining time in the plant wasn't going to be long.

It is through the misrecognition of the political implications of their task in the perpetuating of an arbitrary power structure that the managers can unwillingly perpetuate the given labor division and also the alienating conditions under which the workers produce. And it is also under the same process that they may fail in creating the legitimacy of their own authority, precisely because they ignore the issues they should consider for consciously constructing a legitimated exercise of their authority (although some people seemed to have a natural talent for successfully managing conflict within the various plants). The learned exercise of authority is still a luxury few managers have access to, but of which the necessity has been more and more emphasized, under the spirit of quality production. Much more investigation of the practical relation to practical problem-solving in a power field and its impact on the collectivity is necessary to fully understand how the managers affect the workers.

For the manager of Alagoas, a man who had himself experienced the blue collar labor routine, to manage blue collar workers in an authoritarian way was quite natural. He had progressed up the managerial ladder not because he had opposed the authoritarianism with which his own job was controlled in the past, but because he had accepted it and constructed his excellence as a worker within it.

The difficulties the young operators had in accepting the same arrangement was, to a certain extent, incomprehensible to him. He tended, in our conversations, to attribute the operators' lack of desire to cooperate to individual personality traits and to the work of 'negative leadership' and 'the bad influence' of some operators over others, and to the 'weak personality' of some of the youngsters. It is because the problems on the shop floor were attributed to the work of 'difficult individuals' that high staff turn-over was utilized as a strategy to 'find the right people for the right job'. For the workers, with

a completely different point of view on the nature of the conflicts, the manager's strategy of lay-offs was the tool of a dictator, designed to force compliance.

5.6 The operators and their function

Similarly to the situation in Camaçari, the operators at Alagoas tended to emphasize the importance of the operators as a professional group in terms of their higher responsibility over the equipment and their relation to danger in comparison with other professional groups for the company. But, while at Camaçari there was a lack of interest in the technical and scientific aspects of the process, at Alagoas there was a strong pressure for upgrading the contents and quality of the instruction and training programs.

Comparing the two plants, it was easily perceptible that the operators of Alagoas were much busier, and that there was much more uniformity in personal appearances and in the physical environment. I learned that there were precise rules in regard to the uniform, which prescribed, for example, that the buttons should be buttoned all the way to the neck and that the shirt should go inside the pants, thus showing the belt. Long hair was forbidden as a safety measure, and for the sake of discipline and cleanliness.

The workers explained their lack of time to talk to me in the area as a function of the company's policies that they described in a little verse that said: "invent, try, and find more work for us" (*invente, tente, encontre trabalho pra gente*). According to the operators, it was highly unusual to find blue collar workers so busy in the productive area, for continuous production technology does not demand much interference in the production itself. The operators in other plants were dedicated mostly to the surveillance of the equipment and have to stay in the plant mainly for emergencies. But not in Alagoas. To avoid the otiosity of the operators, the plant manager, together with

the managers of the production area and those of the divisions, devised an intensive on-the-job training program, according to which the person immediately above another in the hierarchy was expected to train his junior in his own function and make sure that all the steps prescribed for the junior's activity in the operational manual were known by the junior. Periodical examinations checked individual progress, and the performance of the junior was important both for himself and for the senior, as the instructor. The operators said they would go over and over the equipment, all the valves, their names, numbers, positions, alternative uses, emergency uses, adequate maintenance procedures, types of repairs recommended, sensitive points in case of accidents, etc. An intensive simulation program was also developed to make sure the actions taken in the case of accidents would be precise.

Even though complaining at the way the training was performed and the contents chosen, the operators themselves demanded more training. An investigation into the nature of the dissatisfaction with the training revealed that the operators wanted to have access to information of different categories. The intense training they were receiving was intended to upgrade their operational skills, but the training they were demanding would have enabled them to push forward their claim regarding the necessity of opening up the access to managerial careers to the blue collar workers. They wanted to be instructed in process engineering, in the scientific aspects of the reactions occurring inside the reactors, the different formulations of the various resins and their different specifications. According to the company policy, however, white collar workers with engineering training would progress along the management career path (three ranks until plant manager), and the blue collar career would end at the supervisor level, with a total of 6 ranks.

Asked about the chosen contents of the training programs, the area manager said:

"Well, we hired those guys to be operators; in the same way we hire secretaries to be secretaries. As we are not training my secretary to take over my position, but to progress with a secretary's career, I am not training operators to become engineers or researchers. If they want to be hired as engineers, they are

free to go back to school and send a resume applying for those positions, but I am not transforming the company into a university. The demands of those guys are absurd. I once asked what they wanted to learn. If you do what they want, you will have a hundred operators in line waiting to be promoted to the research laboratory or to the positions of engineers. Their training program is excellent for operators. I can't lend my ears to their demands, because they are endless".

Compared to the other two plants, the operators of Alagoas were far more dissatisfied with their blue collar destiny. It was much more common to hear operators describing to their jobs as temporary, just while the economic recession lasts, than in the two other plants. The company's changing policies on retirement benefit, which was a cause for anxiety in the two other plants, was hardly mentioned at all here. Except in the case of the older operators, transferred to the plant, there was a certain consensus at the operational level that it would be worthwhile leaving the plant before retirement.

The pressure for participation in the decision-making process in regard to their own activity was quite strong, but developed among themselves, as strategies of resistance against certain policies, and was exhibited by a refusal to participate in the company's club and integration activities. The criticism against their isolation from the decision-making process was not brought up at the level of an articulated defense of their claims to the management. Very seldom was their discontent clearly expressed at the level of discourse with those in superior positions, but the expectations of the shop floor workers were known all the way up the hierarchy.

Instead of regarding the opposition of the operators as a sort of abnormality or a problem to be solved by adequate human resources management policies, those in management positions tended to believe that a certain degree of opposition and dissatisfaction to be normal. This perception reinforced the faith of middle management of the need for surveillance and control by the plant manager. The middle managers tended to feel powerless to address the conflicts, and tended to stick around the plant manager as a strategy to increase coherence of managerial action.

In spite of the general tendency towards dissatisfaction with the political environment within the plant, operational pride was very much described as being related to the general results of the plant and to the feeling of participating in the most modern and productive plant of the group. The operators often repeated that their plant was cleaner and better organized, and was the one closer to reach certification as a producer of quality. There was a feeling of rivalry in relation to Camaçari, which was the plant that supported the group until São Paulo and Alagoas were operating profitably. Due to the time it usually takes for a new plant to work out a routine, Alagoas had, in the beginning, too many operational problems compared to Camaçari, but now it was working better and producing more. According to the operators, there was no other company producing PVC in the country that could match their standards. They often said, as did the plant manager, that their new target was to overcome the marks of Mitsubishi's plant in Mizushima, Japan, with similar technology but producing with higher quality.

There seemed to be no perception of incoherence in the attempt to extract professional pride and a sense of participation in the success of the plant and yet be be dissatisfied with the political organization inside it. Although the number of suggestions given by the workers of the Alagoas plant in the group's suggestion program was higher than the other two plants, the managers and some of the operators themselves believed that involvement and participation could be even better. The operators confessed many times to having experienced a feeling of self-betrayal when cooperating with the company. On the other hand, they experienced the need for a meaningful work experience. The demands for participation and democratization of the environment seemed very much related to the workers' own necessity of a more total involvement in the work community. Although the dissatisfaction with the company was as clear as in Camaçari, the fact that in Alagoas the communication system bringing a wealth of information to the workers was very efficient, allowed the workers to maintain

a sense of meaningful participation in the collectivity of the plant. The operators frequently justified the need for more freedom in terms of the company's interest itself, saying that if their contribution could be successfully collected the company would be better off. The workers of Alagoas experienced a feeling of powerlessness, anxiety and a deep mistrust in the company, but did not experience the feelings of meaninglessness and normlessness experienced in Camaçari. So that although the authoritarian power arrangement jeopardized the quality of the production by affecting the desire to produce for the company, it did not affect the relation of the workers with their own activity as it did in Camaçari, making it impossible for the workers to see the meaning of their own activity in a coherent., larger frame work.

Cases of sabotage were occurring at Alagoas as well as at Camaçari, but were nonexistent in São Paulo. Instances of objects as large as a helmet found in bags of pellets were being frequently brought to the attention of the marketing department, as complaints of clients. Instances of second grade products being sent together with those of higher quality were also a problem, causing clients to complain of a lack of consistency in the loads. These were only the worst cases of a lack of involvement of the workers with the interests of the company, and their deliberate attempts to harm the company's image in the market.

In regard to the present experience of blue collar career and blue collar activities, the workers at Alagoas tended to see their activity as not determining their social status or their rights to climb to the management career structure as definitively as they were perceived in the two other plants. But they tended to demonstrate, through nonverbal communication, such as body language and the use of space, their perception of their own function as inferior in the context of the company. Humbler attitudes were much more common in blue collar workers then other professional groups.

In terms of the danger of their activity, they were clearly more concerned and more worried about the responsibility over the productive process and over the lives of the

others in the plant. Their claims for the need for valorization of the operators on the basis of the risk of their activity was as strong or stronger than in Camaçari, for besides serving as an alternative principle for the organization of the status system in the plant it reflected a very concrete worry about the danger of the process.

In terms of the power relations within the plant, although the political opposition was clear, the phenomena of alienation could not be observed as much as in Camaçari, pointing to the fact that the efficiency and efficacy of the communications systems from the top is fundamental in preserving the sense of integration between worker and his activity. Information is the key element in fighting the negative impact of fragmentation of activities in the development of alienation. Even dissatisfied with the company, the workers could retain pride in their achievements, perceived through the general results of the plant. This sense of achievement contributed to a higher motivation in participating in the suggestion and training programs, but was not enough to create firmer bonds of loyalty and identification with the company, as the cases of sabotage well illustrate.

Compared to Camaçari, the operators in Alagoas were much more committed to the quality of the product and proud of the tidiness and organization of the plant. Even though they tended not to trust the discourse of the managers in regard to the financial difficulties of the plant, they did not develop the same degree of alienation as the workers of Camaçari. It is true that their powerlessness to affect their activity was often talked about, but there was much more awareness of the cause of this powerlessness, and they had more elements with which to understand and evaluate their relations to the company.

Also compared to Camaçari, the system of communications was much more elaborate and information consistently reached the shop floor. Large meetings in the auditorium were frequent, quality meetings had a high frequency in every area and the achievements and progress of the company were well communicated at all levels of the

hierarchy. In general, the operators included the achievements of the plant in their narrative of their own their activities, and were able to extract a sense of pride in the collective results. But compared to São Paulo, the fact that the communication was a one way flow, top to downwards, and there was almost no delegation of authority, significantly reduced the degree of identification of the employees with the company and their motivation to participate in the search for quality. The conclusion, looking at the situation in Alagoas, is that although a consistent and efficient system of communication considerably reduced the likelihood of alienation of the shop floor workers, in the form of meaninglessness of the activity, as was observed in Camaçari, the full development of ties of identification, fundamental for the adequate degree of motivation, seemed to be equally dependent on the possibility of participation in the decision process, that is, not only sharing information but also power and responsibility over the results are fundamental to the implementation of the quality programs.

Once more in comparison to Camaçari, there were no episodes observed of teasing between VCM and PVC workers in regard to the natures of their activity, as with the constant "baker" jokes in Camaçari. The person in charge of recruitment of new employees said the level of educational and professional competence in both areas was similar. As there were plenty of highly educated applicants to choose from in that region, they could always chose the best ones from a large number of applicants. Also, in Alagoas, the head of the PVC division was not willing to allow the head of VCM division to get all the best trainees, for the results of the intensive training depended on the quality of the trainee. Even then, the operators of the PVC division believed the work at the VCM area to be nobler and demand more intellectual skills. The VCM workers also believed so. In this sense, the VCM operators did have a certain amount of extra pride of being the elite in the productive area.

5.7 Strategies to construct and reduce status differences: Non-verbal communication and body language

The non-verbal communication, that allowed, in the other two plants, the observation of the reproduction of a scheme of domination in the body language and on the usage of space, did not to communicate as many differences in Alagoas. This fact may be partially the result of the younger average age of the employees, which has given them proportionally less time to incorporate the body dispositions common to the blue collar workers of the other plants. But, if my argument is correct, the less marked differences are due primarily to the dispute over the principles of hierarchization of status in the plant, and to the operator's belief that they are not intrinsically different from, or inferior to, those outside the blue collar career path. The younger operators, in all three plants, tended to demonstrate a lesser degree of incorporation of an inferior status in their body language, although some similarities in the usage of space and body movements were common among all inside each particular professional group in the same plant. The tendency to look down when speaking to those higher up in the hierarchy and using a less firm and lower voice pitch was more common in the other two plants than at Alagoas.

In the usage of space, though, there were fewer differences. The operators, in Alagoas, tended to reproduce the pattern observed in the other two plants of standing by the doorway when told to visit someone's room, and talk while standing up and without moving forward. The white collar workers tended to walk inside the rooms under the same circumstances and those higher up in the hierarchy to sit down without invitation. The white collars and managers were also more likely to speak to people in other sections uninvitedly, while the blue collar workers tended to talk only when spoken to. Another clear tendency observed in all the plants in regard to the use of space was in regard to the seating arrangements at the restaurants (but much less marked in São

Paulo). The white collar workers and managers would invite themselves to sit in at a table with the blue collar workers, upon a short introduction of the sort "May I joining you today?", or "Hi, how is it (the food) today?" There was no occasion on which I observed the opposite, that is, a blue collar worker joining a table of white collar workers without an invitation. In the São Paulo plant, a group of two or three blue collar workers sitting just next to a group of white collar workers was not uncommon, though, but alone blue collar workers were most likely to sit with other blue collar workers.

Other schemes of reproduction of status differences

There was a tendency, exclusive to Alagoas, to utilize professional or respect titles before the proper names. Mr., Ms., Mrs., engineer, doctor, etc., were commonly employed from those lower in the hierarchy when addressing superiors. Those in the middle management tended to believe that to demand the usage of prefixes was a positive strategy to keep an adequate distance between superiors and subordinates. They believed excessive intimacy, brought about by the usage of first names and other signs of equality, would make the exercise of control more problematic. In the two other plants, the uses of similar prefixes were rare and much more dependent on individuals' preference.

In São Paulo plant there was a conscious policy of bringing dissatisfaction to the surface for debate, and an absence of control on the tendency to openly criticize the company in Camaçari, but in Alagoas there was no freedom to openly criticize the company. The censorship of discourse was acknowledged at all levels of the hierarchy. The degree of loyalty to the company was an implicit item in the employees' performance evaluation, and although it was not officially recognized, except in regard to labor union affiliation, it was widely known to exist as a criterion of the bosses'

subjective judgments. Although the company had a carefully constructed instrument of evaluation, in which each item should be discussed between the superior and employee, while providing mutual feedback of opinions, there was a shared feeling among the operators that bosses' favoritism was a strong element in deciding promotions and in grading the employees.

Although it was common for the employees to criticize the system and the lack of moral strength and shame of those who openly attempted to flatter the boss demonstrating too openly their loyalty for the company, to a certain extent all attempted to conform. Even those who furiously criticized the company in private, tended to demonstrate exemplary behavior in front of others, showing strength the nonverbal and informal coercive strategies had in conforming behavior. Particularly those who had participated in the strike were now behaving in an exemplary manner, in an attempt to earn redemption for their 'betrayal'. This "political" way of comporting oneself was clearly constructed upon the perception of the appropriate behavior at a given point in the hierarchy, so that proper behavior served also as a instrument of communication of status.

5.8 The employees club

As at Camaçari, Alagoas had a recreational facility by the beach just outside Alagoas city, with a soccer field, volleyball and basketball courts, a play area for children, a swimming pool and a restaurant, for the use of all employees and their families. Some of the debates on the democratization of relations in the plant occurred here, "to avoid the biased air of the plant", in the words of the psychologist from the human resource division.

Although the facilities were nice, the blue collar workers, in general, said they rather avoided using it. The reason, they said, was that the 'politics' of the plant got in the way

of the enjoyment of their leisure time. The managers were attempting to organize a weekly soccer game, between teams of mixed of blue and white collar workers. Some chief operators and supervisors joined the games, but not without reservations. They feared that by doing so they would increase their distance from their blue collar colleagues, some of whom they would insistently invite to the games, but they also worried that by not participating, doing so they would not be providing a good example of how blue collar and white collar workers could join together as a team. Indeed, in the opinion on many blue collar workers, the supervisors and chief operators who joined the games were just showing off to the management, and trying to demonstrate how committed they were to the integration programs. They would say, that because of the nature of the hierarchy within the plant, operators could not play comfortably as if the game were among equals.

