Change Management? Organisational Change Strategies

and Managers' and Workers' Responses: a Case Study of

a Commercial Vehicle Manufacturing Plant in Southern

India

Two volumes. Vol. 1

by

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A thesis submitted in partial fulfilment of the requirements for
the degree of
Doctor of Philosophy in Sociology

University of Warwick, Department of Sociology

March 2013

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Acknowledgments

The time seems to have arrived for me to stand back, reflect and thank all those teachers and mentors, Mum and Dad and friends who have contributed to what has been an immensely valuable learning experience for me. Their unwavering support and their quiet and occasionally unjustified optimism have mattered more than anything.

I would like to express my heartfelt thanks to my teachers, Professor Tony Elger and Dr. Carol Wolkowitz. Without Carol's eye for detail and her perseverance in bringing order, analytic coherence and structure to my writing and her constant guidance this thesis would have been impossible. Whenever I sat down to write anything Carol's edict of coherence and organization always came into mind and I am indebted to her for keeping me 'on track'. I shall remain forever indebted to my Industrial Relations Guru Tony who gave me priceless insights into the complexity of the sociology of work and Industrial Relations and its interplay in the modern world and introduced me to the wonders that lay in the works of Clegg, Flanders, Freund, Fox and Hyman et al. Tony was the initial inspiration for my coming to the University of Warwick and my sense of attachment to him has only grown stronger over time. No words can express my appreciation of the guidance and support I have received from both Carol and Tony. Thanks also to Professor John Kelly for watching me evolve and through his prompt replies to my queries and drafts, always reminding me of what came to be known as the Kelly question, which my attention must never veer away from the main analytic thrust of the thesis and its core argument.

Mum and Dad in India have borne me with boundless patience and no little stoicism in the time it has taken me to complete this project. I thank Mum for

always calming me down and urging perseverance during all those days as I pranced up and down anxiously during our evening phone calls and Dad for instilling self-belief and the recognition that the pursuit of perfection is possible for all of us. I cannot express my gratitude to you both.

To Ian who has been a mentor, fellow Industrial Relations comrade, intellectual fellow traveler and emotional crutch in times of need, thank you for supporting this project in every conceivable manner right from making me believe that the scaling the summit was always possible and in making every effort in ensuring that I made it eventually by being there all through the way. Thanks also to Ian's family: Liz, Emma and Pete for their kindness, friendship and their willingness to help in any way possible.

My heartfelt thanks and appreciation reaches out to both Rama and Ash Kavan for providing me with emotional support, shelter and food throughout my time in England. I cannot thank them enough.

I would also like to place on record, my gratitude to Professor Surjit Banerjee of the Warwick Manufacturing Group who has been unhesitatingly supportive even when I approached him at short notice and who has given many hours in offering suggestions and guidance whenever required.

My thanks also to Dr. Uday Balakrishnan PhD [Politics] for patiently enduring my 'almost there emails' and my YouTube videos on talks by Saul Kripke, Russell and Rorty et al and for being a marvellous interlocutor in our discussions of philosophical concepts of meaning and understanding and the tribulations of world in general. My abiding feeling of gratitude remains unchanged, to Dr.V Janardhan PhD [Sociology], University of Hyderabad India, who introduced me to the world of the sociology of work and Industrial Relations while I was a student there.

Thanks to Ramnath Cowsik for making it possible to do my field work in the commercial vehicle manufacturing firm in India and to the managers, workers, and trade union conveners in my case study firm for sharing their valuable thoughts with me.

Thank you Jenny, Jo and Emma from Ian's office for expending their valuable time and effort at various points of this journey. I am grateful to Jenny for making the travel arrangements that allowed me to present at the ILPC conference, Stockholm, 2012 and to Jo and Emma for working their magic with the drawing software and never for a moment minding the time it took to get each drawing in the appendices ready.

Special thanks to Ramdas for labouring for several hours reviewing the Bibliography and being so very hospitable and supportive whenever I visited him in Manchester when he was himself busy working towards his PhD in History in the University of Manchester. He provided much time and moral support during the final stages of my pursuit of the summit. Both of us started our journey from the University of Hyderabad India, and he has been such a special friend. Thanks to John for always being available to listen and being invaluable in friendship and affection during and after his PhD in the University of Warwick and to Nikhil for being unfailingly conscientious in sending financial reports and analyses of the automotive industry week after week for over two years.

Thanks too to Sameer for his company and friendship during his study here and for making time to meet in Bombay, whenever I landed briefly; to Mr.Hussain for being very accommodative in our passion for trains over the years and Subhadarshee for his friendship!

If I have omitted some names, it is for want of space and I am profoundly grateful to my many other friends and contacts who contributed to this project in so

many ways. Last but never the least I would like thank Wittgenstein even in death, for

entering the thesis so late but profoundly influencing its

direction. I am coming and keeping my word of seeing you in the Ascension ,

Cambridge with Ian as promised, I do hope you do not find it inconvenient.

Finally, any errors of omission and commission are entirely mine and

I accept full responsibility for them.

