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A F R I C A N S T U D I E S I N S T I T U T E

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Title: Skills, Control, and 'Careers at Work': Possibilities for Participatory Management in the South African Motor Industry.

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INTRODUCTION

Much of the writing on the South African motor industry assumes that the coming of the multinational automobile company brought with it the transplantation of the repertoire of production techniques developed under the rubric of Fordism. Whether inspired by Taylorist assumptions about scientific management or Braverman-inspired criticisms of the degradation of work, there is general agreement in the literature on the generally low levels of skill, high levels of monotony, and general dehumanisation associated with work in the auto plants. While most analysts pay close attention to the low-volume character of the local industry when discussing the crisis of high-cost production in a saturated market, no one has investigated the obvious point that low-volumes should have a dramatic impact on the nature of work itself.

This paper departs from the conventional view of the labour process in the motor industry, and argues that analysis until now has failed to come to grips with the complexity of work in the industry. Indeed, rather than viewing the industry as one dominated by deskilling and dehumanisation driven by rapid mechanisation, the perspective developed here is that jobs require far greater thought and direct physical control over execution than is allowed for in the Fordist model. Workers not only perform more complicated tasks than similar workers in the United States and Europe, but are invariably able to perform a very wide range of jobs as well. Workers are not reduced to mere appendages of machines controlled ultimately by supervision or production engineers in time and motion departments. Rather, an elaborate system has developed in South African automobile plants where workers develop a wide range of skills, which may be described as "allrounder" status. Instead of seeing workers as possessing few or no skills, this paper makes use of the concept "tacit skills" to argue that automobile workers possess a wide array of carefully developed abilities.

Workers' problems in the industry grow less out of the conventional grievances identified in the Fordist approach - monotony and degradation - than out of a deeply felt injustice at the heart of the system of job grading, reward, and promotion. The formal job grading system bears little similarity to the actual tasks workers perform, failing in the main to recognise their tacit skills and allrounder status. Nor is there any comfortable fit between jobs and level of education. Thus, while workers' knowledge on the job - their skills - are crucial ingredients in the company's success, workers themselves remain largely unrecognised and generally unrewarded for their contribution. As a result, workers develop a sense of deep frustration in their working lives, leading to profound demotivation, with little sense of a future. These attitudes are important products of the labour process, and have extremely serious implications for productivity in the industry.

The technical division of labour is not the source of these problems; rather they grow out of an informal personalistic system of control dominated by white foremen, which has two distinct tap roots. Supervisorial domination was *the* mode of control in the factories from their inception in the 1920s through to the 1960s when trade unions and industrial relations departments usurped many of the functions of foremen. Supervisors' continuing control over promotion is a legacy of this system, though in a

covert form adapted to the modern system of labour relations. The second root lies in the historical practices of job reservation in which whites protected their own positions while controlling the pace and form of entry of blacks into the factory through manipulation of definitions of skill and job categories.

Supervisors' informal practices around promotion make use of the dominant modes of these two historical traditions: first, the importance of personalistic ties of patronage to particular foreman, and second, a deep-seated racism which privileges whites. Thus, despite the transfer to the industrial relations system (labour relations, trade unions, and the Industrial Council) of powers of hiring and firing, wage increases, and discipline, in actual practice, foremen maintain great, though hidden powers which allow them to subvert the formal promotion system seemingly monopolized by labour relations.

By admitting the existence of tacit skills amongst automobile workers, this paper hopes to lay bare an extremely important area of conflict in the factories. At the same time, however, it also aims to expose an extremely valuable asset workers possess. Their depth of skills has afforded management with a very rare flexibility in deploying manpower, a priceless ability to rotate workers as the volume of work or absenteeism demands. Such capacity - virtually unremarked in the literature - is one which has been very carefully cultivated by automobile companies in Japan, one universally viewed as central to their success in cutting production costs.[1] Japanese producers have similarly viewed workers' job knowledge as a resource to be cultivated in the quest for improved productivity; indeed, managements bestow upon such workers higher status, better wages, and greater job security. The view that South African automobile workers are essentially cheap, relatively unskilled labour denies them their dignity and obliterates abilities they have struggled to develop. But, more importantly, the view also ignores a crucial factor which makes production possible at all. If developed and rewarded, workers tacit skills could play an extremely important role in efforts to improve productivity in the industry.

Thus far, however, these grievances associated with skills and promotion have not resulted in worker action. In most cases the informal system is taken as an inevitable fact of life, impervious to change. Some companies - perhaps with eyes open to the true material basis of production in their plants - are already attempting to build systems of workplace participation, especially schemes involving workers in fault-finding and redesign of jobs.

But such objective conditions may also serve to promote an intervention by the labour movement into the organization of production. In other countries trade unions have won effective control over precisely such processes, greatly expanding worker control in production. Perhaps the conditions described in this paper could serve as the basis for unions to colonise the internal labour markets of firms, and gain control over crucial elements of the labour process. In so doing, they might place themselves in a powerful position to influence the development of the industry, while at the same time providing their members with substantial rewards.

PART I. SKILLS, CONTROL, AND CAREERS AT WORK

Issues of skill and control are closely linked concerns in any labour process. Workers' possession of skill, their knowledge of the job, confers on them some measure of control over production. This control obviously becomes a problem under systems of private ownership in which the workers are not themselves the owners of the means of production. How can a private employer ensure that his goals will be met in the time, and at the quality, and cost desired?

Frederick Winslow Taylor understood that workers' possession of skills stood behind the process known as *soldiering*, workers' conscious efforts to restrict output to protect their earnings and conditions of work.[2] It was in workers' self-interest for owners to remain ignorant of how fast work could actually be done, to preserve their own estimate of the value of their work. Taylor's famous management principles aimed to overcome soldiering by systematically gathering the knowledge of workers, separating conception from execution of work by transferring "brain work" from workers to management, and by formulating precise instructions for each worker which define the tasks to be done, the procedures to be followed, and the time allowed. These principles were meant not simply to routinise work, but, more importantly, to transform power relations fundamentally by transferring skills - and therefore the control over production - from workers to management.

Taylor's innovations coincided with the experiments by American automobile producers at the turn of the century which would have even more dramatic affects on workers' skills and control over production. These experiments transformed an industry based on specialised production by artisans of small batches of expensive units into the quintessential mass production industry. Henry Ford's manufacturing breakthrough was the culmination of advances from a range of mass-production industries. He combined innovations in fabrication techniques and materials from the metal working industry with a simple, well-designed car adaptable to a multitude of driving conditions and markets.[3] But Ford's major breakthrough was to integrate those advances with experiments in two separate areas of production to form the continuous production system.