The integration among the families was also made difficult by the division among blue and white collar workers. According to the blue collar employees, their wives didn't feel comfortable with the wives of the white collar workers, because the others were better dressed and 'more intelligent'. Even plays among the children tended to correspond to the pattern of friendships developed by the parents, with the children playing with the children of the families their parents had closer ties with, but mixed playing between the children of blue and white collars occur, being often stimulated by the fathers, especially. The mothers tended to care more about how to manage the conflicts among the children taking into account the status difference of the fathers.

Even on Sundays the club was nearly empty. The atmosphere was not very relaxed and a certain amount of formality could be readily observed between those of different status.

5.9 On the physical environment

The comparison of the physical environments of the three plants can also provide interesting clues in regard to the degree of control over the routine and the environment that the different managers made.

In Camaçari, for example, we could observe quite a lot of free 'decorating' in the plant. In most of the managers' offices, secretary's rooms, the maintenance workshops and the operation control rooms there were pictures hanging on the walls, family photos, plants and other items. In the operations control rooms there were also some pictures glued to the panel (one cut from the advertisement of a new model of a sport car, the picture of a saint, and a comic strip). This expressed much less concern with the type and quality of the messages spread through the company or with control over the physical aspect of the environment.

In São Paulo also there was some degree of freedom in transforming the environment, but as a result of a collective decision of some sort. The operators agreed, for example, to paint the old concrete floor in bright colors. This was performed with two goals in mind: one, make the environment brighter. As the plant was old, to have the floor and the equipment, pipes, and etc. tended to be covered with black grease. And two, because a lighter color would make it easier to distinguish the various parts, and see small parts of the equipment, screws, and etc., that might have been dropped on floor. In Alagoas, the items on the walls and all decorations had to be previously approved and patterned. The company's mottos, for example, were all printed in navy blue letters on white paper, framed in the same way and hung on the walls. The workers seemed to like the system, because it helped to keep up the clean appearance of the plant.

The architecture of the plants was also quite different, allowing for much more direct surveillance in Alagoas. In that plant, the interior walls were mostly made of clean glass from one third of the height up. While in Camaçari I could be talking with the same group of operators in the eating room of the productive area for quite some time, the

operators of Alagoas felt much more compelled to return to work after meals because the supervisor could clearly see those who stayed too long. In this sense, the physical aspects of the environment also served to increase the sense of constant supervision.

5.10 The company and the manager

One issue that was present in the other plants but caught my attention particularly in Alagoas was the tendency, among the employees, to see the company as the manager and vice-versa. The managers tended to be taken as the incarnation of the more abstract concept of "company".

In the employees' free description of the company, sentences such as the following would often be pronounced: in Alagoas "the company is clean and organized", the company values professional competence and demands intensive training", "the company most values integration to its work philosophy and with the colleagues than outstanding professional performance", "the company does not really discriminate on the basis of sex, but we don't believe a woman would be allowed as an engineer in the production area".

In São Paulo, things like "the company values open-mindedness", "the company has a good policy of valorization of the employees", or "the company values any contribution one is willing to give", for example, were common. In Camaçari this tendency was also clearly expressed: "the company doesn't value the employees, they squeeze the juice out for profit and that is it". "The company doesn't have a clear position in relation to the union", or "in this company there are no criteria for promotion". These sentences indicated the extent to which the manager was seen as a personalization of the company and how the way each manager worked was significant in the formation of the employee's relations to the company and the perception they had of it.

According to C. O. Bertero (in Fleury ed., 1989), there was a tendency, in Brazil, until at least the early nineties, for the internal coalition of power, in the organizations, to be stronger than the external coalitions, as the external groups pressing the organizations from the outside were quite weak. In a situation in which the market for the products of the dynamic industries were protected as a 'national asset', and the social stability assured by government policies, the market lost some of its power as an external influence on the organizations, which could manipulate it with a certain freedom. In this context also, the labor union had rather limited power.

In this type of situation, the managers had more power internally to develop their own policies, often acting as the founders of the organization. As the profits assured by the market allowed the stock holders certain tranquility in regard to the returns, much was delegated to the managers in terms of the organization of production. The objective situation in which those organizations were functioning allowed for the power of the managers to be exceptionally endowed with energy to mold and transform the organizations[114]. The common language and the common concepts to communicate in each plant had much to do with the exercise of the power to organize the community of each manager. Each manager, in their own way, delimited the frontiers among the groups and provided the criteria for inclusion of exclusion, dispense rewards of punishments according to their own views of the organization, diffused their ideological discourse to reinforce the views they wanted to impose and provided the much of the basis for the construction of a hierarchy of status and power.

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[114] This doesn't mean that the differences among the three factories of the same holding company could develop exceptionally in Brazil. As Harris, 1987, abundantly demonstrates in her comparison of two ammonia plants in England, constructed in the same region, belonging to the same group and subjected to the same labor union, a considerable difference in the 'culture' of the organization can develop in other national contexts as well. The inclusion in here of the comment on the specific Brazilian situation is aimed at allowing the reader to understand that some degree of differentiation may be influenced by factors other than the internal organization of the holding company in question, especially in regard to the freedom with which the managers of the factories could deal with the labor unions in Brazil, a situation that may be quite different depending on the country, on the freedom of the labor unions to act and on the degree of maturity of the democratic institutions.

Much on the same way as the founders of the many organizations, the managers provided the official values according to their own world views, their own values and their own understanding of the business, defining which values are to be internalized, accepted and incorporated by the members of the organization[115], and what sort of values and behavior are not accepted within it.

The perception the workers had of the company as coinciding and being confused with the perception they had of the managers was related to the degree of freedom the managers had had to impose their own views as if they were the views of the "company". Indeed, all three managers believed that in the daily exercise of management they were defending the views and interests of the company in accordance with the guidelines provided by the holding company, and adapting it only when local circumstances so demanded. The managers tended to downplay their own role in forming much of the environments inside the plants, and tended to see their own actions as chiefly concentrated in the solution of very practical problems. The manager of the São Paulo plant was the only one who acknowledged the existence of some sort of previously devised human resources policy, with consciously planned strategies. But even he failed to evaluate the dimension to which his own policy affected the collectivity under him. In many instances he expressed doubts about how much of the plant policy had actually got out of paper to became a way of doing things. He tended to believe that much was still to done in terms of implementing human resources policies, because, as he had an enormous amount of his time bind to the more urgent problems involving production and marketing, he tended to believe he was still to dedicate himself to the full implementation of the desired policies.

The three managers tended to believe that their efficacy in affecting the environment of the plants was very much restricted by time limitations. They tended to see themselves as overwhelmed in their daily routine by the volume of practical and urgent

115 These are the main attributes of the power of managers according to Edgar Schein, 1985, p.66.

issues they had to address, and perceived themselves dedicating much less time to people management than to issues of their natures. There was a tendency, for all three of them, not to realize how much they affected the collectivity through their approach to those very "issues of other natures".

The fact that the employees confused what were company policies and what were the managers' views corresponds to the blurred nature of the relations between the company and the managers, as its representatives. Quite unconsciously and sometimes unwittingly, the managers imposed their own views as those of the company (stock holders priorities and the deliberations of the holding company), and at other times they had the company's policies and deliberations pushed down in the hierarchy as their own decisions. The introduction of the quality program had the power of reducing the workers' feelings of being forced to accept the managers' decisions without much explanation (sometimes the lack of explanation was the main reason or the feeling of arbitrariness).

The democratization of the company in Alagoas, for example, allowed the employees to realize that the increase in the amount of work they were experiencing, at that specific time, was a temporary necessity brought about by the quality program, that in it was aiming at increasing the competitiveness of the company. The increase in the volume of work for the sake of quality, especially because many meetings were necessary to establish the procedures that were to be recorded, and because many tests were necessary to define the best procedures, was not blamed on the manager and did not became another element fueling the conflict, such as the intensive on-the-job training had done. As they started to have access to the results of the other factories and of the goals of the company as a whole, many of the demands of the plant managers started to be perceived as justifiable by something bigger than the managers arbitrary attempt to keep them busy during the shift. As the quality programs necessarily opened the space for employees participation in the decision-making

process regarding their own activities, it allowed them, for the first time, to experience a sense of meaningful and wittingly contribution to the company that bypassed the plant manager and provided them with a discourse against the concentration of authority that did not need to appeal to the idea of unionization. Through the logic provided by the quality programs, the operators started, for the first time, to be able to articulate and express open criticism of the power concentration in the plant, because now their discourse was legitimately defending the interests of the company itself (that is, while the discourse of opposition to the concentration of authority was that provided by the labor union, the claims of the operators were refused by the a priori refusal of a heterodox, heretic discourse. The quality program provided the possibility for the articulation of a discourse within the accepted limits of orthodox censorship).

In one of the first meetings regarding the democratization programs, the managers made a public promise to accept criticism as long as it was 'productive', that is, as long as the criticism had a positive aim, contributing to the company's progress in the implementation of the quality programs. A little unsure about the limits of their new freedom, however, the operators were still enthusiastic about the quality programs. Their enthusiasm was justified, by themselves, in terms of the possibilities that were opening up for them to participate and contribute more to the company, in an environment of "companionship and dialogue". That is, the quality programs increased their power within the context of the company and their status in relation to the managers and engineers. In exchange they were experiencing the need to participate more fully in the creation of quality and profit for the company. Their higher power and status within the organization created a feeling of responsibility over results and commitment to the company for the attainment of competitiveness.

Again comparing to the São Paulo plant, it is possible, from what was said above, to see that even though Alagoas had theoretically all the elements to be ahead of the other plants in terms of worker satisfaction, productivity, and quality level, the overall

performance of the plant was pushed down by the manager's style. Alagoas had the newer and better equipment, had been ergonomically designed, had newer technology and the most modern laboratory. The workers were ambitious and well educated and the plant was providing the best remuneration and benefit system in the region. Yet, the number of significant innovations was smaller than at São Paulo, the number of episodes of sabotage was higher and the dissatisfaction of the shop-floor employees was clearly more perceptible. The manager's effort to transform his own behavior, though, was producing results. The manager was very enthusiastic about the quality programs, and determined to have the plant certified according to them. His own efforts at behavioral change were having a positive impact on the perception the workers had of him and of the company, and served as an indicator to middle management of his degree of commitment to the program and of his willingness to change for the sake of the company. This attitude served to push the middle managers in the same direction. All middle managers in the plant were studying the quality programs, and many had formed study groups to discuss the necessary steps for implementation according to the situation they had in the plant.

5.11 The introduction of the quality programs

Recognizing their difficulties in proceeding with the democratization of human relations that is fundamental for the implementation of the quality programs, the plant manager and the middle managers agreed to bring a specialist to help in the transition. Verifying that indeed bottom up communications in the company were practically limited to specific technical issues due to the political nature of the organization of the activities, the specialist suggested the implementation of democratization program. Working initially with those in management level, the consultant attempted to convince

them of the necessity of more open communications to increase the quality of the product and upgrade the productive process.

In the second stage, the consultant worked with those at operational levels, in selected teams. They were also instructed on the importance of communications and cooperation and were given the role of transmitting messages to others on the shop floor. The problems diagnosis process included several sessions of interviews with the workers themselves. Upon obtaining everyone's agreement on the fact that the democratization of the relations in the plant wasn't going to be easy, but that it was a necessary transition for the implementation of the quality programs, the consultant managed to include the workers and the managers together in a series of communication exercises. They started with anonymous feed-back by means of drawings. The workers from different areas would attempt to describe their managers through drawings. The managers would then attempt to guess which drawings were made by their own subordinates, asked to reflect upon then, and explain why it that they saw themselves in those drawings was. This was the first step of the so-called self-diagnosis program, designed to create an awareness of one's own management style as a precondition to changing it. The most obvious difficulty for the progress of changes at the level of the middle managers was their own difficulties in perceiving the limits of their own new roles in relation to that of the plant manager.

In theory, all employees agreed on the need for freedom of expression and that the quality programs would be a valuable tool for increasing their control over their own productive process, and opening channels for the exercise of intellectual creativity. In practice, though, they doubted the program could be successfully implemented by the company due to the resistance of the managers to open communication.

The operators demonstrated a constant interest in quality and environmental problems even when not in the presence of their superiors. A group of operators I, for example, made the subject of quality and environment preservation as the chief topic of

conversation even during their break hours. They were concerned, at that time, with the quality of the antioxidant the company had bought, which according to them did not adhere to the walls of the reactors in the PVC area, and could allow corrosion to develop in a short time. They were also concerned about the progress of the project for decontamination of the water table in the region, which CPC was financing. They were constantly worried about the purging process in the VCM area. Operational carelessness could allow leakages of gas into the atmosphere, and despite problems in human relation in the plant they were very much interested in keeping to the prescribed rate of residual VCM going to the atmosphere. They all approved CPC's efforts to keep within the highest standards of environmental protection, and tended to think of their own contribution to keep within the indicated rates as a matter of 'individual consciousness of duty' and not as bending to the demands of the company. The perception of the operators at Alagoas of the importance of their role in environmental protection contrasted sharply with that of Camaçari workers in regard to the same issue. At Camaçari, the overwhelming tendency was to believe there was nothing the operators themselves could do that would make a difference to such matters. I first thought that some differences in the precision of the equipment and technology could provide a concrete reason for this belief, but the engineers in charge of monitoring the environment at both plants assured me the differences were minimal and nearly irrelevant in regard to the role of the operators. In Camaçari also operational care made all the difference in the company's ability to keep or not the defined standards.

The operators had much hope for the progress of democratization programs, but were moving slowly toward it in their attempt to understand where the new limits to communication were being set. Their doubts on the commitment of the managers to the program were the chief barrier to their faith in its progress. Full integration with the company was only to be attained when the democratization programs became, as they did in São Paulo, a way of performing one's activity in the plant.

Even after recognizing the need for more participation, the plant manager was by no means willing to reconsider establishing dialogue with the labor union or allowing the operators who joined the strike to stay at the company. According to him, they were still in the plant simply because the training of operators took time and the plant could not work without properly trained professionals. This refusal to compromise on the part of the manager was a strong barrier to the progress of open communications, and the main element that led the workers to doubt the commitment of the plant manager to the new programs.

It is the power of the manager that gives order to an organization. And is this power that sets the limits, that homologates organizational processes and rewards what is organizationally considered to be good performance (Fleury, 1990). The manager of the São Paulo plant was able to exercise the power without resentment. The manager of Alagoas, on the other hand, created a very bitter and ambiguous relation to power on the shop floor, leading the operators to explore what was negative in relation to power and to transfer their resentments to their relation with the company. But thanks to an efficient system of training and communications, that kept the shop floor workers well informed about the company, quality and environmental risks, the resentment in relation to power did not develop into a process of distancing the workers in relation to their activity as fully as it had happened at Camaçari. But the resentment in relation to power was certainly a barrier to a better integration with the company, so that as the activity was carried out for the company and at the company, some of the resentment against power was transformed into mixed feelings in relation to the employees' own activity. It is interesting, though, that this resentment could be focused on the relation of the workers to the company, so that they could still feel powerful and able to to work positively in regard to environmental and safety issues and pursue higher quality as a matter of operational pride, which, in turn, did not prevent them from enjoying the knowledge of a successful sabotage scheme affecting the image of the company with a

client. In such cases their dissatisfaction was noticed by the holding company and therefore successfully expressed without compromising the safety of people, equipment or the environment. They knew they had opportunity to cause much more damage than they did by placing foreign objects in the bags of the final product, but any attempt more radical than that of going against the company was not acceptable to the workers, especially if it involved a third parts, as in the case of carelessness with procedures that could lead to environmental problems.

It is true that the power concentration created a sense of powerlessness on the shop floor, but this feeling was not aggravated by feelings of meaninglessness, helplessness, estrangement, and a sense of separation between the self and the objective world, expressed in different ways by the workers of Camaçari. In Alagoas, the constant cry in Camaçari demanding the restoration of a vague "humanity" to human relations within the company was not common. The clear principles upon which the social organization of the plant was built allowed the workers to focus their discontent and devise strategies of action having as a basis the rather concrete possibility of estimating the outcomes. Also, the constant supply of information allowed them to understand their position in the chain of production and to see their own activity within a broader frame.