A.V. Raman

Coventry

September 2012

Abstract

This thesis examines the conception, implementation and outcomes of corporate management change strategies through an ethnographic study of a commercial vehicle manufacturing plant in Southern India with a history of labour-management conflict. Participant observation and interviews were carried out mainly within one manufacturing facility between July 2008 and June 2009, with a further visit in 2011. Towards the end of my fieldwork I also interviewed trade union conveners, activists and a cross-section of workers.

The change management programme at the case study firm sought to implement the precepts of lean manufacturing by removing systemic inefficiencies in inventory management and production processes and installing a new organisational culture that promoted greater participation and self-initiative among workers and managers. Investigating the reasons for this programme's very partial success made it possible to understand better the contradictory pressures faced by corporate management, the challenges encountered by senior plant managers and the factors shaping the reception of management policies by middle managers and workers.

The thesis furthers our understanding of the limits of managerial agency by integrating two largely independent strands of enquiry: the rich ethnographic studies of the labour process, by Delbridge [1998], Milkman [1997], Durand and Hatzfeld [2003] and others, that consider the implementation and denouement of Japanese modes of work organisation such as lean manufacturing, and the granular focus on managerial subjectivities that shape managerial activity and condition managerial agency, represented by the work of Watson [1994], Jackall [1988] and Dalton [1950]. In addition, it documents the importance of broader

political-economic contexts in determining the outcomes of management initiatives.

Declarations

I declare that this work is entirely mine. It has neither been submitted to any other University nor has it been published anywhere else.

Dedication

This thesis is dedicated to Ian.

Chapter 1 Introduction

1.0 Introduction

This thesis is a case study of the challenges faced by and experiences of senior and middle management involved in implementing change management in a brownfield commercial vehicle manufacturing plant located in southern India (to which I assign the pseudonym EWS). Lean manufacturing lay at the heart of the change strategy of corporate management of CompCo (pseudonym for my case study firm, owner of EWS), which was intended to increase the efficiency of human resources and machinery and protect or enhance profitability. The term 'change management' from the purview of this thesis implies the intention of corporate management, from its headquarters in a town whose pseudonym I assign as Nellore, to optimise the use of machinery and workers to attain cost advantages and 'add value' at every stage of the production process. The senior corporate management of CompCo argued that attaining 'process efficiency' in its plant had to be combined with changing existing ways through which the firm managed human resources, by aspiring to create greater involvement and participation at senior plant management, middle management, and operator levels.

EWS, my case study site, is an engine manufacturing and medium duty vehicle assembly plant, located in a town in southern India to which I assign the pseudonym Hubli. This was the primary case study site for my fieldwork from August 2008 to June 2009, with a further visit in 2011, and my discussion and findings are excogitated primarily on the basis of this research. EWS is one among other manufacturing units of CompCo, a large automotive firm located in southern India. It is an old plant amongst CompCo's other plants, established in the early 1980s, and it possessed a traditional

hierarchical organisational structure of management. However, CompCo was trying to align itself to a changing Indian automotive market, so corporate management was attempting to institute lean manufacturing within an older organisational structure in EWS where management had worked on the basis of expediency, contingency and immediate practicability. These themes will be evident throughout the thesis, as they form the managerial undercurrents that guided the implementation of change management within EWS and therefore influenced its outcome.

I now turn my attention to summarising the research questions of this thesis. First, I seek to investigate the context within which change management takes place. This raises the question of what impels senior management to strategise in this way, to respond to changing external factors and/or the internal organisational expectations from its employees. I will attempt to answer the question of what strategies the senior management of CompCo adopts and why they do so. Second I will investigate the processes and outcomes involved in implementing key aspects of corporate management's strategy. In this regard conceiving and implementing these strategies in practice are two different things. Through this thesis, I hope to demonstrate underlying tensions between the grand narrative of corporate management, the aspirations of the change management team that was tasked with implementing change management, and the practical exigencies under which plant management had to implement these plans. In doing this I will consider the manner in which senior and middle managers in EWS responded to corporate management's change agenda. This defines my third important research question, which considers how change management was received by different categories of middle managers, what constraints limited their decisions, and how this affected how change was implemented. Finally I turn my attention towards workers and enquire whether they embraced, inhibited or resisted corporate

management's change management policies, especially with regard to job routines and with regard to accepting new vocabularies of participation and self-initiative.

The remainder of this introductory chapter is divided into four sections. The first section, 1.1, lays out the scope of the analytical agenda of the thesis and explains the features that distinguish it from similar ethnographic studies in the field. It also lays out the study's delimiting boundaries. The second section, 1.2, outlines the contextual factors that have influenced management policy and employee responses, both internationally and within India. The third section, 1.3, explains the rationale and contemporary relevance of my study. It briefly charts the evolution of my research agenda on management policies and industrial relations that led me to this project and this research theme. Finally, by way of conclusion, the fourth section, 1.4, explains the overall organisational plan of this thesis.