The first was to master advances in new machinery and transport mechanisms to facilitate the continuous flow of materials in assembly. Ford's engineers developed a myriad of single-use machines fed by unskilled workers to perform simple, precise, and rapid operations. These machines were meant to eliminate all hand work from the machining of parts, thereby removing any imprecision in manufacture. and were were arranged in the exact sequence of manufacturing operations from the first sub-assemblies through to the final product. Experiments in transport mechanisms linked these machines together; gravity slides and conveyors moved the job between each worker while providing a ready supply of components when and where they were needed.

Ford combined these innovations in production organisation with Taylor's "scientific management" techniques for dividing skills and routinizing work.[4] The modern assembly line led to rapid deskilling and fragmentation of work, which permitted greatly

increasing efficiency and accuracy of production while vastly reducing the dependence on skilled labour and workers' ability to resist the intensified pace of work.[5]

The image of assembly work as fundamentally low skilled activity derives from these interlinked legacies of Taylor and Ford. Oddly enough, their descriptions parallel the Marxist tradition which emphasises the increasing deskilling and growing alienation of workers as an inevitable consequence of the growth of capitalism.[6] Managers are portrayed as omnipotent, and their best-case plans are taken as reality, while workers' own roles are ignored, particularly their resistance to managerial initiatives.

Jean Leger's recent thesis on South African mining contains a lengthy examination of another approach to workers' skills. In elaborating the concept of tacit skills, Leger argues that the labour process is always a dual process of conflict and cooperation, in which management never gains absolute control over production.[7] In Leger's discussion skill is not seen narrowly as the product of some educational or training programme. Rather, all human activity entails the exercise of some skill. He identifies two important aspects of "tacit skills." First, what are often assumed to be routine tasks may involve conscious and unconscious processes which are learned experientially; they cannot be articulated in formal statements, nor learned through detailed instructions. Such an approach may help to define the skills present in a familiar task like riding a bicycle, or the more specialised tasks associated with "the tricks of the trade." Second, social skills must also be taken seriously as essential components of any labour process: cooperation, trustworthiness, congeniality, and obedience.

These skills are described as "tacit" for the simple reason that they are not formally recognised nor are they rewarded. Powerful groups may have interests in denying their existence, while those in possession of such skills may be powerless to articulate their interests. Rather than seeing skills as some objective datum, Leger prefers to view them as social constructs. The social construction of skill results from social processes which involve power relations between individuals and groups in which certain occupations are defined as skilled or unskilled.[8]

This approach does not hold that all skills are equal, rather that the common tripartite distinction between skilled, semi-skilled, and unskilled "grossly underrate[s] the working knowledge required and the skills exercised in these occupations....there is no such thing as unskilled work and...the term is humiliating to the workers so labelled."[9] Craftsmen learn their skills through apprenticeship programs, and through on-the-job experience where they master the art of applying abstract principles to specific problems. Their skills are general, and may be applied in diverse situations. Their skills are formally recognised and accredited. They carry their skills with them.

Tacit skills, however, usually take the form of "plant specific" skills, in which workers acquire a store of very detailed knowledge of the particular processes in their factory or industry. These skills are seldom developed in formal training programs, but can only be learned on the job through watching other workers or through informal education conducted by factory elders. The fact that workers are taught "by doing," rather than in formal training is not an index of the lack of skills associated with the

work, or of the value of the skills to overall production, but of the particular kinds of skills.

Such skills may be especially well-developed in older factories where machines "develop quirks that only their operators can anticipate and control."[10] They may not be recognised in any formal sense, but they are essential to the smooth operation of the plant; they therefore also possess power to disrupt production. At the same time, workers with plant-specific skills are extremely vulnerable to plant closure or relocation: they cannot transfer their accumulated experience into a certificate which allows them to compete for another job. They may come to share with management a commitment to maintaining the long-term viability of their enterprise. Leger's approach indicates the importance of seeing the labour process as an affair in which workers are more than pawns in management's schemes. If workers are active participants in production, their positions are in part the result of their own actions and designs.

The American sociologist Charles Sabel has produced a concept which helps to capture workers' own involvement in production. The "career" refers to the series of tasks a person chooses "that successively challenge and require the development of whatever powers one takes as the measure of human worth." Different work groups have different ideas of success; "they differ about which powers define dignity, which jobs count as disgraces and which as accomplishments..."[11] Sabel asserts that the worker's world can be understood as a whole, in which a range of experiences and ambitions "combine according to stylistic canons that the worker recognizes as his own." Insofar as these canons shape a worker's responses to events, his behavior cannot be understood without taking them into account.

Taken together, the two concepts of tacit skills and careers at work will help to provide a different understanding of the labour process in assembly line work in South Africa, and simultaneously, to grasp the deep frustration workers encounter when their skills go unrecognized and unrewarded and their career aspirations unfulfilled.

PART II. THE FORDIST FALLACY AND THE SOUTH AFRICAN AUTOMOBILE INDUSTRY

The South African industry dates from 1924, when Ford opened an assembly plant in Port Elizabeth. General Motors followed its American competitor to Port Elizabeth in 1926, and the two companies dominated the industry until the post-war period when European competitors entered the South African market.[12] In the 1960s Japanese companies opened plants, and in a decade began to dominate the market. But the decisive transformation in the industry occurred in the early 1960s, when the government passed import-substitution legislation forcing multinationals to source an increasing percentage of their components within South Africa. Previously the industry had been organised on an assembly basis only, relying on parts imported from overseas in a disassembled form.[13]

The program quickly led to the expansion of the industry, as a number of new foreign producers rushed to establish assembly plants. Assemblers could easily meet the first stage of local content through inclusion of components already produced in South Africa. Subsequent stages, however, would be impossible to meet without further investment in manufacturing operations by the assembly firms and components suppliers.[14]

The 1960s expansion had a dramatic impact on employment. Overall employment grew by 437%, increasing from 8,918 in 1961 to 39,011 in 1975, an annual rate of just over 29%. As significant as the overall increase, however, was the change in the racial composition. Where whites accounted for just over half the workforce in 1961 (52.1%), coloureds 27.6%, and Africans 20.3%, the figures virtually reversed fifteen years later, with Africans amounting to 44%, whites 34%, and coloureds 22%.[15]

Not only had the automobile industry developed a majority black workforce, but blacks were increasingly clustered in the main semi-skilled occupations at the heart of the assembly and manufacturing operations. The changing size of the workforce, racial composition, and the advance of blacks to higher skill levels should not obscure an important qualitative change in the character of employment. These workers were no longer employed solely in assembly work, but in a wide range of occupations within the new manufacturing facilities in each plant. Whole new workforces were needed at those firms opening up engine plants and press shops, with skills never before required in the assembly industry: skilled workers such as tool and die makers, machinists, and electricians; semi-skilled die setters, sheet metal workers, motor mechanics; a whole range of semi-skilled operators of lathes, drill presses, grinding machines, and presses; and new categories of quality control technicians to monitor the manufacturing output.