The concentration of power, although creating conflict and sometimes powerful reactions (as in the case of the strike and some examples of sabotage) did not create the worst situation of alienation, and its outcome in the form of a lack of motivation. The workers could partially relate to their activity independently from the political organization of the field, and could gain some rewards in terms of professional pride and 'consciousness of duty' despite of their resentment in relation to power. But that resentment in relation to power set a very clear limit to the managers' request for more flexibility in the employment of the workers' time and to the nature of the activities to be performed. The workers at Alagoas were by no means willing to help in the maintenance of the equipment, with small construction or painting jobs, or whatever

they were asked that was not the job they were being paid to perform. This attitude contrasts very much with that of São Paulo's workers, who were willing to perform extra tasks for the sake of the company and their colleagues.

After each the meeting concerning the quality programs, that took place weekly at the club, bringing people from the shop floor into a dialogue with the human resources division and the assistant of the plant manager, the mood tended to be more positive on the shop floor. At those meetings they were encouraged to discuss various aspects of the organization of the company and of the activities within it, and although the issue of the tendency of the plant manager to concentrate authority was wisely avoided, the shop floor workers began to express more positive views on the company.

The middle managers agreed that after the quality programs started there was noticeable progress in regard to the delegation and decentralization of authority. During the time of the assembly of the plant, pre-operation and start, until all the adjustments had been made, authority had been far more concentrated. They believed that, as the group gained professional experience, the plant manager tended to delegate more. Especially now, they all agreed that the manager was making an effort to adapt to the quality programs' requirements. According to the production area manager, the fact that many middle managers got the habit of always consulting with the plant manager or taking decisions together with him increased the feeling, with the subordinates, that authority was concentrated. Still according to the area manager, after attending a course on situational leadership by middle managers, the perception of authority concentration was reduced because they "learned to talk in their own names". Because for a long time authority had indeed been very much concentrated, the middle managers hadn't develop confidence in giving orders in their own names, because their own perceptions of themselves was that of being powerless within the plant. To increase the efficiency of their negotiations with the employees, they had tended to always use the plant manager's name to back up their authority.

With investment in training programs aimed at enhancing the decision-making capabilities of the middle managers, less was done in the name of the plant manager, giving the shop floor workers a certain feeling that the quality programs were starting to bring concrete results in regard to the quality of human relationships inside the plant. Various subordinates, though, believed the middle managers were still mere executors of their superior's orders, without much autonomy of action.

After nearly two years of the end of my formal observations, I returned to the company to find out how things were progressing. I learned then that the company had progressed further towards delayering, through the elimination some of the division manager positions. The manager of the Alagoas plant had successfully managed to accomplish the democratization plan, and the plant rated as exemplary in the examination that certified it as a producer of quality. The manager of the Alagoas plant is now in charge of both the Alagoas and Camaçari plants, both successfully producing according to international quality standards. CPC is operating in profit in all of the studied plants, and has recently acquired a second plant in São Paulo, which will increase by 10% the total productive capacity. According to the January, 1994 issue of the monthly magazine of Getúlio Vargas Foundation, one of the most respected periodicals of Brazilian economy, CPC was the company that grew most in the country, having grown by 122.52%[116] between the first semester of 1993 and the first semester of 1994. Part of this growth was due to the increase in demand from the USA, which increased the prices in the PVC market. During this period, CPC's gross sales grew by 120%. The company was able to benefit from this growth of international and domestic demand because it was already producing a product of high quality, well accepted by the international market.

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116 As means of a comparison, it is interesting to mention that the average growth of the 30 companies that grew most in the same period (including the growth rate of CPC) was of 39,8%.

CONCLUSION

The general conclusion is that the overcoming of alienating labor routines, and the progress toward a lasting state of motivation, depends very much on an efficient system of communications, on the free flow of information and on a process of delegation of authority and responsibility. The efficient system of communications and the adequate flow of information are essential to integrate the otherwise fragmented routine of blue collar workers in the activities of a factory collectivity as a whole, an integration that bestows meaning upon the individual effort. The delegation of authority and responsibility, by opening space for the blue collar workers to manage their own routines and participate in the problem solution process, allows them to have a sense of achievement over the results of the plant and is a fundamental element in creating a sense of truth on the information divulged. The non-delegation of authority and responsibility for well-informed workers, as the case of Alagoas demonstrates, serves as a filter for information, and creates mistrust toward management, jeopardizing the quality of the environment.

The above elements: system of communications, free flow of information, delegation and responsibility over one's own labor routine, though, are inextricably related to the way the manager exerts his authority and on the principles upon which the routine of factory work is constructed (those principles also being dependent on the labor of the manager). All individuals in a factory are connected through a complex system of power relations, within which the authority of the manager is the organizer energy.

The recent transformations of the global economy and the need to progress with quality programs destroyed the blind faith on the logic of the bureaucratic organization, allowing for the perception of the importance of the labor of the managers in creating an integrated community within the industrial organization. The quality programs provided,

in this process, the vocabulary for the creation of an orthodox belief in the commonalty of interest between capital and labor, at the same time in which it allowed for a further naturalization of the legitimate right to power of the managers based upon educational and cultural capital. The logic of the meritocracy of the modern organization destroyed much of the heterodox conflict of competing ideologies inside the world of industry, creating a sense of justice in regard to the unequal distribution of power upon which labor relations are constructed in the industry.

Contrary to what happens in traditional societies, where customary rules were naturally preserved by the group's memory generating infinite practices based on a small batch of schemes (Bourdieu, 1777, p.16) fully shared by the group, the group formed to become a factory collectivity is artificially assembled, in the sense that people from different ethnic, educational and religious backgrounds are at once collected to compose a collectivity. Even though, and although the prescribed rules of the organization define rather broadly the roles of individuals and the nature of human relations within the factory, in the sense that it provides only a general hierarchy of command and role descriptions, upon being put together the limits of each individual scope of action is smoothly discovered. The different degrees of access to power, status and economic benefits are more or less readily accepted, allowing for the smooth formation of a productive community integrated by a delicate system of power and status (that is impossible to be planned in all of its extension). It demonstrates that even where the institutionalization of human relations appears to be more complete, the cognitive, generative schemes are the stronger organizers of practices.

The orderly way in which the "organizational culture" is created, owns much more to the orchestrating dispositions of the social agents than to rules of behavior prescribed under the institutional codes of conduct. The sense of practical relation to authority within each plant is constructed on the daily experience of the work routine. The workers depend, in this context, on the work of the manager for a meaningful work

experience. It is the work of the manager that provides the intellectual connection between the otherwise fragmented and limited routine of the worker and the final product of the collective effort. Without this labor of the managers, the workers tend, by the nature of their activity, to lose connection with their final product and the collective effort of production, falling into a situation of alienation in which the activity loses meaning for the actor.

As all the observed arrangements are reasonable variations allowed by the generative schemes constructed upon the basic structure of the capitalist division of labor and applied to all domains of practice (such as the analogies based on the opposition between manual/intellectual, executor/coordinator and etc.), the social agents tend to have a teleological perception of the social mechanisms in their field, in which all practices, present and future, are justifiable according to the functions they were originally devised to fulfill within the industry.

The necessity of quality production, by demanding a transformation of the traditional way the social division of labor was organized in industries, brought about a transformation of the mass-production reality and opened space for the participation of workers in the management of their activities, reversing the trend towards deskilling and fragmentation of the industrial activity and the process of alienation of the workers it had generated. But the rather calm and organized transition from one mode of organization to the other was only possible because it did not provoke the questioning of the naturality of the arrangement that justify different chances of access to posts of command according to the possession of different amounts of educational and cultural capitals. Because quality production increased the need for even more complex discourses and intellectual processes for the economic success of the modern organization, it ended up by further naturalizing the unequal participation in the decision-making process in the industrial organization as a function of different degrees of possession of symbolic capital (in the form of a recognition of a superior right of

speaking the truth about the market conferred by educational and cultural capitals). The democratization of the industrial environment proceeds without threatening, and, in fact, further assuring, the position of the top managers, but making unnecessary the many layers of middle managers necessary in the mass-production era, so that the shop-floor workers can develop a more direct relation to the top manager and feel a part of the manager's projects for the future of the organization.

The arbitrariness with which the managers organize the reality within the plants is not fully perceived, neither by the blue collar workers nor by the managers. Some political awareness of such arbitrariness does indeed exist, as the anti-management discourses reveal, but it does not recognize the full nature of this arbitrariness. The effect of the management's exercise of authority on the individuals relation to his product and productive process, and to his bodily dispositions and the inclinations to act in relation to his colleagues and other professional groups in a given hierarchical arrangement are the aspects of this power relation more fully ignored by the collectivity, and, precisely for this reason, the most difficult to affect and transform, being responsible for one aspect Marx had already pointed out in relation to worker alienation: the fact that the alienated worker is unaware of his own alienation. This is possible because of the correspondence between the dispositions that allow for the acceptance of the capitalist arrangement of power based on the accumulation of knowledge is fully inscribed in the domain of doxa, and therefore outside the domain of political discourse. It is the naturality of this political arrangement for those who are possessed by this doxa that makes it possible for the manager himself to exercise his power unaware that by doing so he is reproducing alienating power relations, and to exercise his power believing he is naturally entitled and socially expected to do so.

To progress with the understanding of the power relation in the industrial organization, and all the complexity it produces and reproduces, discontinuity and particularity cannot be eliminated as exceptions or reduced to fit nicely arranged

categories of analysis. The conditions that allow for the existence of discontinuity and particularity are precisely what it's necessary to investigate if one is not willing to unduly reduce the complexity of the social world. In this sense, the power of the manager is one of the elements that have been more fully ignored in the sociological analysis that attempted to understand human relations in industrial organizations by utilizing objective, measurable, structural explanations.

It is equally inadequate to look at those realities through rational actor type of theories and subjective appeals to reason, for they also fail to provide an adequate explanation for the too obvious role of the objective experience of concrete economic and political realities in the apparently inexplicable choices of the social actors. To attribute the complexity of the system of relations created in the field to the action of the rational leadership, for example, is to attribute superhuman powers to the managers, given that no one person could possibly have conceived, entirely, in all of its subtle distribution mechanisms, reciprocal controls and adjustments the 'culture of the organization'. The point is not to uncover the anyway inexistent overall project that created all these developments, but to understand how, in terms of strategy, the different pieces were set in place[117].

The understanding of the social reality created within the industrial organization must be grounded in a theory of knowledge that allows for the understanding of how economically grounded political power affects the formation of the self, and how one's relation to oneself and one's own activity can affect the functioning of the company and its competitiveness in a larger market. It implies an analysis of power not as a coercive or negative element, perpetuator of inequality and injustice, but an analysis of the creative power of power, as a fundamental organizing element in society. If different degrees of access to political power is a constant in all human societies, and if in all societies, to exist, power must be grounded in shared categories of thought that allow

[117] Gordon, 1980, Foucault's lecture on Body/Power (p.55-63).

for its perpetuation, the analysis of power finds its limits well beyond political science. In this sense, the understanding of how inequality is perpetuated and how conditions of anomie and alienation are developed depends on the understanding of how the functioning of political arrangements affect cognitively the collectivity of the individuals living under those power arrangements. In the same way, it is through the understanding of the nature of this process that we are to find a solution those problems.

It is my impression that the further the industrial organization proceeds in revealing the arbitrariness of the political arrangement within itself, the more it will distance itself from the injustices analyzed by Marx in his critique of capitalism, reducing the possibilities for the phenomenon of alienation to occur, and the more successful the future organization will be in becoming an integrated and productive team, within which human capabilities can be exercised in a constructive and creative way. The exposition of this arbitrariness can occur in the form of a policy of human resources management that progresses through the opening of political debate within the organization, with the opening for participation and democratization of the decision-making process in general, incorporating the traditionally subjugated proletarian knowledge into the main body of knowledge over industrial production and through the constant process of on-the-job education, in the place of just on-the-job training, in which various professionals within the organization can educate other members in their area of expertise in a way that allows the collectivity to have a more holistic view of the whole productive process and market functioning, allowing for a more objective and productive participation. Also, a sense of justice can be created by opening the management careers structure to individuals who, as the manager of the Alagoas plant, even coming from outside the main managerial career path demonstrates good leadership ability, and by providing adequate management training to whomever emerge as a positive leader, despite professional or class origins. This type of training can be incorporated as a constant

process in the organization, using the professionals belonging to the company themselves as irradiators of information, in a low-cost process that does not involve the constant need for outside consultants.

In terms of the debate on the question of power and the reproduction of inequality in the capitalist society, what does the fact that the workers are called to think over and manage their own productive process means? It means that the most brutal aspect of the capitalist division of labor, the one that allowed for the separation between thinking and doing, conception and execution, allowing for alienation of the labor force to develop as one of its worst side effects, is becoming less central to the organization of productive activity. It does not mean that the system is progressing towards equality. It means that the equilibrium point on the quality of the decisions that need to be taken and the quality of the information that the managers must take into account has changed. With the globalization of markets, with global computerized connections and the extremely fast flow of information, the traditional role of the manager has changed. If in the early years of the industrial revolution managers were in charge of supervision of the productive activity itself and marketing the final product in a market that changed comparatively slowly, nowadays managers must keep up with the fast transformations of technology, with changing demands of demanding clients, environmental problems and the ever-threatening international competition. The production must take care of itself, matching the objectives the managers translate, from their interpretation of the broad variety of information they analyze, into production plans. To manage production is no longer the chief concern of the capitalist. It no longer guarantees competitiveness. It has become a second-class type of administrative activity that does not require the intellectual skills demanded from a manager able to navigate the flow of information. If the educational requirement of the workers is raised, high school education for the blue collar workers being now required, it is because the managers' educational requirement has been raised even further, reflecting a new division of

industrial work. A master's degree in business management is fast becoming a requirement in many industries, which, besides looking for highly trained professionals (in terms of their capacity to deal with larger amounts of information), need managers capable of constant and fast learning. Companies need to keep their managers constantly in training, sending them to special upgrading courses, symposiums and etc., not to allow for the erosion of their symbolic capital. The basic hierarchical division of status in industry is becoming even further grounded in formal educational training, so that the elite positions will continue to be held by those whose family could afford longer years at formal education and access to networks of information from his or her early years.

A higher degree of motivation of the workers is a requirement in the new market because the workers now perform the tasks of the old managers and must be able to increase quality and production by themselves, if the new manager is to be free to dedicate his time to the analyzing of market trends. The fear of the managers to delegate the factory routine for the workers doubly jeopardizes the competitivity of the company. First because the quality cannot raise enough without motivated workers, and second because the manager becomes trapped in the management of the factory routine and is unable to keep track of market tendencies. As, indeed, the needs of capitalist production are as much a part of blue collar workers' dispositions as they are of the managers, the competency of workers to manage trustfully their own productive activity depends only on an efficient human resource management strategy, that keeps the workers as well informed about the company's goals and position in the market as the old managers were. To the contemporary manager, is left the nobler task of interpreting, selecting and applying the information found on the market to the specific industry, devising future strategies, and giving a sense of direction the collectivity under his/her command. In this process, the manager also sets the rules for the solution of conflicts, as the guru who can see above daily struggles within the company, redirecting

the collective effort towards the attainment of the company's goals, according to the logic of the latest tendencies in conflict solution strategies, developed by specialists of the area, which they learn in the constant effort to keep up with innovation.

The apparent democratization of the access to knowledge, in the sharing process of information that the manager promotes in the modern organization, and the constant investments in training of the workers, is not equivalent to a distribution of symbolic capital. Indeed it reflects a new distribution of knowledge within industry, but knowledges that are not neutral in terms of weight and value as symbolic capital. In the past, a blue collar worker of extraordinary skill, as with the manager of the Alagoas plant, could aspire to management posts. It was indeed common, as far as the senior managers' recall, in the earlier years of industrialization in Brazil. But now the operators are correct in affirming that a blue collar worker cannot get out of the blue collar careers path. When the management tasks required less formal education, it was more common, and possible, the learning on the job. That is the type of learning that is presently being delegated to the blue collar workers. The power of the modern manager, though, is being further legitimized by the naturalization of the relation between power and knowledge of a different type. The modern blue collar worker is now educated enough to perceive how much he doesn't know in regard to the company and the market, and how much he depends on the manager for interpretation of these realities, and also to understand that without adequate knowledge the company cannot survive in the contemporary environment, naturalizing the power arrangement based on the superiority of the formal education of the manager, who can learn orderly and systematically thanks to the complex intellectual exercises to which he was subjected throughout longer years of formal education.