1.1 The Underlying Analytic Agenda of this Thesis.

Lean manufacturing is both a process as well as a paradigm. It is a paradigm when viewed by much mainstream management literature, because it is seen to comprise a set of inherent first principles that delineate it in contrast with older paradigms of production such as Fordism. It has a technical component of work reorganisation and a social component comprising repercussions on employment routines, employee interaction, and industrial relations. I am primarily interested in a sociological analysis of the social component of such policies and their implementation. The analytic thrust of this thesis will lie in understanding the implications of such policies for different categories of middle managers and workers, rather than scrutinising the technical pre-requisites required to implement 'lean' systems of work organisation talked about in the management literature [Womack and Jones, 2007; Liker and Convis, 2011].

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Overall, then, this thesis will investigate the specific mix and character of lean-influenced 'change management' policies adopted at CompCo. It was very much a top, management-driven project, but its implementation by senior plant management was also part of a learning process for these managers. It turned out that change management was one among other plans it had, such as massive automation, cost cutting through head count reduction, outsourcing and also starting afresh in a new production setting where lean manufacturing could be implemented from scratch. Consequently, I decided to concentrate to a lesser degree on whether CompCo's management adhered to the text book prescriptions of lean manufacturing or whether the full repercussions of lean manufacturing on workers (such as tighter coupling of work processes or tightly coordinated team efforts, as explained in the labour process literature) bore itself out. These ramifications would, however, have been more pertinent had the plant gone the full distance in implementing lean manufacturing and modular manufacturing.

I intend to deploy my 'sociological imagination' [Mills, 1959] to understand the 'why' aspect of management policy development and implementation, with particular attention to why managers act the way they do in the course of implementing change management. My answers to this latter question will focus on the social contexts within which managers act as well as their own subjective orientations to managerial decision-making. I consider how both economic and organisational contexts and managerial subjectivity mould and shape managerial decisions. In doing so, I consider how middle managers of EWS experience organisational policies designed to motivate and monitor their conduct, how their departmental affiliations and career pathways influence their ways of managing and how their work links to broader on-going changes in class structure within India. Within this thesis, however, I do not intend to focus in particular detail on the

negative outcomes that have already been highlighted in the critical literature Ð such as work intensification, the fragility of the lean system, or the limits to the positive learning effects of lean manufacturing on workers Ð nor do I intend to revisit the well-rehearsed criticisms of the IMVP programme [Coffey and Thornley, 2008: 85]. Instead I will investigate the implications of the specific 'change management' policies adopted in my case study, while keeping an open mind about the strengths and weaknesses of these policies from the vantage points of different categories of managers and workers.

More broadly, wider political and economic casual factors form the overall context that influences and conditions managers' decision making and workers' responses (see section 1.2 below). Studies such as those in Pulignano et al. [2008] analyse the forms of governance and control of firms, the shape of supply chains and the patterns and forms of trade unionism, and address corresponding worker responses and forms of resistance. Inherent in their analysis is a characterisation of the macro determinant variables, such as the product strategy of the firm, the choice of suppliers in a particular plant, the degree of fragmentation or integration of the Ð production process within and across plants and so on, that cumulatively shape the character of lean manufacturing production within the plant. Finally, they also provide an excellent account of the varied forms which lean manufacturing regimes take across plants in many countries. Following the approach of regulation theory and arguments about 'hybridization', their approach highlights economic and political determinants as pivotal for their analysis of evolving patterns of industrial relations. In parallel fashion, one of the few extensive fieldwork studies on the Indian automotive industry by Becker-Ritterspach [2009], concentrated upon a detailed analysis of the elements of management strategy, their links to supplier chain integration, and the degree of replicability of production regimes that was

possible as they moved from their original exemplars to plants in the developing countries. For him an important issue was how the "complex contextual embeddedness of subsidiaries impact transfers and adaptations and thereby production system hybridization" [Becker-Ritterspach, 2009: 4]. However, as Wittgenstein said, "Whereof one cannot speak thereof one must be silent" [Wittgenstein: 264, in Morris], and my own case study research is primarily focused on internal organisational processes and outcomes, together with the immediate organisational context which covers links with suppliers and contractors, the state of local labour markets, and local trade union organisations and traditions. Thus my claims and findings emanate only from this case study, based on empirical data of what I saw and heard, and it is from this starting point that I will ground my analysis. This means that the impact of the wider political economy on developments in my case-study plant can only be sketched out, and also that any extrapolation of projections from my findings to other firms and workplaces would commence from my analysis of my case study firm.

The primary reason for my highlighting this sample of the literature is to distinguish my study from this other literature. These studies examine the 'how' and 'what' aspects of management policy, the forms of lean manufacturing that result, and the end impact it has on workers. I am, on the other hand, interested primarily in the 'why' aspects of managerial policy, the reasons that managers give and have for their selection and implementation of policies, and the manner in which competing organisational groups interact within EWS to inhibit or further corporate management's agenda. While I utilise the hybridization thesis, the overall degree of replicability or failure of lean manufacturing is secondary to me because I view change management through the eyes of the specific managers and workers in my case study, and seek to

piece together the overall outcome of lean manufacturing in this particular workplace in the light of their individual and collective work histories.