The government's reluctance to intervene to limit the market meant that growth was characterized by extreme fragmentation. Virtually every MNC automobile producer entered, and soon South Africa reproduced in miniature the competitive dynamics of the international market.[16] Car companies competed through the demand-side practices of product differentiation used in the European and American markets, resulting in the proliferation of models and variants, fragmenting still further the already competitive market. The latest models were provided, promising frequent turnover and high retooling costs, and the motor firms were routinely the most prolific advertisers among South African corporations.

What possibilities as may have existed for internal economies of scale were lost, and the companies resorted to battles for the relatively well-off, upper segment of the market, which meant white consumers, corporate fleet purchasers, and the government. These conditions had a dramatic impact on the labor process, placing a premium on appearance - which rendered the system sensitive to sabotage and other forms of resistance - and the multiplication of models created high job content for workers required to assemble a number of different models and variants on the same line.

The transition to manufacturing had a dramatic on the nature of the labour process in the industry. Yet, the available accounts have often misunderstood the character of work in the automobile plants, as the studies have been based on a logical fallacy, that firms could be treated as a black box in which the internal labour processes could simply be deduced from the conditions of mass production in the home country.[17] This is particularly true in the structuralist Marxist tradition of analysis of South African industrialisation. In this approach, the motor plants have been singled out as pioneers in the transition from manufacture to machinofacture in South Africa, the latter being a profound change in relations of production in which handicraft processes are replaced by machines tended by semi-skilled operatives, marking the "real subsumption" of labor to capital.

Rob Davies has applied such a perspective in explaining the origins of the "civilised labour policy" of the Pact Government. General Motors, according to Davies, was "perhaps the most mechanised single plant in South Africa during the Pact period," and it was in the company's interest to employ relatively well-paid whites, because they had internalised appropriate capitalist virtues which suited them to such mechanised work."[18] Leaving aside theoretical criticisms of the concepts machinofacture and subsumption, the depiction of the labor process and workforce at both GM and Ford is entirely inaccurate for the years 1924 to World War Two. The first automated assembly lines were installed only in 1948, and it is impossible to accept Davies' claims about machinofacture prior to that date. To compound the problem, the period when more recognizably "Fordist" techniques were adopted - from the 1950s onward - coincides with the erosion, rather than the strengthening of the white monopoly on employment.

Yet, even more sober and empirically attentive analysts fall victim to the deductive fallacy. Roger Southall's otherwise excellent assessment of the rise of unions in the automobile industry nonetheless attempts to read off the South African labour process from Robert Blauner's analysis of alienation and the assembly line in the United States.[19] Similarly, the work of researchers at the University of Port Elizabeth, under the direction of the industrial psychologist Roux van der Merwe, evaluated the skill levels of jobs in nine manufacturing sectors in Port Elizabeth, including the motor industry. They too, appear to take the division of labour at face value in their assessment of workers' jobs, and conclude that median job complexity for auto workers was below the average for all the sectors analysed in the survey.[20] The same study was uncritically drawn upon in an otherwise superb study by Jan Roux who concludes that auto workers have low skill levels, and have been "stripped of any form of control, both over the ordering of tasks, and over the speed at which they had to be executed."[21]

The shortcoming of each of these presentations is that in decontextualising their studies of the labour process, they ignore a crucial feature of the South African industry: it's low volume character. It is rather surprising that such an obvious feature of the industry is not taken into account. Most of the same authors readily admit the effect low volumes have on profitability: producers are forced to spread their investments over a limited output; economies of scale are impossible, unit costs are

high, and producers are thereby forced into raising prices in a highly competitive market. High prices further restrict demand, and so the vicious cycle begins again.

However it is posited here that these same conditions have a decisive impact on the labour process, which fundamentally differentiates South African production from the processes in metropolitan countries.[22] First, the level of output from any South African plant is but a fraction of the output from a plant in the industrialised countries. In addition, South African producers, oriented as they are to the white market and with no hope of economies of scale, do not compete by cutting prices, but by differentiating their product through a range of makes and models, offering a wide array of options.

Workers on the line therefore operate in a very different environment to workers in the United States, Europe, or Japan. An assembly line in such plants may be producing as many vehicles in an hour as a South African line produces in a day; workers on the line have far less time to perform their tasks, and are of necessity given fewer tasks to perform. According to a retired Ford (South Africa) Production Director,

> In a North American line you'd probably get 60 [vehicles] an hour, he's probably loaded to about .9 of a minute, he only gets time to put on the front door handle and the rear door handle. Where here a chap is in a plant producing a vehicle every two minutes. So his work load changes quite significantly.

The South African worker may be responsible for a number of operations which in America would be performed by a number of workers.

The proliferation of makes and models complicates the picture. An American plant might be responsible for producing a single make of car, and workers on line would face the same model - with the same operations required - over and over again throughout the day. On a South African line, a worker may encounter a number of different makes, each with an assortment of models (different engine sizes, two door, four door, etc.). The condition means that the South African worker must be able to identify the part appropriate to a particular car. According to the Ford Director,

> See, basically what determines work content is the number of parts you handle. If you take a line in the US plants...you probably find that the basic vehicle has got something in the neighborhood of about 5,000 line items. There might be a couple of thousand or so of options. So the labour is handling possibly between 6,000 and 7,000 line items. A line item count in a plant like Volkswagen or Ford Motor Company here or Toyota will be 17,000 to 18,000....So you've got fewer number of operators assembling those to the product, it stands to reason they are going to have to know more about the product than people at a higher rate of production.

In sharp contrast to the repetitive monotony of overseas assembly lines, in South Africa the greater job content means workers are performing a variety of tasks in a constantly changing order:

> We were building 150 units a day with a mixture....The repetitiveness of work was alarmingly low. As a matter of fact, in many instances operators were only repeating the exact same cycle eight times a day, although they were operating on 150 units a day. Whereas in the states it could be 60 times an hour.

Workers must master the operations necessary to fit the appropriate part in the proper manner within the time allotted, or else he will find himself "drifting out of station," or moving down and interfering with the worker below him on the line. For this to be done successfully, the worker must learn a variety of tacit skills, usually from more experienced colleagues on the line:

> Q: Did you get any help from the other workers?
> A: Yes.
> Q: What did they do?
> A: Sometimes they helped me. Sometimes they showed me the "how to," the art of doing it.
> Q: "The art." What do you mean?
> A: You see, say you fit a tail light, and you are working in a line that is moving. Someone will tell you, "This thing has got four screws. Put the light in and fit the washers, the bolts."

Later the same worker expanded on how he learned the procedures:

> Or maybe, if you do something like as I have been fitting in there, this window winder, you may fiddle in putting it in, not knowing the exact way....Say that the thing is laid this way, you are checking it another way, and sort of holding it on the side, so someone will tell you, "No, put it this way and in." I mean, the art.