The acceptance of the power of the managers is more complete, and the discourse of the labor unions seems oddly outdated. Quality assurance created new disciplines within industry, and a new political discourse that neutralized that of the historical

opposition of interests between labor and capital. But the disciplining of the post-industrial labor force depends on the delegation of the authority of the managers and on an educational process within factories that allows the blue collar workers to understand the new needs of capital and transform them into their own disposition. The general conclusion is strange and confusing: the overcoming of the alienation of the workers depends on their successful integration with their productive process, in a way that they can understand their activity in the larger market and promote changes in their routine. It doesn't mean, though, that they are less subjugated in terms of dispossession of power, nor politically more aware of the conditions of their own subjugation. Complementarily, the competence of the managers is defined by their ability to profit from the newly created political orthodoxy, through the adequate usage of their symbolic capital to increase the capital gains of the modern enterprise.

If it is true that the quality program provided the conditions for the overcoming of the classic problem of alienation of the workers in the industrial organization, it is also true that it did so by extracting more value from labor. If before the extraction of physical labor sufficed, nowadays intellectual labor and the benefits of the workers' knowledge also become a part of the final value of the labor they sell. Whether it means that the overcoming of the mass-product arrangement brought the enhancement of the exploitation of the workers is another question. In the Marxist tradition, the notion that capital exploited labor was based on the fact that the capitalists extracted surplus labor from the workers for their own personal benefit, and that the competitiveness inherent to the system allowed the reinvestment of this profit in increasing the scale of production, thereby further concentrating wealth by preventing the less wealthy members of society from participating in the competition, in a system that was believed to progress toward an escalating concentration of income at the expense of the majority of the members of society. In a situation in which the ownership of capital becomes pulverized among small investors and pension funds, the enhancement of the

productive capacity and the increase in the final value of the industrial product seems to have a redistributive effect. It becomes meaningless to talk of exploitation if the product of more satisfied workers will serve to increase the well-being of other members of society and assure their livelihood in old age, in a system in which the factory workers are entitled to. Similar benefits as those of other professionals. The focus of the concern with social justice, I believe, must shift from the relation between worker and company, to the question of how to assure the means of survival of the workers in a society that tends toward the reduction of industrial employment simultaneously with a tendency to reduce the welfare state, and how to promote equality from the education system, avoiding the development of a class society divided according to the different degrees of acquisition of educational capital. That is, how to assure that the increasing efficiency, automation and productivity of the industrial organization won't lead toward a society divided into two classes: one with access to employment and with enough educational capital to have bargaining power in the market, and the other consisting of a large mass of unemployed or underemployed workers.

In conclusion it is necessary, for the sake of professional honesty, to make a note on the nature of anthropology as an applied science to production, that is, on the usage of the instruments of social sciences for consulting projects aiming at enhancing competitiveness. Historically, those dedicated to the study of the social sciences tended to believe they were doing so for the promotion of further well-being and the better functioning of society. For those like me, who studied social sciences at the end of a long period of oppression and dictatorship, political militancy and scientific practice were an inseparable part of a dream of freedom and the fight for the end of oppression. The research as a consultant is not free of problems of conscience. We are fully aware of the fact that forms of classification are also forms of domination, and that to expose the arbitrariness of those forms of classification could provide instruments for those in dominated positions to fight for equality. But this is obviously not the goal of the

consultant. The revelations need to be partial, just enough to expose what needs to be exposed for reform, and keeping silent about the deeper questions such as that of the naturalizing power of arbitrary social arrangements based on the symbolic capital of managers and different degrees of access to totalizing views of the company situation, created by participation in different parts of the productive chain, and the its effect in the reproduction of inequality. To what point is it moral to compromise the scientific investigation to safeguard the interests of some groups as opposed to some others is something that has to be thought by the professionals of human sciences now, in a situation in which the demand for this type of work in on the rise.

The comparison among the plants allows for the understanding of how the symbolic systems, in modern industrial organizations, that allow for the agreement of the intelligences and the consensus on meaning, assume economic efficacy, in forming an economically productive collectivity, through the intermediacy of the dominating exercise of political power, defined through the strategies of investment of the symbolic capital of the managers in the attempt to extract extra benefits from the labor force, on one side, and the strategies of the labor force, on the other, for constructing a reputation and a sense of achievement through a meaningful productive activity, also by trying to extract more than mere economic benefit from human relations at the industrial organization. From the interplay between forms of domination, strategies of negotiation, and incorporated systems of disposition, different "organizational cultures" are constructed as possible variations of the capitalist organization of production. As "culture" only exists, effectively, in the form of symbols, as a group of significant/signified, from where it derives its own efficacy, and that provide the logical principles for the organization of the perception of the natural and the social worlds, the symbolic perception of reality, that the "culture' produces, is inseparable from its political function. As the relation between individual and society occurs only through the intermediacy of symbolic systems, that is a condition for participation in any social

group, the relation of the individual to himself and to the group is politically and cognitively organized by the same basic generative principles. Being so, the conditions for perpetuation of a situation of alienation, or its elimination, are located not only at the level of political economy but at the cognitive, symbolic level as well.

To conclude, it is possible to say that the search for quality and the overcoming of the mass-production type of organization allowed for the discovery that workers can genuinely cooperate with management. The empirical observation allowed me to observe that the workers indeed demand adequate conditions for doing so, as a way to extract more meaning and sense of achievement from the labor process. At the present stage, this cooperation is fundamental to the competitiveness of the capitalist organization. In the two plants in which the exercise of power was performed in a way that did not allow the workers to have meaningful experience, a higher involvement with the company and a higher motivation to produce, the workers themselves searched for a discourse that could justify their claim for changes that would allow them to commit more totally to production. How long this equilibrium will last, I believe, will depend on the capacity of the new model of industrial organization to benefit from the mood of political orthodoxy and the faith in capitalism as a means of social progress.

APPENDIX I

ON THE PHENOMENA OF ALIENATION

In the classic writings, the ideal state of non-alienation was clearly stated, whether one agrees or not with the position of those thinkers is not the question here, against a metaphysical understanding of the human nature or a utopian ideal[118]. Also, in the classics, one can find logically established relations of causality between some social phenomena and the process of alienation (as it is going to be explored below). In the modern writings, a sort of psycho-social approach is utilized, in which predominates the vague association between factors of the modern society, such as mass consumption, mass production, etc. and the feelings of anxiety, powerlessness, meaninglessness, normlessness etc. demonstrated by the individuals. Precisely how these factors affect individuals is largely unexplored. It is largely assumed that mass society and many other features of the modern capitalist arrangement do naturally cause, by themselves, all the symptoms of alienation. In many cases, the assumption that modern society somehow destroyed the most natural (pre-capitalist, pre-mass consumption?) ways of relating to others gives space to moralist preaching on the evil of consumerism and other common practices of modern society (as in Langman and Fromm), in which consumption is seen as the antithesis of meaningful subjective experiences and relationships[119]. It is my feeling that much of the vagueness regarding the discussion of

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In this discussion, much of the conclusion of the thinker evolves from an apriori conception of man. The central questions are: Is man essentially a narcissistic being or a being who attains a higher degree of fulfillment through relatedness with the other? Are man's needs socially defined, as proposed by Durkheim, or anti-social in nature, as proposed by Freud? Does man have an inner need for transcendence, artistic creativity, as proposed by Nietzsche, or would the majority of humanity be satisfied by reproducing pre-stablished roles?; The discussion of alienation has been very much based on the separation of man from the ideal established on the basis of this nature. For further reference, see Schacht, 1971, and the introduction of his book by Kaufmann.

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As Bourdieu demonstrates in Distinction, consumption in modern society is not in the way of subjective experience and meaningful relationships; it is partly through consumption that social relations are built. Consumption is not carried out in a meaningless, disorganized way. The observation of a group of middle class housewives in Tokyo indeed revealed that consumption is carefully planned strategically defined and includes, in its actualization, the consideration of an enormous quantity of variables. A skilled housewife can balance the expenditure on daily needs, plan for the future and consume "superfluous goods", such as brand-name clothes etc., in a way that matches the social status of the family, that allows the children to have neither more (and be subjected to criticism by peers) nor less than friends, to keep face and enjoy different combinations of interior decoration, which not only allows her to create a pleasant environment at home through consumption in which she actually does experiment a sense of being creating beauty in a rewarding way, at the same time that allows her to reinforce the status of the family face others. In consuming, the housewife is building the relationship of her family to others of similar status, and setting herself apart from families of different means (a Japanese lady married to an American man illustrated well how different degrees of access to consumption work by explaining why, in spite of the American father, they decided to send their daughter to a Japanese private school instead of to an international school, much more expensive than the former, by saying that although they could pay the fees of the international school, they could not put up with all the rest, nice houses, frequent trips abroad, fancy receptions etc. that the other parents in the international school could, so that in sending their daughter to the Japanese school, she wouldn't feel poorer or

alienation comes precisely from the fact that, as not much fieldwork has been done on the investigation of the phenomena, the answer of how it is that a person or a group of people actually become alienated remains unanswered.

Some of the literature on the subject points to the fact that the term alienation has been overused, and one can frequently find, in the criticisms on the way the term has been employed, reference to Hardin's (1956) label "panchreston", to describe scientific concepts such as that of alienation, which in an attempt to explain all, explains nothing, and carries an undesirable capacity to communicate feeling. Indeed, as Johnson (1973) points out, especially in its use as a vogue or "fetish" world, alienation is capable of conveying more feeling than denotation.

This leads to the necessity of clarifying how the concept is being used here and why, in spite of the criticism of overuse, alienation was kept as the central concept for this paper. Through a literature review, I hope to be able to justify this choice (this literature review does not pretend to include all the works done on the subject. Also, because of lack of competence on the subject, no reference is made to the usage of the concept in disciplines other than sociology (although it is my feeling that a more multidisciplinary study would be fruitful). There are studies on various different aspects of alienation in modern society, such as C. W. Mills' study of man in an age of mass society, where the individual is surrounded by mass institutions and large social complexes and finds himself powerless to affect its surroundings, the K. Mannheim study on the alienation of generations, Laporte & Thomas' collection of essays on the alienation of women, minorities, especially the American blacks, studies on alienation in modern politics and the Mac Dermott analysis of technology as the "opiate of the intellectuals", among others, which relates to the issue discussed here indirectly or in a way that is not central to the line of argumentation. I will therefore concentrate, for the literature review, on the works that contribute directly to the understanding of the issue I intend to study.

As for the etymology of the term, according to Johnson (1973) it is hard to present its meaning(s) in a concise and precise way, for the word is used variously as a concept, as a scientific term, as a specific construct and as a popular expression. In some fields, as in theology, philosophy and psychiatry, the word alienation is generally used as a concept denoting the element of separation of two entities, with resulting tension and frustration. In this same disciplines it is used, under other circumstances, as a specific scientific term suggesting rather special aspects of separation, or as s delimited, theoretical construct depicting salient and specific aspects of behavior. He also points out to the fact that the major unabridged dictionaries fail to suggest the richness and confusion inherent in the etymology of alienation. Webster's (1968) first denotes alienation as a "conveyance of property to another party", secondly, relate the term to the "estrangement of a person" (or of his affections), and thirdly, defines it as "mental derangement". In

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deprived, and would be happier going to the Japanese school and being just like everybody else). Many of the works of alienation, by failing to observe the processes they explore in their concrete actualization, in the practice of social agents, end up divagating in their criticism of the modern man in general, as if there was such a thing as a social agent in general, existing somewhere in a vacuum, at the same time everywhere and nowhere.

the Dictionary of Social Sciences, Kurt Lang defines alienation as "estrangement or separation between parts or the whole of personality and significant aspects of the world experience". He describes the term in its references to (1) objective states, (2) states of feeling accompanying alienation, and (3) "motivational states tending toward estrangement". In these latter states (3), separation is possible between self and the objective world, self and factors within the self, and, finally, between self and (total) self. (Lang, 1964, in Johnson, 1973). In the International Encyclopedia of Social Sciences, Lichthein (1968, in Jonhson, 1973), the concept of alienation is described as a basic ontological theme in Western culture stemming from a Neoplatonic doctrine of emanation. Through this doctrine, finite, existent beings are depicted as creations springing from some ultimate source. He traces the fusion of this concept with the early Christian interpretations of creation. The effect of these doctrines of creation (emanation) has been to emphasize the discrete, finite forms of creation, which implies a form of separateness.

Still according to Johnson, in spite of the inconsistency and vagueness that allows for the concept to be used to denote a great variety of often dissimilar phenomena, the older denotations in theology and philosophy are not easily separated from its current range of meanings within social sciences. And the meanings of alienation stemming from Hegel, Marx and Weber are in no sense altogether distinctive from the meaning of alienation within existential psychiatry or, for that matter, as the term appears in the popular political phraseology.

Kaufmann, W. (1971), refers to the predominant meaning of alienation as the subject's feelings of estrangement from any object or from himself, caused either by an intentional exercise of philosophy, creative artistic effort etc. or imposed on the subject without letting him either identify the cause or the nature of the process that brought him into the "painful sense of isolation, self-doubt and frustration".

For Paul Meadows (in Laporte&Thomas, 1973), alienation refers to a sense of separation from something substantial, a sense of separation that creates concern over that which has been lost. For him, there are two conceptual themes throughout the whole alienation literature. One, is the sense of separation (philosophical strategy) and the other is the concern over loss (over which was developed an empirical strategy of alienation theory). Under the second theme, there is the concern over the dimension of the loss (psychiatric, sociological and psychological), with the recoverableness of the loss (torts, equity), with the responsibility over the loss (the guilt theme), over the involuntariness of the loss (the hopelessness and helplessness themes), the process of the loss (mechanisms of abnormal psychology), the possibility of the loss (anxiety), and the consequences of the loss (the bereavement theme). In the writings on these themes, the understanding of alienation varies and sometimes overlaps.

It should be mentioned here, before proceeding to the literature review, what my own position is in regard to alienation. To say what alienation is, always implies the question of what it is not, or, in other words, what is a non-alienated human being?. We cannot proceed in the study of alienation as doctors, who by examining a human body, determine what is a state or normality or of illness from a concrete reality which is more or less readily present. The discussion becomes even harder if we attempt to

generalize to human nature in general, for a short reflection upon the literature does indicate differences between Eastern and Western perception and feelings of alienation. The connection between man to himself, to other men, and to institutions, occurs through a process which is highly symbolic. At this level, the state of alienation becomes a matter of value, significance, meaning and transcendence within a symbolic reality[120], and as such we should expect it to be experienced in different ways in different cultural contexts[121]. However, it is my feeling that any individual, if unable to make sense of his own working experience, and without access to information that allows one to understand his own reality, would feel powerless and unmotivated to proceed with this activity. In this sense, I believe that to see the meaning in what one does is a fairly universal need[122]. It is by assuming the universal need for meaning that the working of the power strategies analyzed here are viewed as the cause of the alienating processes.

In modern sociological writings on alienation, the concept has been employed in such a variety of ways that Lukes (1972) is correct in pointing out that it has become largely debased. The original meaning of alienation in the work of Marx has been lost, and it has been employed while the presuppositions that are constituent part of the concept have been forgotten. It has also been largely associated with Durkheim's concept of anomie (as in Mizruchi, 1970), one as a type of the other and vice-versa, although both concepts depart from quite divergent views on human nature. Lukes is also correct in pointing out that both concepts are, in their original form, an inextricable fusion of fact and value, so that one cannot eliminate the latter while remaining faithful to the original concept. Obviously, to abandon those concepts all together would be an enormous waste, for both approaches offer precious insights into life in industrial societies. Lukes argues, again correctly, that some degree of alienation and of anomie is inseparable from life in industrial society. To build upon the legacy of Marx and Durkheim, it is necessary to return to their writings and understand how a modern approach to the problems they analyzed can both use them as the giant shoulders on which we stand to see further, and yet depart from them consistently.

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120 Becker, E. as quoted in Johnson ,1973. For further discussion see: Becker, E. The Birth and Death of Meaning, Glencoe, I11:Free Press, 1962

121 Some differences inherent in the term alienation as viewed by Western and Eastern philosophers, lead to the conclusion that the explicit Western sense of alienation has more personal and individualistic connotations, whereas the Eastern model is more implicitly a sense of disorder in terms of nature or some abstract scale concerned with rule-following. see: Manley, J.C. Report on the Fifth East-West Philosophers Conference. Honolulu, Department of Philosophy, University of Hawaii, 1969, p.390-392. In Jonhson, 1973.