In pursuing this agenda I endeavour to deploy an analytic approach that is sensitive to managers concerns and vocabularies and considers the competing management constituencies involved. On this basis I seek to provide a more rounded approach in examining the process of the transmission and implementation of management policy across the organisational hierarchy and understanding the competing preoccupations and interpretations of different managers, all of which bear on the effectiveness and impact of 'change management' policies, rather than simply delineating those policies. I am more interested in the character and impact of lean manufacturing as a response to immediate corporate management policies within EWS, rather than in attributing more general reasons for its success or failure. Hence, the objective of studying the implementation of lean manufacturing lay in investigating whether and how managerial rhetoric, especially about troubleshooting and self-initiative, was translated into working in practice and consequently its day-to-day implications for middle managers and workers. On the workers front, I wanted to understand from the first-hand accounts of trade union leaders and activists, the choices they made and the reasons for their doing so as they reacted to a multitude of management policies, of which 'change management' was only one component. In this regard studying EWS's difficult industrial relations history made me appreciate that the sceptical reactions to management policies among trade unions and workers were bound and conditioned by the longer historical context of industrial relations between management and labour within EWS and CompCo.

At this point is worth noting that the industrial relations 'governance architecture' and conventions in India have exhibited continuities with those in Britain, partly because of the long-standing links and exchange of ideas, and in the

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post-war period there was a related cross-fertilisation of the academic industrial relations literature in the two countries. More recently, however, much of the mainstream management literature and analysis of management strategies and industrial relations in India has stemmed from British and American management research and theoretical constructs, partly because this management-oriented literature has served as the dominant paradigm. Meanwhile a sociological tradition of plant level sociology, along the lines of Batstone et al. [1979] and Beynon and Nichols [1977], which covered the automotive industry and other parts of British manufacturing, has been virtually non-existent within India, but my research seeks to draw upon this alternative ethnographic tradition.

Having laid out my research themes and my analytic agenda, and having mentioned that the wider context is an important influence that underlies managerial decisions and workers responses, I will now turn my attention to explicating the changing macro political economic context that is influencing corporate change management policies in India. This will involve a consideration of wider developments beyond India in recent years, and also comments on developments within India itself, and these are topics addressed in the next section.

1.2 The Political Economic Context within which Change Management is Taking Place

In this section I will first consider how global economic cycles affect the Indian economy and in particular affect the market dynamics of the automotive industry. I argue that the interlinked nature of the Indian economy, post-liberalisation after 2005, means that it is no longer protected from contagion from external economic headwinds. These headwinds influence the Indian economy and affect corporate management's plans and plant management's production decisions. I

will then turn my attention to the immediate Indian context and trace continuities and recent developments in the economy and the societal framework that have implications for the process and implementation of corporate management plans by middle managers and workers.

1.2.1 The global financial crisis and economic recession of 2008 and their ramifications for the Indian economy

The global economic downturn that began in 2008 and continues to this day has highlighted the cyclical and yet vulnerable nature of the global economy. The fragile nature of the global economy forms the environment within which corporations, and thus their managers and workers, operate in order to secure and enhance profitability (or extract surplus value) using the best paradigms available, such as lean manufacturing and the related reorganisation of the economic value chain. Manufacturing firms find themselves operating within an environment of uncertainty, indeed within an environment where the fundamental constructs of capitalism are being questioned. In this context mainstream management literature continues to champion change management programmes such as lean manufacturing and to trumpet their success in transforming organisations and empowering employees. As we will see shortly, the Indian economy and Indian manufacturing firms are now inextricably entwined in these developments.

 I wish to suggest, however, that offering a critique of the purported beneficial effects of lean manufacturing on worker knowledge and empowerment is not enough as a response to such managerial policies of streamlining the labour process. In particular my case study will demonstrate that managers, when they seek to implement such projects of organisational change, are buffeted with a basket of competing priorities. These competing priorities influence the ways in which

managers interpret and respond to the precepts of lean manufacturing, and thus the ways in which the theoretical constructs of lean manufacturing are implemented on the shop floor. There are different categories of managers who are involved in managing the organisation, who bring to bear their distinctive insights and interpretations of change management, and this in turn affects the transmission and outcomes of management policies through the organisational hierarchy. In this regard firms have to do more than minimise their costs and operate in a variety of political economic contexts, because they face the uncertain nature of the global economy. Indeed, the recent crisis and the recessionary phase of the world economy actually suggests that we need to do more than trace cause and effect relationships that influence corporate strategy and industrial relations, because we have to address the uncertainties and rivalries that beset corporate policy implementation, and in this sense the subjective nature of managing and management.