But fitting parts to a body on a moving line presents its own difficulties, which the worker must learn to master. Here a worker describes the process of "working up the line," whereby he places the part in a number of vehicles at once, and then fits each one, working back to his starting point:

> Someone will tell you, "Before you do that, take six lights [walk up the line] and put in the different cars and come back with them." You see, the art, the way of doing it is easier for you. More than taking it from [the bin] and putting it in the car. The car is here at that time. Now you left it there...you have to come back [to the bin] again and take a light, and the car is going forward, see. Now by that time you are drifting out of station.

Furthermore, a South African plant will integrate a far wider range of production activities than first world plants. Organizationally, an assembly plant in the United States or Europe will only assembly cars, and will be fed from a separate engine plant and a separate body plant, which may even be located in different regions and in separate divisions of the corporation. In South Africa low volumes mean there are not sufficient economies of scale to warrant the establishment of separate plants. Most companies conduct all or most of these operations under one roof, so that the workforce will contain an extremely wide range of occupations.

Most workers in assembly and basic metalworking operations learned the work from other workers. Rising up the graded job hierarchy, workers in intermediate occupations requiring formal certification, such as metal finishing, acquired their skills in the Volkswagen training centre, or in private study which enabled them to pass national trade tests.[23] Still higher up the hierarchy, Volkswagen trains a wide array of artisans through formal apprenticeships, and a die-setter, two electricians, and a toolmaker were among those interviewed who had acquired their skills through such in-house programs.

Workers lower down in the hierarchy were often indeed performing "simple" tasks, such as fitting components on the assembly line or spot welding in the Body Shop. Nonetheless, many had acquired multiple skills to the point where they claimed the ability to perform all the jobs on their line or in their department. Many had developed such skills through their own initiative, by watching other workers. Some had done so by being temporarily reassigned by the foreman to another job when a worker was absent. One worker explained the source of his "training" as follows:

> I learned these other jobs only by helping other people. Monday, then the man who is doing the job is not here, and then they take somebody from our line and then I must learn how to do his job....The other jobs there, nobody ever taught me how to do them, no, I have just learned them by seeing.

And on the same lines, another worker said:

> I'm only responsible for fitment. Door fitment, bonnet fitment, fender fitment, and tailgate fitment. That's what I'm doing here. I'm fitting the bonnets. If for instance, the guy who is fitting the fenders, he's not at work, I have to do that, as well.

One operator in the Press Shop (at the bottom of the pay grades), reports that he can do the work of the die-setter (at the top of the grades):

> A: If the setter is not there, I handle it,I can control the department, because the foreman is coming to ask us, "Do you know this part?" I say, "Yes." "How do you do this part?" I say, "All right, I show you how to set this machine for that part. How to make it right."
> Q: How did you learn that?

A: Since I have a long time doing that job, no one has ever learned me how to do it, but I only see, on this job now, they did like this, they did like this.
Q: Did that foreman that you described, did he show you those things?
A: No, he didn't show me. He only worked in front of me. I am just keeping an eye when they are working.

These allrounder skills possessed by line operators provide management with an extremely valuable asset: workers can be rotated to different posts as the volume of work or absenteeism demands. There is no expensive retraining required, and no interference from cumbersome work-rules, as stipulated in union contracts in the United States or Britain. Such manpower flexibility certainly enables management to cut costs, by relieving it of the need to retain temporary workers or a larger-than-necessary staff.

From the workers' point of view however, such allrounder status does not prove to be such an asset. While it is possible to achieve a formal allrounder status, known as utility man, and to jump a pay grade as a result, many workers claimed to possess these skills without being recognized. Not only don't they receive a full grade increase as a result of their skills, but in fact they are frustrated that they often perform the work of higher graded workers, without receiving even a temporary increase. One worker commented as follows:

Well, I'm easy to go there, but some other, they have a question. "Why must I go and do that job? That is Grade 5 and I'm Grade 2, and I'm not supposed to be there. I'm supposed to help the same grade as I."

Another worker stressed the same theme:

They promise such things. Once they say, "If there are more than about five jobs in the same line, they will give you something. But they ask how many jobs you know, you know seven jobs, eight jobs, then you get nothing. Now the only thing they ask, as far as I am concerned, is when there is anybody who is absent, they just check on that note that somebody can do that job,and they take you and put you there. You do different type of jobs during the week, although you get nothing for that.

Despite developing multiple skills, and in some cases, certificated skills, workers were divided on the marketability of their abilities. Those who had obtained nationally recognised qualifications felt secure in their ability to find work elsewhere, and felt they had learned skills at Volkswagen which would be of use to them in the future. At the other extremes, some workers who had not obtained formal or informal allrounder status felt they had attained very little. A Press Shop operator complained, "No, no, no, no, you just take your small child and come and operate this." Another, who installed the electrical harnesses in the vehicles, complained that he did not know other operations in the car, and described his job as "an empty bucket, it's not enough information." Yet others, especially allrounders in the

assembly lines, and especially metal finishers and painters felt that their skills could provide them with a livelihood in the township, repairing cars. Whether or not management formally recognises such workers as possessing skills, a majority of those interviewed felt they had acquired abilities which would be of use to them in the future.

PART III: THE RISE OF INDUSTRIAL RELATIONS

Prior to the 1970s, foremen possessed vast discretionary powers, including the power to grant incremental wage increases for workers.[24] But the foreman's disciplinary arsenal did not end with wage setting. He also enjoyed the ultimate discretionary authority: the power to hire and fire. The contractual basis for hourly-rated production workers was the so-called "hourly basis," which meant simply that they could be fired on an hour's notice. There were no formal procedures for appeal.

One retired General Foreman from Ford described the dismissal process in the following way:

> A: A fellow will come to you in the morning and I'll say, "Well, George, where were you yesterday? Where were you the day before?"....Now just about two or three days after that, he's out of work again. Well he says, "My wife is not well. She's just had a baby"....There's a weak link. That fellow, you've got to get rid of. Get rid of him straight away, because he's upsetting these fellows around this area. You see, when you're working with a team of people, and you've got one bad egg, there's encouragement somewhere....So you've got to tie that down. And the only way to tie that down is to get rid of him.
> Q: And the decision making would be entirely up to the foreman?
> A: Up to the foreman, yes.
> Q: And if he had a dispute, would there be anywhere for him to go?
> A: No, no, no, you just give it to him. You know, you just get your General Foreman, you superintendent, and you tell him, "Okay, I fired this fellow and this is the reason why." And then I'll just take in another man.

Ollie Rademeyer, former Industrial Relations Director for Volkswagen reinforced the story by relating an anecdote from General Motors:

> You've probably heard it. The biggest optimist in the work force is the guy who brought his sandwiches to work, because he had no assurance that he'd still be there at lunch time.

A Volkswagen worker relates the same view from the receiving end:

> Ag! We sort of were ill-treated by the white people here. Just like if, say, you are a foreman in my department, if you don't like me, you have to just chase me very, very easily away, drive me away, out of the

> factory....The guy who was responsible for that section used to say, "Well, I don't like this man. He must go." And then he go, whether he likes it or not.