122 The difference between Eastern and Western experience of alienation might also occur because of differences in the organization of the labor process itself, in a way that, in Japan, for example, even the realization of a boring and repetitive task can be interpreted as an important contribution to the success of one's group (company or family), to which the individual is well integrated, while in the West the capitalist arrangement didn't allow for the creation of meaningful ties between the worker and organization in which he works. An aggravating feature being the fact that frequent layoffs and hard salary negotiations left the workers and their families in an undesirable and vulnerable situation.

Indeed, it is presently impossible to think of the phenomena of alienation in a value-free ground. To explicit ones assumptions is a great contribution to the reduction of the already enormous confusion that exists around the concept. It is, therefore, necessary to be aware of the underlying political implications of the various views on the subject to understand the logic of the writing of the various thinkers, and to understand the position of the thinkers in relation to their objects.

The approaches of various authors will be contrasted in an attempt to form as clear as possible understanding of the usage of the concept in this paper. Especially dealing with a concept such as that of alienation, it is important to return to the original source of the modern debate. The understanding and the usage of the concept, as Schacht (1971) well demonstrates, varies enormously from one writer to another, and the amount of literature in which the issue appears is very large. I am not trying to do again in here the work Schacht did in reviewing the main tendencies of the literature on the issue, and exploring the way the concept was used by the most prominent philosophers, theologians and social scientists. The bibliographical revision here has the aim of situating the present discussion in relation to the main currents of thought that influenced the contemporary research on the issue.

The concept of alienation in the work of Hegel

Hegel uses the term alienation in two different, and somehow opposite, but complementary ways (Schacht, 1971). Let's first describe what those two different conceptions of alienation are and, then, see their theoretical implications according to the Hegelian system. Alienation-1 has its meaning derived from the Reformation theologians to refer to the separation of a person from God, and involves the idea of something "becoming alien", different, strange or foreign. It is used to refer to a separation of the individual from the "social substance" (a general term employed by Hegel to refer to culture, social and political institutions and social creations in general), this is a process or a stage also referred to as self-alienation. It involves a loss of union with the social substance which is not the intended result of a deliberated action it occurs when a certain change in the awakening of a person's self-conception takes place. Although this type of alienation is not the desired stage to be attained through the development of human reason, it is seen by Hegel as a desirable transition towards maturity, i.e., towards the complete realization of man's essential nature[123]. Alienation-2, on the contrary, is the result of higher form of

[123] For Hegel, the consciousness of oneself as distinct individual does not necessarily emerge in the course of one's life. It implies a break with one's identification with roles and groups. Traditionally, the identification with roles and groups was immediate and unreflective, and to a large extent it continues to be so nowadays. This is a state in which people's relation to the social substance is one of complete and immediate unity (Schacht, 1971). Self-alienation is made possible when historical development brings about its possibility, when time has ripped. Talking about the crusades, Hegel says: "Spirit, disappointed with regard to its craving for the highest form of the sensuous presence of Deity, fell back upon itself. A rupture, the first time of its kind and profound as it was novel, took place. From this time forward we witness religious and intellectual movements in which Spirit -transcending the repulsive and irrational existence by which it is surrounded - either finds its sphere of exercise within itself, and draws upon its own resources for satisfaction, or throws its energies into an actual world of general and morally justified aims, which

deliberation. It involves a conscious relinquishment or surrender with the intention of attaining unity with the social substance. Alienation-2 is used with a meaning that is derived from that in which the social contract theorists (Grotius, Hobbes, Locke and Rousseau) employed the term. Alienation-1 is to be overcome by alienation-2, and alienation-2 can only be attained if, through alienation-1, the immediate identification with the social substance is overcome (Schacht, 1971).

Alienation-1 and alienation-2 are two stages toward the realization of man's universality, a reunion with the social substance through the exercise of reason. Hegel's phenomenology is an investigation into the problem of what knowledge is, of what can we know and how through knowing who we are we become ourselves, through the realization that we are "an I that is a we and a we that is an I" (Pippin, 1993). In this process of discovering our social nature (universality, in Hegel's term, a terminology constructed in opposition to particularity, individual, circumscribed nature), we must pass through a stage of self-negation, a necessary stage for reasoning upon ourselves. In this stage (alienation-1) we break the immediate relation to the social world and discover that we are different from everything that is not ourselves. In the reflection upon our own nature that this break creates, we realize that we only are in relation to all otherness and come to accept the union with the social substance through reason and without doubt (alienation-2). It occurs through a dialectical process which will bring about the realization of the Absolute Spirit (which is the Spirit conscious of itself - where spirit is the consciousness which, through reason, discovers its own universality).

In a stage prior to alienation-1, man has not come to think about the condition of his own existence and is not aware of its own nature. When this stage of innocence is surpassed, man becomes aware of his existence as an independent entity, becomes aware of himself, and comes to see the social substance as separated from him. This marks the emergence of a dimension of distinct individuality and independent existence, which is necessary if man's essential nature is to be realized completely (Schacht, 1971). It is in this stage when man is able to reason upon the nature of his own relation to the social world. He discovers that he cannot know the world in itself (that it is impossible to know the "substance" of an object). Hegel accepts the claim (due to Kant, in Pippins, 1993), that all sorts of knowledge claims are "conditioned" and rely on a priori presuppositions that cannot be confirmed by any relation to objects (because such assumptions determine or constitute what count as relation to objects) - denying, therefore, the possibility of our self-conscious knowledge of any first-order truths about the world. As it is impossible for us to know the world as it really is, then the understanding of the nature of all our knowledge depends on the investigation of how the world is constituted "for us". He concluded that what is true for consciousness is not something other than itself (in Pippins, 1993). What makes all the claims true or false is consciousness itself. This derives from the perception that what is known to us does not come to be so by the world in itself impinging on our senses any feature of external objects. Neither is it caused

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are therefore aims consonant with freedom" (Hegel, The Philosophy of History, The German world, p.395). In the same way, an individual must be ready to get into this self-alienating stage which will lead to a free and meaningful integration with the social substance.

solely by external entities by apprehension of which a discriminating reference to the sensible world is possible: universal, abstract objects (as tradition, senses, thoughts, etc.). "Any relation to objects, even non sensory objects, is, it is argued, inexplicable, or at least radically undetermined, by any direct apprehension or causal influence of the object itself" (Hegel, in Pippins, 1993). Such a possibility (of relating to the world) presupposes some way of comporting oneself toward the world, some active attending and discriminating that cannot be the simple result of our encounter with the world. In relating to the world, the consciousness is, indirectly or implicitly, relating to itself in a mode that is at least relatively empirically independent, for any coherent, unified experience of, or representation of, objects requires some truly independent activity on the part of the subject, which can only be realized if the subject is purposively self-directing, self-conscious. This awareness of individual existence is alienation-1. But there is a second relation to be understood. This individual, to successfully relate to the external world, must relate to the world in some way, which introduces the problem of the nature of this self-relation, and of how to account for it. "The self is not and cannot be an internal object of self-inspection, but a "project", a way of projecting oneself forward into the world; a promise to oneself to act in a certain way, or, in Hegel's account, a kind of practical resolution that fundamentally orients one to a world and is of crucial importance in any basic categorization of the world" (Pippins, 1993). Hegel suggests that we come to understand and make judgments about anything through a function of some sort of mutually sanctioning[124] process among the subjects (social agents), and that this process can be understood only by considering such subjects as practical, purposive or living beings. In this process of realizing man cannot "know alone", one recognizes the existence of one's relation to the social substance. One comes to realize that the social substance, which is alienated-1 from him, is not something different from him at all, but a creation of human spirit (sometimes used with a similar connotation to that of culture, but with strong ethical implications, in which the indispensability of mutual relations of individual and social substance is recognized- Schacht, 1973). One overcomes alienation-1 when one realizes that the social substance is the objectification of human spirit, which means that the substance is spirit in objectified form. Through this discovery, one realizes that there is a fundamental identity between the spirit which animates oneself as an individual and that which has itself objectified in the social substance. One discovers, then, that one's true self is a social self, and that when in the stage of alienation-1, it was not something different from oneself what was alienated from the individual but one's true self objectified that was alienated-1 from one. Ideally, this recognition should lead the individual, through the exercise of reason, to the willful surrender (alienation-2) to the social substance, a surrender brought by the desire to

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Although nowadays it might seem rather obvious, Hegel is indeed, in affirming so, innovating in relation to previous theories of knowledge and with the schools of thought which saw this possibility of human mutual understanding as a sort of metaphysical process or practical reason. "Hegel has thus tied the possibility of some epistemic reassurance about our representational strategies and conceptual schemes to some form of social or mutual reassurance, and so to a general claim that the possibility of judgment always requires such independent, mutually related subjects", Pippins, 1993.

be united with one's own nature, which is not particular and limited, but universal. The importance of this process, is for Hegel, due to the fact that Alienation-2 is not synonymous with the primary unity with social substance, in which dependence and subordination to another person was not rare, but a stage in which, if such a subordination should be required, it would only be accepted for the sake of the attainment of a broad universality, in which particularity is subordinated to universality but not eliminated altogether (Schacht, 1973).

3.2 The concept of alienation in the work of Marx

Marx, in his debate of alienation, distances himself from Hegel's approach, denying that it is from consciousness that emanates reality, and affirms that, rather to the contrary, that it is the material conditions of existence that form consciousness. The alienation Marx criticized in his writings was the phenomena of separation of man from the product and process of his own activity brought by the organization of production under the capitalist arrangement.

For Marx (as for Hegel), men have an essence and an existence, but although those two entities are stated separately, man's essence is not an abstraction inherent in each separated individual and independent of men's historical existence, but actualized through men's existence. In the process of existence, essence is realized.[125] For Marx, it is not only in thought but through all the senses that man is affirmed in the objective world. "A needy man ...has no appreciation of the most beautiful spectacle", so that a man's senses are partially formed by his relation to the outside world (there is no freedom in this kind of necessity - as that of food for the starving man - the wealthy man is at the same time one who needs a complex of human manifestations of life, and whose own self-realization exists as an inner necessity, a need)[126]. In this relation with objects human nature develops itself, but can only be fully developed through actively affecting the world. Being passive, man remains separated from the whole, and cannot therefore fulfill his desire for meaning in his life. Activity is the way men express themselves to the world. It is the fundamental condition for the construction of society, and history.

Marx identified the need to produce as the most basic need for the existence of man and society (for Hegel, that need was to harmonize reason and feeling, or nature and spirit, Lauer, 1976). Through producing, man relates to nature and to other men, and realizes his creative potential as an individual. In their association to produce, men relate to each other creating means to organize their activity. "The way in which men produce their means of subsistence depends first of all on the nature of the actual means they find in existence and have to reproduce. This mode of production must not be considered simply as

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125 "The world is an estranged and untrue world so long as man does not destroy its dead objectivity and recognizes himself as his own life 'behind' the fixed form of things and laws. When he finally wins this *self-consciousness*, he is on his way not only to the truth of himself, but also of his world. And with the recognition goes the doing. He will try to put his truth into action, and *make* the world what it *essentially* is, namely the fulfillment of man's self-consciousness". This understanding of the relation between men and the world derives from the Hegelian thinking, as Fromm put it: "For Hegel, knowledge is not obtained in the position of the subject-object split, in which the object is grasped as something separated from and opposed to the thinker. In order to *know* the world, man has to *make the world his own*. Man and things are in a constant transition from one suchness into another; hence "a thing is for itself only when it has posited all its determinates and made them moments of its self-realization, and is thus, in all changing conditions, always returning to itself". In this process "entering in itself comes essence". This essence, the unity of being, the identity throughout change is, according to Hegel, a process in which "everything copes with its inherent contradictions and unfolds itself as a result". " The essence is thus as much historical as ontological". in Fromm, Marx Concept of Man, 1961.

126 Iden.

being the reproduction of the physical existence of these individuals. Rather, it is a definite form of activity of these individuals, a definite form of expressing their life, a definite *mode of life* on their part. As individuals express their life, so they are. What they are, therefore, coincides with their production, both in *what* they produce and *how* they produce. The nature of the individuals thus depends on the material conditions determining their production".[127] In contrast with the materialist tradition of his days, Marx saw the sensible reality not solely as an *object* or contemplation, but as sensuous *human activity*, as *practice*; not subjectively.[128] Man's consciousness of himself and of his reality, therefore, evolves from the economic and social conditions under which one lives. The physical organization of man and means of production is a basic necessity for producing the means of subsistence. In producing their means of subsistence men are producing their actual material life. “In the social production of their life, man enters into definite relations that are indispensable and independent of their will, relations of production which correspond to a definite stage of the development of their material productive forces. The total sum of these relations of production constitutes the economic structure of society, the real foundation, on which rises a legal and political superstructure and to which correspond definite forms of social consciousness ... It is not the consciousness of men that determines their social being, but, on the contrary, their social being that determines their consciousness".[129] Different societies, in different historical times, organized differently to produce, and in the course of this organization created unequal access to the means of production and social injustice, which was not, for Marx, an exclusive feature of capitalism. But it was, for him, in the capitalist mode of production that exploitation reached its peak, and it was under the capitalist organization of labor where the most acute and unacceptable form of alienation evolved.

Marx considers the alienation of practical human activity, labor, from two aspects "(1) the relationship of the worker to the product of labor as an alien object which dominated him... (2) The relationship of labor to the act of production within labor. This is the relationship of the worker to his own activity as something alien and not belonging to him, activity as suffering (passivity), strength as powerlessness, creation as emasculation, the personal physical and mental energy of the worker, his personal life (for what is life but activity?) as an activity which is directed against him, independent of him and not belonging to him. This is self-alienation as against the above-mentioned alienation of the thing.[130]

And then he proceeds to examine the alienation as the separation of the worker from the process of labor, as the third aspect of alienation: the understanding of alienation as the separation of man from the process of labor, is deduced by Marx from the differentiation he traces between man and animals: "The

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127 German Ideology, 1.c. p.7 in Fromm,1961.

128 Thesis on Feuerbach, quoted in Fromm, 1961. Italics on the original.

129 Marx, Engels, Selected Works, Vol. I p. 362-4, quoted in Fromm, 1961.

130 Economic and Philosophical Manuscripts, First Manuscript, Alienated Labor. p. 100 Translated by Fromm, in Fromm, 1961.

animal is one with its activity. It does not distinguish the activity from itself. It is its activity. But man makes his life activity an object of his will and consciousness. He has a conscious life activity". This is the reason why, for Marx, man is a species being, by which he means that while animals produce (bees, ants etc.) only for themselves and their young in a single direction out of the compulsion of direct physical need, men produce universally, reproducing not only themselves but the whole nature. Man only truly produces when free from the compulsion of physical need, and is free in face of his product. When producing, man is conscious not only of himself but of the whole species. Man produces universally, and unlike the animals, not according to the standards of a species but according to the laws of beauty. Activity is not only one aspect of life, but life is activity. To stress this relationship, Marx uses the term life-activity to refer to human activity. It is just through work upon the objective world that man proves himself as a species-being. By means of his production "nature appears to man as his work and his reality. The object of labor is, therefore, the objectification of man's species life; for he no longer reproduces himself merely intellectually, as in consciousness, but actively and in a real sense, and sees his own reflection in a world which he has constructed. While, therefore, alienated labor takes away the object of production from man, it also takes away his species life, his real objectivity as a species-being, and changes his advantage over animals into disadvantage in so far as his inorganic body, nature, is taken from him."[131] As a consequence of that, alienated labor turns the species life of man, and also nature as his mental property, into an alien being, transforming his activity into means for his individual existence (placing human labor in the same category as that of the animals). As he is alienated from his species life, he loses any sense of universality and a shared sense of participating in the human species, becoming alienated from other man and also from himself, for like an animal, he only produces to exist as an individual, being cut off from humanity and therefore from himself. "Human alienation, and above all the relation of man to himself, is first realized and expressed in the relationship between each man and other man. Thus in the relationship of alienated labor every man regards other men according to the standards and relationships in which he finds himself placed as a worker" (indeed, during the analysis of the field work data it will be possible to see how true this statement is).