This thesis operates within a time period from 2008 until the present, and is thus located during the changing nature of economic activity in the Indian economy after economic liberalisation. The world has not recovered from the aftermath of the economic recession of 2008 and India, being inter-linked to the world financial system, is now not immune from contagion. During this recessionary period dominant international firms have faced challenges, including exemplars of lean manufacturing such as Toyota, which has faced both difficulties in recruiting workers in Japan and problems in producing for turbulent markets. Thus in my view the literature on lean manufacturing could not explain how to manage in a recessionary context when manufacturers, hoping for glad tidings produced by the continuation of the bubble, were beset with large volumes of unsold vehicles. Thus an understanding of the labour process in firms that operate under these conditions becomes necessary but not sufficient, because changes in the labour process are

driven both by evolving managerial strategies and distinctive industrial relations histories.

The abrupt closure of financial corporations owing to suspect practices has had widespread repercussions on the global economy from 2008 and the world has not yet recovered from the collapse of the financial services firm Lehman Brothers. The collapse of the value of many stocks on Wall Street in the 2008 crisis was triggered by a combination of low interest rates and high-risk loans and mortgages in the US [Rajan, 2010]. The effects of this crash spilled over across the world because of the principle of distributing the risks, and many banks and individuals were left with investments whose value had come down to zero. The above developments point to the interconnected and interdependent nature of the economy. Furthermore, there were pivotal changes in the character of this interconnectedness, as there was a shift from a system characterised by assured production, real consumption and active state policies, where firms were characterised by a Fordist system of production, to a financial system that was based upon stock markets, investor perceptions and volatile financial flows. This transformation in the nature of capital mobility has also had major consequences for investment and the profitability of manufacturing firms.

In this context it is possible to regard the renewed interest in Jackall's [1988] book, appropriately titled *Moral Mazes*, as an indication of the relevance of understanding the contradictory but opportunistic nature of corporate management conduct and strategy, as management decisions across organisations in recent times have led to such deleterious consequences during the recession. Jackall's work points out the subjective and instrumental nature of much managerial activity, as it operates across multiple layers and involves multiple interest groups, often intent on impression management and organisational rituals that have little to do with the overall ends of the organisation. Bearing the above background in mind, any study of

those engaged in change management has to seek to understand managers and the activity of managing, including the varied and specific motivations and interests of those in charge of implementing organisational change and how junior or middle managers' concerns intersect with senior corporate management's agenda.

This thesis pursues this agenda by keeping the contradictory, contingent and subjective nature of managerial activity at the heart of its enquiry into the implications of lean manufacturing for different categories of managers and employees. In this regard Indian companies exhibit similar features of management and employment relations to those of other capitalist enterprises across the global economy, but they are also conditioned by the immediate context they operate under, and this is addressed in the next sub-section.

1.2.2 The immediate Indian context considered

The present downturn in the Indian economy has its origins in 2008 because the world economy has never quite recovered from that crisis. In India, the 2008 economic slump was driven by declining investment and lower customer demand because the commercial vehicle industry was influenced by macroeconomic variables, which affected consumer sentiment and deferment of purchases. The crisis that commenced in 2008 and continues until this day also reflects other internal factors, such as massive political corruption and continuing crony capitalism, which alludes to the continuation of the licence permit regime of the 1970s, albeit in a different form today.

The modern face of India nevertheless presents an analyst with growing consumer demand led by an expanding middle class. Rising middle-class demand triggers demand for a variety of goods and services, and engenders complexity in such markets as the automotive market, fed by growing demand. Another causal

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mechanism for the expansion in product portfolios and increasing specialisation in the Indian commercial vehicle industry involves the entry of many multinational corporations such as Mercedes and Volvo who, though relatively new to the Indian automotive market, have long experience of paradigms of work organisation such as lean manufacturing or Volvo's socio-technical experiments. These entrants have intensified competition and challenged the established position of old companies such as CompCo and TATA, though the latter know the market and its demands inside out. For instance, the rules of play in the intercity passenger transportation industry were comprehensively overhauled by Volvo's foray into long-haul, multi-axle buses in India in the middle of the 2000 decade which in turn influenced buying decisions of intercity bus operators and state transport corporations. Finally, increasing specialisation in the cargo and infrastructure industry demanded diversification of the product range offered by Indian commercial vehicle firms.

Against this background employment relations and wider patterns of social relations in India exhibit important continuities in terms of patronage and preferment, but also the co-existence of these features with contemporary management practices within the government and private sectors. The new vocabularies of participative employment and precepts of lean manufacturing began to become popular in India even before the crisis, in 2008-2009, spurred by the prescriptions of the global management literature (especially the enormous impact of the books of Womack et al.), and the manufacturing practices of pioneering multinational and Indian automotive firms. Thus lean manufacturing soon became the dominant paradigm that was at the heart of corporate strategies for changing existing organisational structures, industrial relations practices, and manufacturing processes. Indeed it was such changes that forced corporate management at CompCo to implement changes in their management policy.

Against this background my fieldwork made me interested in the changing job and career aspirations of middle managers, that appeared to be triggered by the life-style changes promised by the burgeoning services sector. The younger middle managers I met were, after all, coming into the work force of an old plant, such as EWS, that operated in a manufacturing industry that could not measure up to the wage levels of the information technology enabled industry. In order to meet global competition but also satisfy changing employee expectations, corporate managements needed to develop new managerial strategies which yielded productivity gains and possibly promised career advancement for managers.