These most blatant supervisorial abuses began to be curtailed in the 1960s, when a union began organising white workers. At first the firms replied as they always had, with an iron fist. They had successfully resisted "interference" from unionising drives for over 30 years "with typical American methods," according to W.G. Ballinger, one of many who had attempted organise workers. "In effect, he wrote, "this means that attempts to organise the workers breaks on the rocks of victimisation."[25]

In the 1960s, however, white workers used political channels and made a successful appeal to the government for protection. The Minister of Labour launched an Industrial Tribunal investigation of the industry for "unfair labour competition" between whites and blacks, which resulted in Job Reservation Determination No. 16 of 1964. In essence, all jobs then occupied by whites were permanently reserved for whites; in addition, a number of restrictions were placed on the sorts of jobs blacks could occupy. For example, no black person could be employed welding jobs outside of a jig. The Determination would have been disastrous for the companies - if it were enforced - but the government offered exemptions from the regulation. As Rademeyer relates:

> So we then entered the period of the glorious exemptions. I've never in my life seen such a farce as that thing....Many jobs that could have been performed...by whites because they were out of jigs, we put into jigs. I mean, a jig is a jig. You can take a job that really can be easily performed outside of a jig and just build an angle-iron frame around it and say, "that is a jig. It can now be performed by a non-white"....if there was a difficult job where they couldn't get whites and they had non-whites, they'd just put a jig around it....Then [the government inspectors] would say, "Yes, but it wasn't done in a jig before." We'd say, "Ja, but you see this model, the 1962, is more technical."

But the determination achieved its aim: to restrict the companies' ability to introduction black workers into the factory. In essence, no black could be employed if there were whites available to perform the work. Rademeyer is quite explicit about the bind the companies were in:

> The companies played the game to a certain extent in that any genuine white worker who presented himself at your gate and he hadn't been to prison for six or seven months in the last two years, you said, "Okay, give him a try. He's white." Any bloke they referred to you, "Give him a try." So that you didn't actively kick whites out.

Job Reservation would have a long-term impact on the company. More than ten years after implementation of the policy, an audit of the application of the "Sullivan Principles" at Ford discovered that 45% of white workers interviewed did not have Standard 8, though all were employed in the highest wage grades; none had entered

the company below the middle grades. For black workers, on the other hand, a Standard 8 certificate was a necessary qualification for advancement to the higher grades, and very few were employed there.[26] Indeed, more than twenty years after implementation of the determination, black workers were still complaining about the incompetence and lack of qualifications of white workers and supervisors who were nonetheless senior to them.

In essence the companies exchanged recognition of the white union for exemptions on job reservation, and in 1969 an Industrial Council was established for the industry. A union for coloured workers began organising in 1967, and was admitted to the IC in 1971, and it soon began organising among African workers in the Eastern Cape plants.

The development of unions is paralleled by the growth in the industrial relations bureaucracy at each of the companies. Formerly personnel and human resources departments had been extremely minor divisions of each firm, handling pensions, benefits, and the security guards, but from the late 1960s they became rapidly developing power centres. The staff expanded along with the general growth in employment, but also to keep pace with new functions, especially those related to regulating labour relations on the shop floor. Functions which were once the preserve of foremen were transferred to the new bureaucracy, and subjected to formal rules and procedures. The former Industrial Relations Manager at Ford commented:

> We've taken it away from the [foreman] for the sake of good labour relationships. I mean for no other damn reason....To ensure that if you get two people breaking the same rule,that the punishment is going to be the same, given the same circumstances.

The former Production Director at Ford echoed the same view:

> I'm fully of the opinion that a lot of the need for a union was as a result of foreman malpractice....It was just a case of saying to the foreman: "Look, you follow this set of rules so that anything that you do with your labour is consistent with what other foremen are doing."

Hiring and firing was now formally performed by Labour Relations, while wage rates were the subject of negotiations between employers and unions in the Industrial Council. Discipline, though meted out by line supervision, was increasingly subjected to review and appeal through company-union grievance procedures, conducted between shop stewards, labour relations officers, and foremen. In short, the formal discretionary power of foremen was substantially reduced by the development of the internal and Industrial Council industrial relations system.

One foreman in the Volkswagen Body Shop, a particularly tough, big, barrel-chested man, recalled the time when supervisors wielded such power:

> Those were nice days! When we had control of the [pay] increments, we had control over the workers. You can kill his wife or his children,

> but don't take his money away. Now there's no incentive for workers to work harder.
>
> In the late '60s, early '70s, if you don't like a guy's face you could fire him....Now you've got to get your facts straight.

The former Industrial Relations Manager at Ford substantiated the view:

> [The foreman] could no longer give an employee a *kicker*. He's got to check with somebody else before he could *kicker* an employee. Do you know what a *kicker* is? A kick in the ass!

Indeed, the institution of a regularised, rule-bound industrial relations system is one of the factors most often quoted by workers at Volkswagen in accounting for what they most like about the company. They are protected in a variety of ways by the union, particularly from unfair dismissal and victimisation by supervision. One Volkswagen worker eloquently summed up the change:

> We used to say, "If the master say or do that, you used to go and run to do that without questioning why." But now we've got *why* now. They don't like that *why*....I mean, because we used to go and do whatsoever. If he said, "Go there and do that and whatsoever," now we haven't got the right, before '80 to ask him, "Why?" He must explain *why* he send me there, because I'm working here.

Maller's recent research on Volkswagen uncovered the same response. When asked why they joined the union, over 80% of black workers cited the need to defend workers' rights, including protections against arbitrary discipline or dismissal.[27]

PART IV. INFORMAL AUTHORITY: THE FOREMAN'S REVENGE?

Despite the development of formal systems for regulating work noted above, foremen nonetheless continue to possess extremely important power over the most basic factory processes, especially promotion. It is asserted by virtually all the interviewees that foremen continue to posses power over wage increments made in the time between across-the-board increases mandated by the Industrial Council. Workers, especially those in higher grades, claim these increments account for a none-too-frequent difference of fifty cents or one rand in hourly pay rates between white and black workers performing the same tasks. In addition, foremen seem to retain considerable power over the distribution of overtime work, which interviewees claim is parcelled out on a racial basis. During periods of short time such unequal treatment can have a very immediate effect on workers' pay packets.

Within the official system, job grading and promotion are subject to the strict controls of the labour relations system. According to the formal system, job vacancies are to be filled by the Personnel Department after notification of any vacancies by supervision. The Personnel Department advertises posts on in-company bulletin

boards, conducts examinations of applicants, and selects appropriate candidates based on the results of the examination.