For Marx, alienation is not an exclusive phenomenon of the capitalist society. Indeed, since antiquity man worked for other purposes than for his own sake, for the gods (represented by the priest, etc.). Always when the product of labor does not belong to the worker, there is a process of alienation. He concludes that private property is not what caused alienation of labor, but rather that the alienation of labor was a necessary condition for the appearance of private property. The relationship between labor and private property, later, became reciprocal as on one hand private property is the product of alienated labor, on the other hand the means by which labor is alienated, the realization of this alienation. What makes alienation especially cruel in the capitalist society is that here the product of labor is set against the

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131
Same, p.103

worker, as developed by Marx in his analysis in the Capital. But common to all forms of alienation is the fundamental disparity between people's existing life circumstances and their generic human capacities.[132]

Following this logic, Marx sees another type of alienation in the capitalist society as rooted in the difference between 'having' and 'being', or the alienation caused by the fetishism of the commodities:

" Private property have made us so stupid and partial that an object is only ours when we have it, when it exists for us as capital or when it is directly eaten, drunk, worn, inhabited, etc., in short, *utilized* in some way. Although private property itself only conceives these various forms of possession as *means of life*, and the life for which they serve as means is the *life of private property* - labor and creation of capital. Thus *all* the physical and intellectual senses have been replaced by the simple alienation of all these senses; the sense of *having....*

The science of the capitalism "is a truly moral science, the most moral of all sciences. Its principal thesis is the renunciation of life and of human needs. The less you eat, drink, buy books, go to the theater or to balls, or to the public house, and the less you think, love, theorize, sing, paint, fence etc., the more you will be able to save and the greater will become your treasure which neither moth nor rust will corrupt - your *capital*. The less you *are*, the less you express your life , the more you have, the greater is your alienated life and the greater is the saving of your alienated being. Everything which the economist takes from you in the way of life and humanity, he restores to you in the form of money and wealth. And everything which you are unable to do, your money can do for you; ...(acquire all the pleasures, art and political power), but although it can do all this, it only desires to create itself, and to buy itself, for everything else is subservient to it...Thus all passions and activities must be submerged in avarice. The worker must have just what is necessary for him to want to live, and he must want to live in order to have this".[133]

The phenomena of alienation occurs, then, when the cognitive process, instead of leading to a meaningful apprehension of the objects which, through a dialectical process lead to the actualization of men's self-consciousness, it is misplaced, or misguided, leading to the submission of human possibilities, to the logic of the capital. This is one form of alienation which Marx addressed. The other form, related to this, is the alienation of the workers themselves. The alienation of the worker is to be understood, having in view the centrality of the concept of productive activity for the whole of Marx theory.

For Marx, productive activity is not a commodity. Labor is the self-expression of man, of man's individual physical and mental powers. As Fromm puts it, what Marx criticized in capitalism was the perversion of labor into forced, alienated, meaningless labor, hence the transformation of man into a

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132 Schweitzer, David. Marxist Theories of Alienation, in Geyer & Heinz, 1992.

133 Economic and Philosophical Manuscripts, p.144-5, in: Fromm, 1961.

"crippled monstrosity". In this context, alienation (or "estrangement") means, for Marx, that man does not experience himself as the acting agent in his grasp of the world, but that the world (nature, others, and he himself) remains alien to him. They stand above and against him as objects, even though they may be objects of his own creation. Alienation is essentially experiencing the world and oneself passively, receptively, as the subject separated from the object.[134] This process of separation occurs within the capitalist division of labor, in which a situation exists were man's essence is separated from his existence (man's essence stands for man's full potentiality, for what man could be if a meaningful experience was not denied to him). “As private property and the division of labor develop, labor and its products assume an existence separated from man, his will and his planning. 'The object produced by labor, its product, now stands opposed to it as an alien being, as a power independent of the producer. The product of labor is labor which has been embodied in an object and turned into a physical thing; this product is an objectification of labor'. Labor is alienated because the work has ceased to be a part of the worker's nature and 'consequently, he does not fulfill himself in his work but denies himself, has a feeling of misery rather than well-being, does not develop freely his mental and physical energies but is physically exhausted and mentally debased. The worker therefore feels himself at home only during his leisure time, whereas at work he feels homeless".[135]

It is my feeling that Marx's intuition in regard to the location of alienation was essentially right, although the causal connection he attempts to establish is misleading. The most acute type of alienating process is indeed more likely to occur in the context of the capitalist division of labor, and the lack of ownership of the means of production was central causal element in this process, by the time of the industrial revolution, but not just because it is in the way of a meaningful aesthetic experience to be actualized through the creative process of producing, but especially because of the concentration of power it allows. But the concentration of power alone is also not enough to explain alienation. The "scientific administration" of the productive process and the capitalist ascetic ideology, cognitively incorporated by the agents as the more logical and natural need for efficiency, for derived from the nature of things proved logically by science, took the mechanics of the rational model (synthesized by Taylor) to its full consequences, thinking of people as a factor of production and allowing for the destruction of meaning as a necessary part of the work experience for the work force.

Schacht (1971), criticizes Marx for having discarded the distinction of alienation as a surrender and as separation as discussed by Hegel in his Phenomenology of the Spirit. But it can only be considered an undue retrocession of the development of the concept, or a undesirable reduction of it, if the concept of alienation is analyzed out of the context of Marx's system, for in introducing the economic and political element to the discussion of society, the act of surrender loses much of its positive connotations and

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134 Fromm, 1961.

135 Capital, I, 1c.p.536, in Fromm, 1961.

instead of representing the meaningful unification of the universalized self-consciousness with the social substance attained through the development of reason, it comes to represent the sacrifice of one's individuality to a socio-political system that does not allow for a meaningful individual development. If we admit an element of power and inequality as part of the historical process, then Marx is correct in seeing an element of negativity in the "surrender". Indeed, Marx's contribution to the study of alienation is special for he is the first to make it possible to think of ideas, products and power relations as products of specific economic systems. Indeed, alienation can only occur, with all the negative connotations attributed to it in modern writings, if the individual selves are "surrended" to society, for it is impossible to conceive a process of alienation without shared categories of thought and individuals living within a sufficiently organized social situation, with rather clear allocation of power and status.

The central difference between Marx's approach and the approach I propose in this paper is focused on the relation between the individual and society. The Marxist reasoning departs from the individual and of the need for the development of individual personality and creative potentialities, to be reached largely through the aesthetic experience attained through man's activity upon the concrete world. Man is dealienated in his freedom to act creatively. In here, I propose that man is dealienated through the freedom to act meaningfully within society (in which meaning emanates primarily from society and not from the individual consciousness). It implies a distancing of the focus on the individual, predominant in the European thought since Decartes, towards the understanding of man as a social agent found in the modern literature (a social agent that is not that of Durkheim, either, but the man who acts socially also in the selfish search of his own interests). It implies that man is not to find dealienation in the meaningful encounter between man and himself, as in individualistic thought, but in the possibility of being free while social, a concept of freedom far more restricted than that of Marxist and Hegelian ideals The present paper relies upon the understanding of a man whose freedom and individuality is social, who exists not only as an individual in his contact with the social world but as an element in a system of relations, the individual who exists socially through those relations, but who builds them with a relative freedom. The comparison between the three plants, I hope, will adequately illustrate the possibilities of this approach[136].

3.3 Alienation and Anomie: Durkheim's contribution

Although understood in a rather different way from that in which Marx and Hegel understood the phenomena of alienation, Durkheim uses the concept of anomie to refer to abnormalities caused by or

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The political implication of this shift is significant, and one should be aware of the moral implications that derive from it. By implying that one may not fell alienated even in a situation of relative submission I do not imply that efforts should not be made to reduce social injustice, just that not all the evils of society should be labeled alienation and that injustice and oppression do not necessarily lead to feelings of alienation, and I doubt whether a person who does not express the sufferings and anxieties associated with alienation could be correctly labeled alienated.

occurring at the division of labor in society, analyzing a social phenomena that is not entirely distinct from that of alienation, but seen from a quite different theoretical and philosophical perspective. While Marx and Hegel depart from the individual and have in mind especially the realization of the individual in society, Durkheim has society as his departure point, and while for Marx man is intrinsically good and rational, and in need for a good society in which to develop his essential nature, for Durkheim man is a bundle of desires, which need to be regulated, tamed, repressed, manipulated and given direction for the sake of the social order (Lukes, 1967). For Durkheim, the division of labor in society, up to the transition to industrialism, gave the conditions of integration and complementarity of functions in society promoting a normative integration of its members. As in the biological body of the higher organisms, each organ contributed to the harmonic functioning of the whole.

For him, the division of labor is a desirable process through which society can properly evolve, acquiring an inevitable degree of complexity and differentiation, in a process comparable to the physical development that brought about the existence of complex organisms, as these of the mammals. He looks at the anomic division of labor as a pathology that leads to the development of devious or criminal forms of behavior, existing to society as diseases exist to living organisms. He attempts to prove logically that anomie is a deviation of the natural course of society, and that the division of labor does not imply it (Durkheim, 1964, p.353)

Durkheim believes that the complementarity of functions that occur through the process of the division of labor, in its normal states, bring about solidarity among the elements participating in it, integrating society and giving it the conditions to advance. The industrialized society's division of labor has a "centrifugal tendency" for it has developed beyond the point up to which spontaneous solidarity could emerge. The individual becomes loosely dependent upon the mass, and no longer feels the idea that a common work is being done by those who work side by side with him. Quoting Comte, Durkheim says "If, on the one hand, indeed, the separation of social functions permits a felicitous development of the spirit of detail otherwise impossible, it spontaneously tends, on the other hand, to snuff out the spirit of togetherness or, at least, to undermine it profoundly. Likewise, from the moral point of view, at the same time that each man is thus placed in strict dependence upon the mass, he is naturally deterred by the peculiar scope of his special activity which constantly links him to his own private interest whose true relation with the public interest he perceives but very vaguely... The division of labor, thus exercises, because of its very nature, a dissolving influence which would be particularly obvious where the functions are very specialized" .. The diversity of functions is useful and necessary, but as unity, which is no less indispensable, does not spontaneously spring up, the care of realizing it and of maintaining it would constitute a special function in the social organism, represented by an independent organ. This organ is the State or Government"(Durkheim, 1964, p.358)[137]. Although the State is seen by Durkheim as a

[137] The impact of these ideas on Brazilian politics in the twenty years from 1964 on was very strong. The "Positive government" defended by Comte and agreed upon by Durkheim was at the core of the ideas of the Brazilian Military when the inauguration of the dictatorship period, in which the State called for itself precisely the function Durkheim

"mechanical necessity" for the maintenance of solidarity, he adds that the most important stabilizing factor in giving unity to society is the spontaneous consensus of parts. In order to attain such a spontaneous consensus, neither simple explanation nor further education would suffice, for the individuals need to "feel" that they are not self-sufficient, but a part of a whole upon which they depend. In order for this sentiment of dependence to be effective, it has to be fruit of a continuously experienced reality, linked "to the very practice of each special function". In the societies existing before industrialization, collective conscience fulfilled the role of promoting an unquestionable unity, for it developed from the rules and moral that evolved from the daily experience of long and well established social relations. For Durkheim, organic solidarity will eventually occur in society, and it has not occurred yet for the industrial division of labor, being extremely recent, has not yet acquired the necessary stability. Once the functions emerging from the division of labor stabilize in definite ways of action, which are identically repeated in given circumstances, they will become habits. These habits, becoming forceful, are transformed into rules of conduct. There is a "certain sorting of rights and duties which is established by use and becomes obligatory". Regularity will stabilize the system.

In this sense, the state of anomie is that in which the "relations of the organs are not regulated" (p.368). The degradation of the worker in making him into a machine, an observable feature of the division of labor, must be avoided for it is not moral, for "it allows the very source of social life to be drained". More education to the workers would not be the solution, for it would just "make it intolerable, and, consequently, more or less impossible"(p. 372). What is necessary is to allow the worker to "feel that he is serving something. For that, he needs not embrace vast portions of the social horizon; it is sufficient that he perceives enough of it to understand that his actions have an aim beyond themselves".

Besides this feeling of solidarity, it is also necessary, for the division of labor to produce solidarity, that it is spontaneous ("by spontaneity we must understand not simply the absence of all express violence, but also of everything that can even indirectly shackle the free unfolding of the social force that each carries in himself). This condition can only be met if the social inequalities express natural inequalities. For this condition to be met, it is sufficient and necessary that the social inequalities are neither enhanced nor lowered by some external cause. Inequality is not especially disruptive in lower societies, for solidarity is assured pre-eminently by the community of beliefs and sentiments. But when the collective conscience becomes weak, or when the organic solidarity becomes predominant, the anxieties produced by inequalities can no longer be completely neutralized, making it more important for the division of labor to

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points out as the "first positive and rational basis for an elementary and abstract theory of the government", that is, that of "preventing" as far as possible, this fatal disposition towards a fundamental dispersion of ideas, sentiments, and interests, the inevitable result of the very principle of human development, and which, if it could follow its natural course without interruption, would end by arresting social progress in all important respects". It is curious to note here that the Marxist ideals defended by the labor unions during the whole period of the dictatorship, were combated by the arguments defended by Comte and Durkheim, which were the core of the Brazilian right wing movement since the Young Lieutenants Movement that occurred in 1922 within the Brazilian armed forces aiming at promoting orderly progress. It was under this ideology that the Petrochemical Complex under study here was constructed, as part of the Second National Development Plan developed under the military government.

be more and more in harmony with the ideal of spontaneity, giving way to an always more sophisticated system of justice, that in a large part substitutes for the common faith the ancient people lived by.

Another cause for the anomic state can be found in poorly managed or poorly developed working arrangements that allow the workers not to be sufficiently occupied in his task of specialization or not having enough work to do. Continuity is a fundamental feature, for only if one is continuously engaged in a function, will one produce more, and one can only produce more if others produce more, so that complementarity is established. In this sense, because the development of the division of labor not only divides the activity but also because it increases the activity, it produces social cohesion. In this way, if, in commercial or industrial enterprises, the functions are distributed so that insufficient material is available for individual activity, besides the loss of effort and other economic losses, the social cohesion will be weak.

As it is the division of labor that makes solidarity possible, it is also the division of labor that creates among men an entire system of rights and duties which link them in a durable way (p.406). The division of labor presents the character by which law and morality is defined, for everything which is a source of solidarity is moral. Law and morality are the totality of the ties which bind each of us to society, which make a unitary, coherent aggregate of the mass of individuals. It is inexact to define it through liberty. "It rather consists in a state of dependence. Far from serving to emancipate the individual, or disengage him from the environment which surrounds him, it has, on the contrary, the function of making him an integral part of the whole, and, consequently, of depriving him of some liberty of movement" (p.398).

Durkheim theorized that true solidarity is based on shared classifications, and that the loss of classificatory solidarity was the central cause for the crises of individual identity, which would then suffer from the absence of strong, supporting, publicly shared, and privately internalized classifications (Douglas,1986, p.98). The primitive mechanical solidarity wouldn't open space for this loss of the individual, for it was fully based on shared classifications, but it is not true for the modern stage of organic solidarity, based on economic specialization (which, obviously, does not exist in a total absence of shared classifications, but that the fit is not perfect, as he shows in his study of suicide). In the stage of organic solidarity, if there is a bad fit between public and private classifications, or if the public classifications are in a stage of incoherence, individual deviance would rise, as a consequence of this anomic state of things.

The alienation process observed during the fieldwork could hardly be classified as a sort of deviant behavior, especially at the Camaçari plant where conformity and hopelessness were the prevalent attitudes of the workers. And it was not because organic solidarity was stronger. In this sense, alienation differs from the classic idea of anomie if the interpretation of Durkheim theory ignores his greatest contribution, namely, the conditions for the existence of any kind of social order or solidarity: the shared classifications or collective representations as the condition for the existence of any organized society. Alienation cannot come into existence if the individual refuses the prevalent classificatory schemes. Rather to the contrary, it occurs because the individuals are not aware of their own condition and this lack

of awareness presupposes the existence of a shared understanding of their own reality, in which the conditions which hold them to their situation are interpreted as natural, taken for granted in a way that alternative schemes do not occur to one's mind. Alienation here is seen as an undesirable outcome of the power arrangements, and in this way, the strength of Durkheim's approach is due to the fact that there is a need to explain how the consensus over power arrangements are attained in the first place, and his theory of shared categories of thought is the most illuminating in this sense.