After the economic liberalisation policies of the Indian state in 1991, the decade from 2000 onwards marked a transitional phase for Indian trade unions, who have had to face a less sympathetic management supported by provincial governments eager to attract investments. However, the new environment under which trade unions have operated since 1991, is still within the limits of earlier protective legislation, such as the Industrial Disputes Act 1947, which gives protection for established employees but little or no protection for contract labour. For trade union leaders within India, as in Britain, the era of militant personality-led unionism (epitomised by luminaries such as Arthur Scargill and the charismatic communist trade union leader in southern India during from the late '70s to first half of the 1990s, Comrade Suryanarayana Rao) has passed by.[1] Instead unions have to satisfy the divergent expectations of different groups of workers, and they have to take difficult decisions in responding to management policies, some component of which they have little knowledge. Thus this marks a period of challenge for Indian trade unions and their leaders.

From the above discussion, I can summarise the following characteristics that define employee relations within contemporary India as: (a) India's economic

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[1] http://pd.cpim.org/2002/july07/07072002 suryanaraya.htm. /

ecosystem is no longer an island by itself but is closely entwined with the global economy, making work and employment relations more open to market forces; (b) there are modern manufacturing and management techniques that co-exist with systems of preferment and patronage long characteristic of the Indian social structure; (c) there are many social groups among employees in India, such as established workers, insecure contract workers and different levels of management, whose expectations compete and collide with one another (and therefore require study in their own distinctive terms before coming to any overall generalisations); (d) despite liberalisation, the state continues to be an important player in arbitrating industrial relations disputes and the implications of management policy for employment relations.

1.3 The Rationale and Contemporary Relevance of This Study

I have an abiding personal intellectual interest in the discipline of industrial relations, with which I have been engaging since the beginning of 2000. Here I will briefly touch on what interested me in this topic of enquiry and how my interest has developed in recent years, against the background macro conditions outlined in the previous section.

My early foray into research on manufacturing industry and trade unionism was during the fieldwork for my MPhil study around 2005 [*Understanding Trade Union Reponses to changing managerial production strategies: A case study of an Automotive Component Firm in Bangalore India*, 2005], which at that juncture was concerned with chronicling competing trade union responses to management policy in the Bangalore plant of the German spark-plug manufacturing firm Bosch. Thereupon my interest in industrial relations expanded from just chronicling overall trade union responses to understanding managerial strategy and the labour process. I became

interested in managerial strategies and trade union responses under a diverse range of conditions in the automotive sector around the world, where the conventional functions of HRM and personnel management appear to have been taken over by manufacturing paradigms such as lean manufacturing, six sigma and TQM. These interests culminated in the present PhD, which has now widened further in its agenda.

I was not convinced by the sanguine proclamations of the lean manufacturing literature [Womack and Roos, 2007] but instead was led by Wilkinson et al. [1998; 2010] and Parker and Slaughter [1989] who debunked their claims and instead emphasised the themes of management control and work intensification in lean manufacturing. Over time, my study of the ethnographic literature demonstrated to me that the effects of lean manufacturing, such as work intensification, its fragile nature, and the tighter coupling of production processes began to appear similar across different plants and companies. However, my own case-study research convinced me that I needed to go beyond understanding top management policies and worker responses in terms of cause and effect, and instead address those middle managers who are trapped in between the competing demands of their superiors and workers but are tasked with implementing change management and have to motivate workers to deliver on corporate management's agenda. Furthermore, workers in EWS faced a number of other challenges, especially with regard to anxiety over job-security. Concomitantly understanding their reactions to management policies, both as individuals and via trade unions, becomes important in order to illuminate how both middle managers and workers went about receiving, implementing and sometimes opposing corporate management policies.

Thus these are the questions that I have pursued in my ethnographic study of management policies and the changing labour process within EWS. As the corporate management of CompCo was attempting to implement its project of change

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management this gave me an opportunity to be a witness and get a first-hand account of the challenges and constraints under which these managerial innovations were made. In developing this research I was inspired by the writings of the sociologist Tony Watson [1994; 2002], who studied the contingent nature of management; Theo Nichols and Huw Beynon [1977], whose landmark study of ChemCo considered how different types of managers implemented workplace innovations, managed contradictory pressures, and controlled and mobilised the workforce, in order to keep the plant running profitably, maintain the technical system; Eric Batstone et al.'s [1979] classic book on trade union mobilisation and leadership; the 'hands on' approach to language and meaning developed by the philosopher Wittgenstein [143-176; Kramer Michael in Crary Alice (eds), 2007e]; and towards the end of my research, the work of Robert Jackall [1988] who deals with organisational politics, the contradictory nature of managers and the choices they made while deciding management policy. All these authors have considerably influenced my train of thought and their ideas will form an undercurrent that runs throughout this thesis.