In practice, however, the system almost never worked in the formally described manner. Instead, virtually all workers interviewed described an informal system in which foremen still wield ultimate control over who gets promoted. When asked to describe the procedures relating to promotion, only one worker said that the actual system in fact corresponds to the formal rules. Those who responded to the question (18 workers) claimed the real promotion procedure operated through favoritism on the part of foremen, racism, or identified a complete mismatch between education and promotion. Many expressed indignation at the promotion of less qualified whites ahead of higher qualified blacks.

> Well, say, for instance, there's a job open for an Assistant Foreman. What they will do, if there is a white guy they know that would also be in a position for that job, and myself also make application for that job, they prefer that white guy to go into that job before they consider me. And, in a lot of things, you will find that they will mostly push the white guy to go into certain jobs before they push any black guys into that job.

Another worker commented:

> How do you like...being taken to be an operator in the lines here, while the very supervisor, or the superintendent, or even your manager is less educated than yourself? How would you like that? That's something wrong, man. That's something wrong, really.

And another:

> We did sit last time with a foreman that can't even make out a time sheet. He asked somebody from the people working under him to do his time sheets. I mean that's unfair, in my opinion.

Racism was one frequently stated complaint, but others complained equally bitterly about favoritism, in which foremen promote workers - African or coloured - who are tied to them. One worker commented that promotion is not a case of what you know, but of "Who do you know?" The informal procedure is to approach one's foreman to ask for promotion. The system seems to be wired in such a way that foremen can obtain advancement for select individuals. According to the procedures (and comments by foremen themselves), they should not have such power, but actual practice is different:

> I found out when inside of Volkswagen, when you apply for a job here you are wasting your time. That is number one...You just couldn't apply for a job inside. You just have to go to the foreman or supervisor concerned to tell him that you want that job....You just don't have to apply for the job inside. If you apply you are wasting your time. You can apply, and you are being called for an interview. They interview

you and they say, "We'll call you back." You will never be called back again.
Q: How do you find out about a job?
A: You have to move around to the people concerned. Tell them you want the job...you want to work under his belt, you want to work under him.

Another worker repeated a similar story, but gave more details of the actual hidden mechanisms of supervisorial control over promotion:

> I heard about the job. It wasn't on the board. I heard about it, somebody told me about the job. So I went up straight to the foremen, asked him where it was, like that, if there was a vacancy and he told me, "That you must first bring in your matric, the only requirement is that you must have some experience of repairman job...

Another worker extended a discussion of these mechanisms, and provided this most telling story of the way he received a promotion from the lowest pay grade to die-setting, one of the highest graded and apprenticed jobs:

> I applied for die setting. Actually, my general foreman...he told me about the vacancies but the notices wasn't on the board yet. So I had to see this guy *****.

The foreman had informed the worker of an extremely important opening, even before it was relayed to Personnel, and referred him to the foreman in the department concerned:

> I went straight to his office and I told him about this vacancies that will occur in the Press Shop. And he asked me, who told me about this, and I said, no, **** [his general foreman]. He said, "It's confidential. It's only between me and him." And he said, "Okay, fill in a form, and bring your certificate tomorrow."

The worker retrieved his Standard 8 certificate and returned to the foreman:

> "Okay, you are in for the thing." So it's about three days after that I started training die setter, and I've qualified last week.

Through personalistic ties to foreman, this particular worker made a leap over 4 wage grades into the artisanal "elite." He now receives more than twice his original wage, and possesses a certificated skill he can take with him anywhere in the country. Finally, one worker captured the informal - and hidden - character of such processes with a thoroughly apposite piece of Afrikaans vernacular:

> I did make application for a foreman job, and through the time that I was waiting for the application, somebody told me long before it was out, "[Another] man is gonna get the job." So what we are calling in

> Afrikaans is *smokkel*. It's not a man that has got the capabilities and the man that has got the qualifications that do get a job, it's a man that has a link with a supervisor or with a manager that do get a job and that's unfair.

What is the basis of such personal ties?

Many workers claim that race is the fundamental divide, with whites being favoured above all. But the worker described above is coloured, and African workers have also benefitted from such relationships on the basis of possessing (or being seen to possess) appropriate attitudes:

> You know, the situation here is politicised, racialised. The relations between workers and the bosses are also regulated by racial considerations, political considerations, you know, attitudes that can affect your progress, if you are deemed or are seen as somebody who have your own mind. Then you suffer in this set-up. You suffer in this set-up. You must just be moderate. And then you get the right chances for moving up....If you have definite political inclinations, chances of advancing are minimal. It *is* like that.

One Grade 7 worker with a matric, explained with contempt the approach which would likely bring success:

> So if we go as far as assistant foreman, and if you are lucky enough, and then you have got to be a friend of the boss, buy him pies and a cool drink, and let him shout at you like anything, let him say disgusting things about you, and you don't say anything against him, you just smile and scratch your head all the time, and then you'll probably be a foreman.

The general feeling amongst workers was that they could do little to change the system. Some saw the practice as inherent in the racial system of South Africa, and nothing short of total political transformation would ever alter it. One man summed up the situation by saying it made him utterly demotivated. Another protested, "I don't even bother to apply any more. I just want to quit."

Thus, despite the formal - indeed the quite substantial - deracialisation of the workplace and the institution of a representative system of labour relations, fundamental processes on the shop floor remain part of an informal system of personal control by white supervisors. While workers may no longer be dismissed or denied wage increases by despotic supervision, their futures with the company, their expectations of a career at work, remain subject to their foreman's discretion.

These informal practices seem to violate fairly deeply held values of justice, especially as related to equality of opportunity. One might have assumed that black workers would come to expect such treatment as a norm, and many were extremely clear in explaining the informal promotion system as a normal part of South African life: as in

'that's just the way things are.' But such recognition doesn't seem to have blunted the sense of morality. "If they can upgrade me," one worker said when asked about his plans for the future, "if they can send me to the training school, I can go there. Then if I failed, I won't blame them, I'll blame myself." He seemed to suggest that he could adapt to individual failure, but could not accept conditions in which he did not even get the opportunity to test himself. The informal promotion system therefore corrupts the relationship between, on the one hand, skill, education, and desire, and, on the other hand, the chances for promotion. The system plays havoc with workers' expectations and calculations about the future, rendering their "career at work" into little more than the plaything of their foreman's caprice.

> We have to meet that particular foreman of that particular job that you want to do. Then you speak to him. If he likes you, then he will accept you. If he doesn't, then it is bad luck.

The absence of clearly defined job ladders, which would at least allow workers some expectation of a career at work, could possibly have contributed to the view of most of the workers, who could not envision themselves working at VW in five or ten years' time.[28] Only a small number identified working at Volkswagen as a possibility. Others expected to be in their own business, unemployed, seeking further education, or dead! A large number didn't know what they would be doing. One worker summed up the pessimistic mood: "I don't think I'll be here in 10 years, if god spares me!"