As Lukes (1967) noted, Alienation and anomie are not mutually exclusive concepts, and although conformity was the predominant feature in all the factories observed, sabotage, thievery and other problems were also relatively frequent, being typical features of anomie as described by Durkheim. Although the empirical observations do confirm this non-exclusive reality, these concepts cannot be mixed unless the presuppositions upon which they are based can be substituted by a theoretically valid reasoning, otherwise the exercise will end up wasted in a sinful syncretism, for as Odenquist[138] notes in quoting Schweitzer, "it is precisely the independent, external, reifying, and determining character of society portrayed by Durkheim that characterizes, in part, Marx's conception of alienation. Durkheim's view of society as an hypostatized and reified power, an external force above us and outside our control is, for Marx, a barrier to emancipation, freedom and self-determination".

138 Oldenquish, Andrew. Autonomy and social identities. In: Geyer, 1992.

Appendix II

2.6 The composition of the units

The organizational chart of the company was divided into five main areas. The Administrative unit, where the central management of the holding company was concentrated, was composed of 283 people. At the top was the director of the holding company, who contracted the research. Working as a team with him were four directors. There was the commercial director, under whom were the areas of sales, marketing and export, concentrated in São Paulo city, in the commercial office, with 50 people. The finance director (especially important due to the constant changes caused by high inflation and company debt), under whom were the area of finance, the accounting area, and the planning area, with a total of 94 people. The technical director (post reserved for the representative of the Japanese partners), under whom were the areas of research and development and the technological advisory area, with 32 people. And the director of projects, under whom were the three productive areas (the Camaçari, Alagoas and São Paulo plants), and the assistant area for special projects. Directly under the chairman of the holding company was the general secretariat, in charge of guidelines for human resources management, labor relations and legal advice, and the special support area, in charge of following up the development of the related companies and keeping up with the advisory body of the shareholders, with 9 people.

In the São Paulo plant, the manager of the plant had the status of director, for besides managing the plant he also marketed its products, related directly to the clients and decided in how much and what kind of resins were to be produced. The commercial director sold the production of the Alagoas and Camaçari plants. São Paulo had 174 employees. One technical area, under which were the production and laboratory divisions, with 25 people, one production area, under which were the operation and maintenance divisions, with 110 people, and one administrative area, with 30 people, under which were the division of industrial resources (human resources management, accounting and finances, cleaning, secretariat and stock room), and the industrial security and environment protection advise area.

The Alagoas plant had 408 people. At the top was the manager of the plant, the industrial superintendent (IS). Directly under him were the technical area, under which were the process and laboratory divisions, with 37 people, the production area, with 145 people, under which there were the PVC unit (with 73 people) and the VCM unit (with 70 people), the maintenance area, with 116 people, under which were the planning division (in charge of small projects, reforms and implementation of improvements in the equipment, with 10 people), the mechanics division (with 24 people), the caldrons division (with 24 people), electricity division (with 19 people), the instrumentation division (with 24 people), and the engineering division (with 13 people), and the Administrative area, with a total of 50 people, under which were the human resources division (with 8 people), the services division (in charge of transportation, cleaning and restaurant-with 29 people), and the medical and social division (with 10

people, including the nurses on the shifts). Each area had its own manager, intermediating between the divisions and the IS. Directly under the IS were the material division (18 people), product handling division (28 people) and the industrial safety and environmental protection assistance area (10 people), his own secretary, his direct assistant and the assistant secretary.

The Camaçari plant had 445 people had a very similar structure to Alagoas. The SI and his direct assistant and secretaries were 5 people, industrial safety and environmental protection advice area 7, material division 18, product handling 39, technical area 42 (project division 8, laboratory 30), production area 166 (PVC unity 93, and MVC 71), the maintenance area had 104 people (the planning division 8, mechanic division 26, caldrons division 23, electricity and instrumentation 37 and engineering 8). The administrative area had 64 people (the human resources division 10, the service division 41 and the medical and social division 11). As of February, 1992, the total number of CPC employees was of 1,230 people, including the sales and finance office in Rio de Janeiro (which I did not visit).

After the reengineering process was concluded, the number of direct employees of CPC was cut to about half of this total. The largest impact was due to the transference of the maintenance area, product handling and accounting division to subcontracted firms, the reduction and automation of the material and stock room, and rationalization of some administrative processes. Due to the enlargement of the productive capacity in developed countries, there was a rumor in the complex that further reductions would occur, this time with worse consequences in regard to the future of employment in the complex. As the complex was composed of 45 companies in a contained geographical area, the rumor said that the union of the companies was studying the possibility of composing a mega-producer, concentrating the management of all the companies in one administrative area for all the 45 companies, which would result in a dramatic lay off of white collar workers. The transference of blue collar workers to subcontracted companies, in spite of the anxiety it generated, as far as I could observe did not result in unemployment. The complement of employees was hired by the subcontracting companies, with the assurance of employment for one year and better career opportunities (In the case of Camaçari, a large maintenance company was providing the service for all the industries in the complex. As its main business was maintenance, the workers were changed from a position of supporting the main activity of a company, to a company in which their activity was the heart of the business. In the case of Alagoas, due to the non-existence of a similar structure, the head of one of the maintenance divisions was encouraged by CPC to open his own company to provide services for CPC, taking with him the present CPC employees. CPC assured him of the continuity of the client relationship. He was chosen after CPC asked the employees to create a cooperative and file a proposal for providing the services (which they didn't do), and later the engineers, head of the divisions, to make their own proposal so that CPC could chose the best of them.

APPENDIX III

Work Methodology

On the unavoidable difficulties

The large majority of the data was collected through non-participant observation. Nevertheless, as the process of research on organizational culture involves many unexpected issues, different strategies were employed in the course of the investigation. Within the organization there were intrincate power schemes which were upset by the simple fact that a research was being carried on within the walls of the organization. The presence of the researcher (mine and of the consulting firm hired to work simultaneously with me) started a process of discussion, interfered in the conflict of interests and in the power schemes existent among people and groups of people. As my presence was known to have been planned by the chairman, protection barriers and schemes of defense were being created to filter or alter the information that some feared could reach the chairman, and in the same way the desire to participate of some people was part of the intention to make information reach the top. These attempts, in themselves, were part of the processes to be observed, and could, by themselves, say a lot about relationships within the organization.

It was never my intention to investigate personal competency or individual problems, but to understand a process that was collective and escaped individual responsibilities. Although I never meant to go against any individual within the organization, the identification of the impact of the different leadership styles and its central importance to the environment within the organization pointed, by implication, to differences in management competence that could affect especially the people in the top positions at each plant. I wasn't naive enough to ignore the implications of my findings, and from the beginning I knew my position was extremely delicate and demanded caution and calm. In a recent telephone conversation with the employee with whom I shared a work room in Camaçari, I learned that the chairman of the holding company was replaced, and that the new chairman carefully read the result of mine and the other research, and asked to see those results again more than once, asked opinions about it and discussed the presented suggestions with the middle management. He believes that much of what was learned during the time of these researches was being used up until recently to rethink human resources strategies. I knew, and the employees knew as well, that to present the reports would result in taking quite a lot of responsibility over the results and that a completely neutral position simply could not exist in this kind of situation.

As in a company environment each individual's responsibilities are rather clearly defined, the simple diagnosis of a problem may be interpreted as incompetence by the person in charge of that area. As

much as possible I avoided implicating people in my reports, which was easier the lower one went in the hierarchy of command, but became impossible when it came to the analysis of leadership styles and their impact on the community. I am confident I didn't harm the people on the shop floor, but I am not so confident in regard to those in management positions.

It was possible to guess the nature of many of the contaminating elements I was going to find during the research, but it was impossible to guess where and from whom to expect them. It is impossible for the researcher to know, in this environment, if the respondent is being true or playing games (probably always a bit of each), even because quite probably impartial truth does not exist for the respondent himself. To avoid contamination as much as possible, seven strategies, listed below, were employed in the hope of getting cross-reference-able information that could confirm or deny the tendencies observed using one specific strategy. Opinions that departed too much from the average (as those of the interviewee in Camaçari who belonged to a very strict protestant sect and had sharply different opinions about work and ethics from the rest of the group), were not utilized to draw the general view of the culture of the plant, but were jotted down and kept as examples of possible variations within the same environment, which I believe contributed to the theoretical conclusions, forcing the departure from closed, perfect or synthetic views of social reality.

The seven strategies

Upon starting the research, I received a desk in the room of an assistant in charge of analyses of market trends of salary, index for adjustment to inflation and human resources policies at the structure of the holding company, at Camaçari. For about a week, I stayed there talking to available people and introducing myself. This room was in the area of the administration of the holding company, in the same building in which the management of the Camaçari factory was located. In this first week I tried to get a feeling for the situation, understand the hierarchy of the company, locate myself in the organizational chart and get acquainted with the nature of the product and process. The order presented below is not chronological. The document research, for example, occured throughout the period of investigation, and not before the third step began.

The total length of duration of the research was seven months, from November 1991 to early June 1992. More than half of the time of the research was spent in Camaçari, the city where I and my family were living at that time. While in Camaçari, I travelled to Alagoas for a week, during which I introduced myself and started with the interviews the management. Then I returned to Bahia for three weeks, had an apartment rented for me by the company in Alagoas and moved there with my mother and my baby, for a planned stay of 5 weeks. To optimize the use of time in those out -of-state stays, I attempted, as much as I could, to stay longer at the plants. In Alagoas, for a total of five weeks, I stayed an average of over 10 hours a day in the plant, including weekends, with the shift workers. In the days I stayed less time in the

plant, it was because I tried to follow them to the discussions of quality in the club, to watch their soccer games or to join the plant manager and the people from the human resources division in their outings on some evenings. I also stayed five weeks at São Paulo, during which I also joined, as much as possible, the workers in other activities. Compared to Alagoas I spent less time in the plant, because the chairman wanted me to interview the 50 people in the commercial office. But if we take into account that the São Paulo plant had only one productive area, the PVC (they do not produce VCM, the gas that serves as raw material for PVC production), I spent proportionally more time with São Paulo workers. Also, as I went alone to São Paulo, I could stay longer hours in the plant.

The **first** step in each plant as well as in the holding company was the open interviews performed with the top person in each plant, his direct assistant for human resources management and other management staff. In this first step the interviews were completely unstructured. To get the feeling of the situation without inducing answers, I asked each of them, in the first contact, to describe the company and the general environment, their main difficulties in dealing with human resources, what they thought were the causes, and whatever they thought I should know. There was no maximum time limit. All of them agreed, in principle, in talking to me for one hour, but, with the exception of Camaçari, it would inevitably lead to a continuation during lunch hours or coffee break. In a second opportunity, I used semi-structured interviews in which I asked which points they believed were especially problematic in their plant, and what they themselves would like me to attempt to investigate. At the end of my stay in each plant I returned to the top person with a more structured instrument to cross-check the impressions I had got at the shop-floor. Many times these structured interviews served to redirect my interpretations, and at other times to better understand the problems of the shop floor workers in relation to the views of the manager. Both in São Paulo and Alagoas the managers themselves eventually invited me to have informal conversations. The contact with these managers was disproportionally more frequent than with the manager of Camaçari, who rather avoided discussing the plant's human resources management with me as he explicitly said he disagreed with the research in the plant and to saw it as an undue interference by the holding company in the plant's internal affairs. Also in São Paulo and Alagoas I had a much easier access to the head of the human resources division. In Camaçari I had to rely on informal access to the assistant to the head of the human resources division, to the person in charge of social service, and to the person in charge of training for information on the plant. The head of the human resources division of the plant was in agreement with the plant manager in disapproving of the research at the plant.

The assistant of the chairman advised me, before starting, to be cautious especially with the top person in each plant, for there was the fear that they could interpret the research as undue interference in their affairs, or that I was a spy of the holding company in the plant. His suspicions were not ungrounded, as I had a chance to confirm. Especially in the Camaçari plant there were many attempts to hide information and make access to the people in the shop floor difficult This very fact was an important indicator of how tense the relations were between the top people in that plant and the management of the holding

company. The contrary was also true, for sometimes the research was seen as a direct channel to the top. Especially the lower end managers, feeling in a sandwiched position between the politics at the top and the problems of the shop floor, seemed eager to use the research as a means to make their views reach the holding company.

The **second** step was document research. I went through old papers of the previous chairman's administration in regard to the company's philosophy, human resources policies and company's vocation and goals, old organization charts, results of previous consulting works, past and present company journals (where it was possible to observe a change in the approach to human resources management both in the quality and nature of the information that was being circulated- although the picture was incomplete, for the papers were not being kept with the intention of being utilized as historical documents). Also the papers from the recruitment and personnel selection sector, training's and courses approved, family composition of the employees (obtained through the social services), punishment and admonition letters issued, salary differences among the various occupations, evaluation instruments and policies, and medical history (history of the times and number of diseases - especially occupational diseases and stress related problems, to see if some variation existed among the plants. The interview with the doctor and the nurse in Camaçari called to my attention the fact that the number of visits asking for anti-acid medicine had increased considerably over the last three years prior to the research, the number of requests for absence for physical problems had also increased as had the number of cases of sickness caused by excess of alcohol ingestion on the weekend, in the form of upset stomachs and headaches in the morning. The doctor attributed the alcohol abuse to the fact that it was an inexpensive leisure - similar problems were not noticed by the doctors at the two other factories).]

The goal of this stage was to get acquainted with the population of the company, have an idea of the size and composition of their families (it was believed, among the white collar workers in Camaçari, that the blue collar workers had many children and a life style similar to the very poor, lacking, among other things, a properly devised family planning strategy. But the number of children in both blue and white collar families was fairly similar, which made me see how socially far apart the two groups were, and realize that the white collar workers tended to have a distorted and prejudiced view of the blue collar workers) . The clearest difference was that among the blue collar workers it was more common to be members of the extended family living together with the employee's nuclear family, and which was dependent on the employee for company benefits purposes. Another objective at this stage was to verify if there were major differences in the speed of promotion among the factories, types of errors likely to be punished in each factory, understand how the evaluation of performance was carried out (especially if the criteria was the same in the three plants), see how much power or knowledge the employees could have on the result of the evaluation of their own performance, differences in the criteria for hiring and firing among the plants

(where considerable differences were observed), and if the differences in income were substantial enough to be a strong factor in forming the blue collar and white collar identities.

The **third** step was the semi-structured interviews with the workers from various points in the hierarchy, in groups of 6 people, differently assembled. These interviews occurred simultaneously with the interviews with the managers, as the time schedule of those in each plant allowed. The interviews with the groups of employees were of one-hour-and-a-half duration. The routine of the group interviews was repeated for three days at the beginning of the research at each plant, with a total of 4 groups per day. In this way, 72 workers were involved in Camaçari and Alagoas, and 40 workers in São Paulo, where the number of workers per group had to be reduced as a function of the size of the plant.

The first day of the interviews I worked with the following groups:

1- Shop floor workers of the same hierarchical level/PVC area

2- Shop floor workers of the same hierarchical level/MVC area

3- Shop floor workers of mixed hierarchical levels/same area

4- Shop floor workers of mixed hierarchical level/mixed areas

On the second day:

1- Engineers and other university graduates without management position

2- Engineers with management position

3- White collar workers without university degrees

4- Mixed white collar workers, randomly assembled

On the third day:

1- Division managers

2- Supervisors and chief operators, on a the shift and administrative time schedule

3- Mixed hierarchical levels with more than twenty years of experience

4- Mixed hierarchical levels with less than two years of experience.

These interviews were aimed at providing an overview of the opinions of the different groups on the quality of the environment, the main problems in the plant, the quality of human relations in the plant, and opinions on the quality programs. The idea of grouping people in the above order was to observe if there was consistency in the views across the hierarchy and areas and to observe if the views were as freely expressed in the mixed groups as they were among colleagues at the same level. I also wanted to observe the main points at which blue and white collar workers views about the company differed or agreed. The idea was also to gather enough information about the company to allow me to draw some hypothesis to enable me to continue the research with clear objectives in mind.

The **fourth** step was the non-participant observation. In the white collar areas, the most direct observation was conducted at the human resources division, where I received a desk in Alagoas and São

Paulo and visited frequently at Camaçari. In the blue collar areas the observation was limited to the operational area. It was selected one group rotating in the shift according to the adequacy of the time schedule to the progress of the research (If I started with a group just before the five-days break they had between one cycle and the next I would have to wait for them to return). In Camaçari I started to rotate with the complete shift pattern of the workers, a system I had to interrupt for private reasons. As I had a 10-month old baby then, I would return home after the night shift at the time the baby was waking up, making it impossible to rest at home. To better suit my schedule I decided to follow one group in the morning and afternoon shift, and then switch to another group when the first one went on to the night shift. In Camaçari I observed the operators for two months, one for the PVC area and another for the VCM area. Much of the observation of the white collar workers and conversations with people in the offices of the holding company and the plant were adjusted according to the breaks and convenience of the observations of the shift workers.