While my fieldwork in CompCo was done during a period of relative industrial quiescence, I also wish to highlight how recent more conflictual events have reinforced its relevance. In particular workers recently 'went on a rampage' at a Maruti-Suzuki plant, causing the death of an HR manager and other employees. I glean from reports of these recent developments in Suzuki that the management's patience in regard to labour militancy had thinned, while hostility between regular employees (and their unions) and contract workers exacerbated the conflict.

Such developments highlight the timeliness of sociologically informed ethnographic studies of Indian vehicle manufacturing plants of the sort attempted in this thesis, which seek to ferret out the underlying causes that might have precipitated this unrest. In the Weberian sense of 'verstehen', on the activities and understandings

of both managers and workers, this thesis offers a timely sociologically informed contribution to understanding both the decisions and dilemmas of management 'change agents' and the decisions and dilemmas of trade union leaders under the present circumstances, that are increasingly towards management's advantage.

This starts from the position that understanding the effectiveness and the implications of corporate management policies during recessionary times around the world is only possible by getting at the nub of the subjective but contradictory nature of managerial activity and combining it with extensive ethnographic data. This qualitative approach is timely because it is the best means of understanding both the motivations and the structural reasons that underlie such tragic events as the death of the HR manager and workers in the Suzuki unrest. Growing labour unrest, such as is manifest in the Suzuki example, makes an extensive ethnographic study of the implementation and experience of lean manufacturing across automotive plants through the eyes of workers and managers paramount, especially as the existing labour process literature has not addressed these aspects of management policy and labour unrest in any detail in firms operating in India.

In this regard a first-hand account of how and in what manner both managers and trade unionists argue and act during the implementation of corporate 'change management' programmes is highly relevant. Furthermore, on the trade union side an understanding of how competing rivals shape their outlook towards management becomes pertinent. My research, influenced by the work of Batstone et al. [1979] helps in throwing light on the dilemmas of union organisers and representatives in representing, mobilising and servicing the grievances of their members, at a time when management is making persistent attempts to alter the terms of engagement with unions and implement a new rhetoric of lean manufacturing. Thus a sociologically nuanced understanding of trade union responses, emanating from individual accounts of the

challenges and experiences of trade union organisers and the collective memory of workers, will help in understanding how past experiences and industrial relations history mould their responses towards corporate management policies.

1.4 Conclusion

By way of a conclusion I will now turn my attention to the sequence of chapters in the thesis and indicate their overall contents and aims individually. Chapter 2 is the literature review. It reviews salient debates in the labour process and empowerment literature, including a set of key ethnographic studies, and then considers several important analyses of the perspectives and experiences of managers, the role of trade unions in responding to management and representing workers, and the role of contexts in influencing the formation and implementation of management policies. Chapter 3 reviews my methodological choices and the rationale for this qualitative case study. Chapter 4 provides an account of the setting of the research. It comments on the wider Indian economic and social context of the firm and its factory, lays out the overall layout of the plant and registers the key organisational features that can be understood through an analysis of the setting. Chapter 5 lays out CompCo's senior management's agenda for corporate change, discusses the way in which it sought to implement this agenda, and some of the challenges it faced. Chapter 6 investigates in detail the implementation of change management by CompCo and how CompCo management tried to resolve its problems.

It tries to understand the implications of change management for middle management within EWS and the critical role of career pathways, as different cohorts of managers respond to and facilitate or inhibit corporate management policy. Chapter 7 traces the industrial relations history of the firm and identifies workers response to the multiple but contradictory strategies pursued by corporate management. It then

considers the strategies and the dilemmas of trade union leaders as they seek to deal with new developments alongside persisting old continuities.

Finally, Chapter 8 concludes the thesis and tries to answer the broad questions that are listed in Section 1.0 in this chapter about organisational change and employee response.

I hope the works offers some insight for the reader and that it achieves what the poet T. S. Eliot ('Litte Gidding', *The Four Quartets*, Section 5) calls the objective end of any work of writing- "What we call the beginning is often the end. And to make an end is to make a beginning. The end is where we start from."

Chapter 2 Literature Review

2.0 Introduction

In this literature review, I will outline key aspects of change management and proceed to suggest the questions they raise for a case study in vehicle manufacturing like mine. The literatures I draw on are primarily from the labour process approach and management studies, including ethnographic studies in these traditions, which illuminate management policies and workers' responses. The purpose of this literature review chapter is to provide a selective review of the sociological and employment relations literature on the efforts of corporate managements to reorganise and even transform work processes and practices under the banner of 'change management'. This literature addresses the form, intensity, and completeness of such efforts at 'change management' and the implications and consequences for various categories of managers and operators. I also draw on some critical literature on industrial relations, particularly in relation to issues of worker mobilisation and union organisation.

My primary aim in this chapter is to support those commentators who (i) address the social positioning of managers, recognise the tensions that they face in developing and implementing their policies and register the often partial and unrealised nature of change management programmes, and (ii) argue for the need to locate managerial decision making and workers' responses within a subtle appreciation of the specificities of context, including the political and economic context of firms. Throughout this chapter, I attempt to address the tension between the structures that shape management's decisions and the agency, which they can exercise to shape policies and outcomes. Each section of this chapter seeks to explain and justify appropriate conceptual tools and research questions relevant to my own research. Thus,

I will lay out the arguments prevalent in the literature that helped me in arriving at my key research questions.