PART VI. THE CONSEQUENCES OF INFORMAL AUTHORITY

The pessimism voiced by workers is an unfortunate consequence of the organisation of control in the labour process in the industry, rather than resignation with factory or assembly line work *per se*. As described above, contrary to popular assumptions, workers in the industry possess an array of skills which are certainly useful to the company, and to a number of the workers themselves. Given the ability to translate their tacit skills into a career at work, such skills could also provide workers with a basis for personal development and self-fulfillment. By not recognizing the importance of tacit skills, both the automobile companies and the union are tarnishing an extremely valuable asset through tolerance of a system of informal despotism.

Labour relations systems in other countries, most notably the German system of co-determination have institutionalised workers' control over the very processes which in Volkswagen are controlled by foreman. Manpower training and promotion, in short the processes central to establishing careers at work, are part and parcel of the legal system of co-determination, and unions have entrenched rights to participation in manpower policy-making. As a result, trade unions are able to achieve employment stability and extensive training for their members. Wolfgang Streeck makes the argument that such deepening of skills has provided German producers with a highly qualified work force, and argues that such capacity is an important part of the foundation for the German producers' extremely successful strategy of building and

marketing extremely reliable high-quality vehicles.[29] In short, Streeck notes a very close connection between union participation in training and promotion, and economic success.

Some companies in South Africa, notably Nissan, have seemingly come to a similar conclusion. They have developed policies adapted from Japan which tap into workers tacit skills, and while providing higher status for participating, though not yet financial rewards. Regular communication groups, the so-called "Green Areas" where workers meet to discuss each day's work, are attempts to marshall workers' tacit skills to improve production. Volkswagen, too, is experimenting with such policies, and has promoted "ikayalam" ["my house" in Xhosa] where groups of ten "workers gather in the foreman's area at the start of each working day and 'specify the work content for the day and decide who does what and when."[30] According to Maller, the initiative aims "to coordinate common interests on the shop floor by drawing workers into co-operative, non-union structures in production."

It is not clear, either at Nissan or Volkswagen, whether such structures will offer workers any substantial rewards, most especially a "career at work." No automobile company has yet come forward offering guarantees of job security or lifetime employment characteristic of the German and Swedish co-determination systems or Japan. It is clear, however, that South African unions have not responded to these management initiatives, except to reject them. But perhaps these responses are short-sighted. While many of these programmes - including the one at Volkswagen - appear to be schemes for avoiding unions and replacing them with company-controlled structures, the material basis which permits the experiment may also be claimed by unions. Tacit skills are at the core of these participation schemes, and unions may be able to develop their own schemes to develop such skills. If they can colonise skill development - perhaps in a variation of the German model - they will not only be making an effective inroad into central managerial prerogatives, but they will also be able to provide substantial material rewards to their members.

ENDNOTES

Methodological note: the interview material reproduced in this paper formed part of the research for my doctoral dissertation. 40 Volkswagen workers were organised in a cluster sample covering all sections of the factory, stratified according to skill, age, and wage grade. The interviews were conducted using standardised, open-ended questions, to allow scope for comparison of results while allowing respondents room to expand on their ideas.

1. In Sweden and Germany the systems of co-determination which spawned such flexibility were forced on employers by powerful labour movements (in Germany) and by a coalition of labour and Social Democratic governments (in Sweden).

2. For an excellent review of Taylorism, see Jean-Patrick Leger, "'Talking Rocks' - An Investigation of the *Pit Sense* of Rockfall Accidents Amongst Underground Gold Miners," Ph.D., University of the Witwatersrand, 1992, pp. 7-11.

3. Alan Altshuler, et. al, *The Future of the Automobile*, p. 14. Hounshell painstakingly reconstructs the development of mass production at Ford and places the advances in the context of the historical evolution of industry in America; David A. Hounshell, *From the American System to Mass Production, 1800-1932* (Baltimore: Johns Hopkins University Press, 1984), especially Ch. 6, "The Ford Motor Company & the Rise of Mass Production in America."

4. In Hounshell's subtle analysis of the advent of mass production at Ford, he makes a fine distinction between Taylorist scientific management and Ford's practice. "Taylor took production hardware as a given and sought revisions in labor processes and the organization of work; Ford engineers mechanized work processes and found workers to feed and tend their machines....the machine ultimately set the pace of work at Ford, not a piece rate or an established standard for a 'fair day's work.'" Hounshell, *From The American System*, pp. 252-253.

5. The historic developments at Ford's Highland Park plant allowed a massive expansion of output. From 1,700 vehicles produced in 1903, Ford's first year, production grew to 10,000 in 1908 with the introduction of the Model T, to 300,000 in 1914 when the assembly line was fully installed, to 1.9 million in 1923 when Model T sales peaked. At that point Ford was producing 44% of the world's output (excluding the company's factories in Canada and England). Ford cut production costs by more than half within five years of introducing the assembly line, and fifteen years after introduction, the price of a Model T dropped to one-third its original level. Rhys Jenkins, *Transnational Corporations and the Latin American Automobile Industry* (Pittsburgh: University of Pittsburgh Press, 1987), p. 14. See also Stephen Meyer III, *The Five Dollar Day: Labor Management and Social Control in the Ford Motor Company, 1908-1921* (Albany, NY: State University of New York Press, 1981). According to Meyer, Ford's "Five Dollar Day" was not intended primarily as a

motivational device (as, after all, Ford relied on the pace of the line rather than normative means to motivate workers) but as a strategy to obtain the best labour available by outbidding his Detroit competitors.

6. Harry Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century* (New York: Monthly Review Press, 1974); see Peter Armstrong's review of criticisms of Braverman and a defense of his deskilling argument, in "Labour and Monopoly Capital," in Richard Hyman and Wolfgang Streeck, eds., *New Technology and Industrial Relations* (Oxford: Blackwell, 1988).

7. Leger's work follows Cressey and MacInness, who argue that the labour process must be understood in terms of the dual nature of the commodity. Peter Cressey and John MacInness, "Voting for Ford: Industrial Democracy and the Control of Labour," *Capital and Class*, No. 11 (Summer 1980). These authors reject the Marxist concept of the real subordination of labour to capital. Capital may purchase means of production and labour as exchange values, but the actual use value may only be realised by workers themselves. At some point, any labour process must enable workers to produce use value; hence, workers will always control the detail of work, and at the heart of the labour process will be a cooperative relationship between capital and labour. See the extremely valuable and clear examination of these concepts in Judy Maller's recent book, *Conflict and Co-operation: Case studies in worker participation* (Johannesburg: Ravan Press, 1992).

8. Leger explains that in the case of women workers, feminist writers have shown how "women's work" is systematically devalued and defined as unskilled, even in cases where women are now doing jobs previously performed by men. Similarly, Leger examines the processes where the definition of skills on South African mines depended on the race of the worker performing the job. Leger, p. 63.