After this, I stayed one month in the operational area in each plant, two weeks in the PVC area and two weeks in the MVC area in Alagoas and 3 weeks in the PVC area of São Paulo. In Alagoas I returned to the night shift, where most of the ghost stories were told and when the operators were alone to run the plant. I chose the strategy of returning to the night shift after a cholera epidemic reached Alagoas state and forced my mother to fly South with my child. Up to then we were living together in an apartment the company had rented for me in Alagoas.

In São Paulo, to better utilize the time, and because the workers of that plant had chosen a shorter shift time with less time intervals between the cycles, I could work with two groups of PVC workers simultaneously. One from 6:00 AM till noon and the other from noon time until 6:00 PM.

While the observations on the shop floor lasted, I was included in the meal planning for the operation and had all my meals together with the operators, which allowed me more time to observe them during their free time. I joined then whenever possible at the club and other activities, met some of the families and was invited to some parties. I also made a point of traveling in the same bus with the operators whenever possible.

Although it is usually not recommended to make notes conspicuously during field work observations, I couldn't help it because the volume of new information was absolutely overwhelming. Except for the break hours, when I could feel the workers would rather having me joining in their rest than working, I took notes in the toilet of the most interesting elements I had observed. I tried not to rely on my memory at all, which I believe was a good thing. After spending a few days in the plants, most of the things that had surprised me at first started to appear normal, and as the involvement with people in the plants proceeded I tended to lose objectivity.

Many times my notes seemed to annoy the workers, who were worried about what I was going to say. I drew two horizontal lines on the top of each page crossed by a few vertical ones in as a code for hierarchical level, area, age, skin color and gender, so that I didn't have to write down sensitive

information about the interviewed people or groups and yet still keep track of the population being researched. Whenever the workers expressed concerned about what was being written I let them read it. After a few times they realized there was nothing that could implicate anyone by their opinion, and started to relax about my jotting. After a few days, the operators started joking that I should buy stocks in a paper company, so that I wouldn't feel bad about wasting so much paper by taking note of the silliest things they did or said. They were especially amused that I took notes on how they sat down, if their shirts were buttoned to the top or not and the contents of their teasing. When I arrived in Alagoas, the workers already knew all about me and my research, not only from the management but also from direct telephone calls with Camaçari, and already knew I liked to take notes, so it didn't cause much anxiety there.

Besides the formal observations in the white collar areas and on the shop floor, I was often invited to go out, especially by the white collar workers and people from the human resources division, with whom I had closer contact. I felt they were trying to make up to me being alone in a new city, and trying to give me company after hours. Besides making the research indescribably nicer, it was also a good way to cross check information and get a larger variety of insights on the issues I was analyzing.

The **fifth** step was a visit to the labor union and interviews with its leaders. Due to time constraints, I could only visit the labor union in Bahia, which represented the Camaçari workers. At the union, I got a completely new interpretation of labor relations with the companies of the complex, and could check the other side of the story that was being told to me at the plant. It certainly helped to compose a more complete picture of the Camaçari situation. At the union, I was informed about the researchers of the Center for Human Resources study of the Federal University of Bahia, which I visited several times, and where I had the opportunity to exchange views and opinions with the researchers of the Center, who had been for years studying the impact of the complex on Bahia state. I had the chance of joining the leader of the union in front of the court building on the day the salary clause of the collective agreement was being judged, and followed the workers and labor union members in their one-hour walk back to the union. I also joined in the celebration, was introduced to many people, and could schedule an interview for later. I told them from the beginning who I was and why I was there. They welcomed me but made it clear that I was not to stay there after the celebration, when the leaders were to discuss the next steps of their strategy. The union leaders were much nicer and more cooperative than I had imagined they would be, given the nature of the bitter relations with the company and their court dispute over payment issues. The leader of the union had studied sociology in college and demonstrated a lot of interest in the research.

The last stage of my own research was completely unplanned but ended up opening my mind to the importance of external constraints on agent's practices, especially time constraints, and opened my mind to the limited understanding the managers had of the effect of their own power over the labor force (and of the vocabulary of the labor union as well). The **last** step, that actually occurred simultaneously with the

others, was the interviews with the managers of other plants in the Camaçari complex and other people involved in the progress of the petrochemical industry in Brazil since its birth. My father, who at that time was one of the directors of the raw material processor at Camaçari complex, constantly redirected my interpretations to take into account a variety of difficulties the managers of the complex were experiencing. At that time, my husband and I decided to rent a house on a beach outside of the city, where the employees of the complex lived. At weekends, when the beaches around the city became too crowded, my parents came to the beach in front of my house. Soon, my father's acquaintances from the complex joined us there on a regular basis, including the chairman of the raw material producer and the president of the union of the companies, the chairman of CPC, who had been an area manager under my father in the raw material processor just before switching to CPC, and many others. The research aroused much interest, and they were all very curious about my findings. We had many long discussion on weekend mornings at the beach, many times continuing during the barbecues at my house. Whenever my conclusions seemed off track, they attempted to redirect my focus according to their views, and were usually ready to provide information and clarify my doubts on the reasons and logic of management decisions. On those occasions, I had countless opportunities to observe their discussion of the issues I brought up in an unusually relaxed and intimate situation. It was on those occasions that I could realize that the pride of the old operators in having 'domesticated' the technology was well shared by the top managers. It was also on those occasions that I learned about the complicated power alliances and the strategies the managers of those companies had to devise to assure their survival, how they related to the foreign partners and how compromised these people were with the progress of the process of nationally independent industrialization. At that time my father had just received an invitation to became the chairman of the synthetic rubber group to which the plant in which the manager of Alagoas plant and my own father started their careers together in the Petrochemical industry belonged. The company was being privatized by the government, so I had a chance of observing part of the process of transformation those industries where undergoing and some of the articulations that these people, originally from PETROBRAS, were creating to allow for their survival. My father and his friends also introduced me to the business and economics literature and taught me about the difficulties of the petrochemicals market. This experience gave me a much broader view of the problems I wanted to understand.

Without having access from the bottom to the top of the hierarchy, I would never have been able to establish the connections presented here. I have no doubt that the circumstances of the research very much favored the collection of the data. After the final report was written, I presented the conclusions to the top manager of each plant, the chairman of the holding company and the directors at a meeting in Camaçari. The chairman of the holding company has allowed me to use the collected data for academic purposes.

The **seventh** data collection strategy, which was very important for some of the conclusions not only upon the observed reality but on the appropriate methodology for the investigation of 'organizational culture' was the questionnaire survey conducted by the consulting company hired by the plant manager. They organized the opinion survey that is mentioned in various parts of the text. I and the assistant for human resources issues of the chairman of the holding company were put to work together with the consulting firm for the construction of the questionnaire. It had a total of 136 questions, organized under the following items: 1) Personal information (employment time, area, whether holding or not management position, formal education, and plant of employment), 2) Performance and opportunities (opinion on promotion criteria, system of evaluation, changes of promotion and etc.), 3) Salary and living standards, 4) Benefits, 5) Work conditions, 6) Safety, 7) Labor relations and personal relationships in the work place, 7) Information and communication, and 8) You and the company (miscellaneous items on opinions about the company). The questionnaire was distributed for the workers to fill at home, against the whishes of the consulting firm, which would have preferred the questionnaire to be filled at the company in the presence of the researchers to guide the workers. The assistant of the chairman was against that idea of forcing participation. The workers were given one week to return the questionnaire. In Camaçari 67% of the employees returned the questionnaire, 84% of the employees at Alagoas and 94% of the employees at São Paulo did the same. A copy of the results was given to me.

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[1] The data utilized here was gathered in a research conducted as a consulting job for the chief executive officer of a holding company of the petrochemical sector in Brazil. The holding is composed of 3 factories, the headquarter and a separated marketing department. Inspired by the readings of Edgar Schein and by the success of Japanese human resource management strategies, the CEO of this company decided to hire an anthropologist in an attempt to understand better the differences observed among the plants.

[2] The differences in attitudes and motivation among the plants were first observed by the variation in the percentage of participation of workers of each plant in the quality, safety and suggestion programs, as well as in the concrete results of each plant in terms of quality and productivity. We tried to understand more about the causes of this variation through a questionnaire research covering various aspects of the life in the company. 67% of the workers of the first plant returned the questionnaire (this plant had 445 workers, and the worst marks in terms of accidents and sabotage). 84% of the workers of the second plant (also with problems but not as generalized as in the first one) and 94% of the workers of the third plant (with 174 workers) returned theirs. The very rate of return of the questionnaire served as an indication of the willingness to cooperate with the company's projects. The questionnaire, though, proved to be an inadequate method of investigation for the problems we were trying to access, the research proceeded for 7 months of non-participant observation and open interviews.

[3] There are very good works on this theme, such as KUNDA, Gideon. Engineering Culture. Control and Commitment in a High-Tech Corporation. Temple University Press, Philadelphia, 1992. OFFE, Claus. Beyond Employment: Time, Work and Informal Economy. Polite Press, Cambridge, 1992 CASEY, Catherine. Work, Self and Society after Industrialism Routledge, London, 1995 and KONDO. Dorinne K. Crafting Selves, Power Gender and Discourse of Identity in a Japanese Workplace. Chicago, University of Chicago Press, 1990. There are, though, many relations that still need to be established so that we can understand better the development of adult personality and the consequences of certain work experiences under a given power system.

[4] There are reasons to believe the new forms of organizing and managing production and its impact on the labor force occurs with peculiar features in the developing nation. First because on the leading countries in this process, the "cooking time" of these transformations are longer and they are, somehow, native inventions. When these same elements are introduced in developing

nations they are usually urged as imperative modernizing strategies, to be assimilated as fast as possible. Besides, there are different cultural features that must be taken into account. For example, DaMATTA, R. (Carnavais, Malandros e Heróis. Para uma sociologia do dilema brasileiro. Rio de Janeiro, Rocco, 1997) notes that in Brazil, the notions of individual as an unit through which runs an axis of moral responsibility is not a central cultural category, being the notion of person, defined in terms of social relations, the predominant category. Barbosa L. (Meritocracia à Brasileira: O que é desempenho no Brasil? RSP,Ano 47, V.120, N. 3 Set.Dez-1996.) points out that the centrality of the category of person is not of small consequences for the culture of the organizations. The imported human resources management strategies (specially from the USA), based on clear categories of merit and competence developed upon the presupposition that there is always a responsible individual to be evaluated, conflict with the native notion that performance is always secondary and depending on surrounding circumstances, and the belief that the group must always recognize that if the individual does not perform, he/she might not do so for reasons external to his/hers own will. Self-reliance is not a primary cultural category, and consequently the understanding of merit and competence is not the same as in the USA. The reward system, for example, quite often imported along with other management techniques, are reinterpreted in the Brazilian factories producing very dissimilar results.

[5] Partly due to the large geographical distance among the plants and partly due to the faith in the functioning of bureaucracy as an efficient mean to organize people, the human resource management of each plant was, for years, almost totally delegated to the top manager of each factory.

[6] For example: DRUCKER, Peter. Managing in a Time of Great Change. & Post-Capitalist Society, New York: Haper/Collins, 1993, GARVIN, David. Managing Quality: The strategic and Competitive Edge, Free Press, New York, 1988), KANTER, Rosabeth M. The Change Masters. Innovation & Entrepreneurship in the American Corporation. Touchstone Book, Simon & Schuster, New York, 1983 & When Giants Learn to Dance: Mastering the Challenge of Strategy, Management and Careers in the 1990s. Simon and Schuster, New York, 1989, SCHEIN, E.H. Organizational Culture and Leadership. Jossey Bass, San Francisco, 1985, KUNDA, 1992, ARGYRIS, Chris. Personality and Organization. The Conflict Between System and the Individual. New York: Harper & Row, 1975.& The CEO's Behavior: Key to Organizational Development. Harvard Business Review, March-April 1973, nº 73202, HAMMER & CHAMPY, Reengineering the Corporation, A Manifesto for Business Revolution, Harper Collins Publishers, 1993, MARSICK, V. & K. Watkins. Informal and Incidental Learning in the Workplace. Routledge, New York, 1990, among others.

[7] BLAUNER, Robert. Alienation and Freedom. The Factory Worker and his Industry. The University of Chicago Press, 1964.KOHN, Melvin & C. Schooler. Occupational Experience and Psychological Functioning: An assessment of Reciprocal Effects. American Sociological Review 1973, v. 38 (February):97-118. FROMM, Erich. Marx's Concept of Man. With a Translation from Marx's Economic and Philosophical Manuscripts. 1961.WEBER, Max. The Protestant Ethic and the Spirit of Capitalism. New York: Charles Scribner Sons, (1930) 1958.

[8] The concept of alienation is employed here in an attempt to rescue its original implications in the humanist philosophy, especially on the writings of Hegel and Marx, in which it appears in the context of a theory of knowledge that addresses the process of development of human personality through participation in society. I recognize, though, that the utilization of the concept of alienation presents considerable difficulties in terms of logic if we depart from the concept of self as a "fixed entity" (as it appears in the humanist philosophy) and try to apply it to a fluid understanding of the self as the locus of one's subjective experience (where affect and reason are experienced and the capacity to act beheld, Casey, 1995) - an experience that is deeply entangled in the social production of identity.

It is important to call attention here to the fact that the possibility of having motivated workers does not imply in the idea of dealienation, as it appears in the texts of Hegel and Marx (different in regard to so many other issues). The motivated participation of workers in the company would mean, according to those theories, an alienation in relation to themselves. It could be seen as living a simulacro, finding satisfaction and pleasure in living a reality organized through an ideological discourse that masks the arbitrarity upon which it is constructed.

[9] Bourdieu, P. "The conditionings associated with a particular class of conditions of existence produce the *habitus*, system of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles which generate and organize practices and representations that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends or an express mastery of the operations necessary in order to attain them. Objectively orchestrated without being the product of the organizing action of a conductor". The logic of Practice, 1991, p.52-65.

[10] See Bourdieu, 1977. P.87.

[11] See Douglas, Mary. Purity and Danger. An Analysis of Concepts of Pollution and Taboo. Frederick A. Praeger Publishers, New York, 1986.

[12] See Drucker,1993, Op.Cit.

[13] Schein, 1985.

[14] It is important to call attention here to the fact that this conclusion is related to the observed empirical reality and may not be possible to generalize to other contexts. Practical knowledge has been, historically, valued in Japan, for example, where practical expertise and bodily experience (*taiken*) are understood as fundamental to the mastery of arts, crafts and productive processes in general. In contrast, in Brazil, the process of physical transformation of raw materials has been historically perceived as a minor/inferior task if compared to 'intellectual' activities. Barbosa 1996, points out that manual work in Brazil is not perceived now as an inferior activity because it was historically carried out by slaves, but that it was historically carried out by slaves because it was perceived as inferior. This socially perceived inferiority of the manual work robs the social status and recognition of those who practice it.

[15] Doxa is the term Bourdieu utilizes to refer to the type of perception of the social world in which it appears as natural and self-evident. It is based on a quasi-perfect correspondence between the objective order and the subjective principles of organization of the social world (systems of classification). Bourdieu, 1977, p. 164.

[16] Schein clearly recognizes the centrality of the role of the leader and the founder in the creation of an organizational culture, but this centrality is very much taken-for-granted, and there is no systematic attempt to understand the means by which the leadership works in the way he himself says it does.

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Managing In The Dark

The present book is fruit of an effort to think, empirically and theoretically, on the question of the relation between authority, and the exercise of power by those in the management position, and the motivation for the workers to produce - That is, how an "organizational culture" is created and how it affects those who participate in it. It emerged from the need to explain why, and how, the workers of three studied factories (which belong to the same holding company, and produce similar products in the same market), had clearly different degrees of motivation to produce, and exhibited different attitudes towards the quality programs they needed to implement. This type of study is of significance because although there is a clear transformation in the nature of the industrial work - and a growing interest in the possibilities of the "design cultures", - there are relatively few efforts to analyze this trend with a detailed empirical data and firm theoretical ground. Before we can point to the effects organizational culture produces or before we can ascribe to it an external function as that of justifying an arbitrary social order, it is necessary to understand better the mechanisms of the symbolic production that makes the representations it creates appear as a reality to those who participate in it, thus endowing it with the efficacy we can observe.

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