9. Leger, p. 13.

10. Charles Sabel, *Work and Politics: The division of labor in industry* (Cambridge: Cambridge University Press, 1982), p. 62. Sabel quotes from William Kornblum's description of a Chicago mill: "[W]hile the mill hand may have no generalizable skills, he is intimately familiar with the idiosyncracies of a particular mill. This is a familiarity which may take years to acquire....The machinery seems to have a personality of its own and the men who coax steel through it know they cannot be easily replaced with new men. This contributes to an egalitarian spirit among mill men of different seniority; all are pitted together against the whims of a cantankerous old steel mill."

11. Charles Sabel, *Work and Politics: The division of labor in industry* (Cambridge: Cambridge University Press, 1982), p. 80.

12. For a survey of the development of the industry, see my paper "From the 'Liverpool of the Cape' to the 'Detroit of South Africa': The Automobile Industry and Industrial Development in the Port Elizabeth-Uitenhage Region," Paper presented to the Conference on Port Elizabeth's Place in the History and Historiography of South Africa, Port Elizabeth, September 1992.

13. The exceptions included components which could be competitively produced in South Africa, such as soft trim, paint, glass, and tires. In the late 1950s, however, such locally produced items accounted for a mere 18% of the value of the car.

14. In 1971 investment in the industry exceeded R200 million, three-quarters of which had been made in the previous ten years. In component manufacturing, investment rose from approximately R15 million in 1961, the year before the Local Content program took effect, to an estimated R100 million ten years later. Through 1967 the motor firms had invested about R155 million in their assembly and manufacturing operations, increasing to R200 million in 1971. The overall sales of passenger cars increased rapidly from 75,938 in 1961 to 229,031 in 1975, but the growth of components industry was faster still. The index of the physical volume of production for motor vehicles increased from 85.1 in 1963 to 199 in 1975, compared to an increase in parts and accessories production from 84.3 in 1963 to 479.3 in 1975. The actual value of locally manufactured components bought by the motor firms increased from just over R13 million in 1961 to R180 million in 1973. See Ieuan L. Griffiths, The South African motor industry," *The Standard Bank Review*, No. 631 (October 1977), p. 14, 19; P.J. Nieuwenhuizen, *The South African Component Manufacturing Industry* (Johannesburg: Federation of Component Manufacturers Associations, 1977), p. 13; and N.J. Swart, *The South African Motor Industry-in an International Context* (Pretoria: die Afrikaanse Handelsinstituut, 1974), p. 168.

15. Unpublished employment figures, January 1960-January 1987, National Association of Automobile Manufacturers of South Africa, Pretoria; and Industrial Tribunal, "Report," 1964, p. 8. In the combined automobile manufacturing and components industry, employment more than doubled from 30,400 in 1964 to 64,700 in 1975, while the ratio of black to white workers increased from 1.64:1 to 2.22:1. Nieuwenhuizen, *The South African Component Manufacturing Industry*, p. 67.

16. In 1972-73 the following MNCs were represented in the South African passenger car market, either through wholly-owned subsidiaries or on a contractual basis with South African-based assemblers:

Subsidiaries	Contractual Agreements	
Ford	American Motors	Citroen
General Motors	Datsun	Renault
Volkswagen	Toyota	Fiat
Chrysler	Mazda	Alfa Romeo
Leyland	Peugeot	Volvo
BMW	Mercedes	

There were 21 manufacturers represented in South Africa (including commercials), producing 44 models of passenger cars (with 229 variants), for a market of 342,000 vehicles. The Volkswagen Beetle was the model with the maximum production, amounting to 21,000 units. By contrast, there were 10 manufacturers in Brazil, producing 38 passenger car models for a market of 609,000, and the model with the

maximum production amounted to 149,000 units. Swart, *The South African Motor Industry*, p. 189-190, 196.

17. Perhaps this fallacy results from the fact that most research on the industry relies on published statistical sources, closed-question surveys, and interviews with production management, rather than on participant observation and intensive interviewing of shop floor workers.

18. Rob Davies, *Capital, State and White Labour in South Africa, 1900-1960* (Brighton: The Harvester Press, 1979), pp. 203-208.

19. Southall asserts that the South African labour process facilitates effective unionisation, "not least because the bulk of the work on the assembly line is excruciatingly monotonous." He then gives a precis of Blauner's examination of highly rationalised assembly line work, in which "job fragmentation and deskilling were inherent in the process...leaving workers with minimal autonomy, with the unskilled being subject to the greatest pressure." He then asserts, "Notwithstanding South African manufacturers' occasional tendency to ascribe to blacks an animalistic sense of rhythm, there is no reason to suppose that the latter find assembly line production any less alienating than do workers elsewhere." Roger Southall, "Monopoly Capital and Labour's Response: Emergent Unionism in the South African Motor Industry," mimeo, University of Ottowa, 1984, p. 17.

20. See the contribution by Joy Welch, "The Technology Dimension," in Sylvia Miller and Roux van der Merwe, eds., *Labour Turnover and Organisational Effectiveness*, Industrial Relations Unit, University of Port Elizabeth, 1980.

21. Jan Roux, "Labour Control in the Eastern Cape Automobile Industry, 1970-1974," Africa Seminar, Centre for African Studies, University of Cape Town, September 1984.

22. Of course the same conditions would apply in other low-volume countries producing for their internal markets, such as Brazil, Mexico, Argentina, the Philippines, Australia, and generally most third world automobile assembling countries.

23. The Industrial Council agreement establishes the wage grades and subsumes each job in the factory within the categories. At the time of research, the agreement consisted of 8 grades, from Grade 1 (the lowest) to Grade 8. Minimum pay levels were also established in the agreement, as well as periodic across the board increases for the life of the agreement.

24. In fact, the only automatic increase occurred when workers moved from beginner to permanent status after three months on the job. In the absence of any systematic wage setting mechanism, all increases were based on merit, as decided by the production manager in consultation with the foreman. Unless he remained on good terms with supervision, a worker would have no other means short of a Wage Board investigation to increase his wages.

25. Report by Representative W.G. Ballinger to the South African Trades and Labour Council," 20 December 1939, Ballinger Papers, University of Cape Town A3.II.11.1 [from a microfilm copy held at CPSA, Reel 1], p. 2.

26. Jan Roux, "Capitalist Control and the Labour Process in the Eastern Cape Automobile Industry," BA (Hons), African Studies, University of Cape Town, 1984, p. 111.

27. Maller, *Conflict and Cooperation*, p. 112.

28. Workers may also have been expressing realistic assessments of the likelihood of VW surviving through economic crisis, political upheaval, and international sanctions.

29. Wolfgang Streeck, "Industrial Relations and Industrial Change: the Restructuring of the World Automobile Industry in the 1970s and 1980s," *Economic and Industrial Democracy*, V. 8 (1987).

30. Maller, *Conflict and Co-operation*, p. 137.