Section 2.1 starts by considering the competing logics of management policies for reorganising work and managing workers, by comparing 'responsible autonomy' and 'direct control' approaches. It then pursues the issues raised in these discussions by moving to a more specific consideration of debates around management policies that claim to 'empower' employees, before considering the implications of selected ethnographic studies that have examined the impact of both lean manufacturing and associated involvement strategies in specific manufacturing workplaces. Having addressed the substantive character and dynamics of such change management policies in increasing detail, the chapter then looks particularly at some key questions about the character of worker responses to management, before considering two issues that are touched on but not addressed in detail in much of this literature. The first such issue concerns the varying roles and subjective orientations of managers as active agents of change management, while the second concerns the wider context within which firms operate and the ways in which such contexts may influence the selection and modification of established management policy templates. I will examine the question of the means through which managers aim to achieve what they regard as the optimal utilisation of the factors of production, which involves seeking to balance the contradictory logics of 'responsible autonomy' and 'direct control' [Andrew Friedman, 1977: 48]. I explore the argument that managers should allocate specific tasks to employees whom they view as best suited for the role demanded by specific job routines. I contrast this with the argument that managers should adopt a participative style, which aspires to some measure of autonomy for employees and aims to bring about voluntary commitment and perhaps hasten the resolution of production-related problems without having to travel up through the organisational hierarchy.

In Section 2.2 I will then consider the more specific debates about empowerment and participation that may overlay changes in the core production process, whether these involve

measures that are sometimes conceptualised as forms of soft HRM, or are part of a compendium of measures implemented under the title of lean manufacturing, or are part of the contrasting model of group working inspired by the Volvo experiment at Uddevala [Sandberg, 1995]. This section relates to the previous discussion on the selection and implementation of management policies by trying to understand what management policies demand from employees, the modes of management exercised in pursuance of those demands and the various means through which employees are expected to respond to meet these demands.

These issues are then followed up in more detail in Section 2.3 through an examination of examples drawn from ethnographic case studies, which illuminate the key features of lean manufacturing and how their implementation has affected different constituents in factories where it has been adopted. These ethnographic studies attest to the contextual nature under which lean manufacturing regimes operate between the continuum of tight managerial control on one end and team-work and participation at the other.

Section 2.4 builds on the findings of the ethnographic studies and selectively addresses the literature on how management policies and indeed change management are received by operators and workers, who are the targets for many of these management policy initiatives in the manufacturing sector. The literature I draw on here interrogates the question of representation and whether this representation speaks with one voice or whether there are differing priorities amongst those who represent labour. I address these questions by looking particularly at the arguments made by Batstone et al. and earlier debates raised by Richard Hyman. I then address some further industrial relations contributions that seek to understand worker and union responses to the exercise of management prerogatives, with particular attention to the implications of John Kelly's [1998] discussion of worker grievances and mobilisation. In this section, I also return to the ethnographic literature to consider the various means by which operators have reacted to management policies.

Section 2.5 of my literature review then considers the rationales for managerial agency, and in particular the arguments used by managers to justify their actions. It does this by looking at two different genres of literature: first, that stemming from Hyman, who emphasises the constraints and contradictions besetting management strategies, and second, that represented by the work of Tony Watson, who focuses sympathetically on the moral orientations of managers as they cope with organisational pressures and dilemmas. It then considers Jackall's [1988] work on the morality of management and how the varying interests of different individuals shape managerial policy. In this way, my review of the literature registers the emerging dialectic between managers as agents of capital responsible for co-coordinating and realising surplus value, and managers as subjective agents within a distinctive moral economy. Both of these approaches are treated as aspects of the ways in which change management policies are enacted and implemented by those in charge. In particular, I will draw on Watson's perspective to show that, from an individual manager's vantage point, there are real apprehensions about matters such as what superiors think, the fear of punishment and the necessity of adopting policies thought to be the best current option for ensuring organisational survival. This section differs from the preceding section because the literature here addresses how managers justify and implement management policies.

Finally, Section 2.6 considers in more detail some of those commentators who have argued for the importance of context in understanding the evolution of corporate policy. This is an important section because this literature demonstrates the role that contextual factors have in the conceptualisation and implementation of change management projects by senior management, and indeed in the reception of these policies by middle managers and workers. This section also considers the processes of selection and interpretation of change management paradigms such as those embracing specific modes of work organisation (for example 'lean manufacturing'), and reviews the literature on the hybridization of such paradigms. As such, it addresses the effects of both 'systemic' and 'cultural' influences on the implementation of these policies.

The above debates serve cumulatively to illuminate a set of research questions that address the implementation of change management policies by management, and their limitations, implications and outcomes as these are experienced by senior managers, middle managers and operators, which I set out to examine in my ethnographic case study of an automotive plant in southern India. I have not addressed the methodological literature directly in this chapter because I will explain the rationale for the choice of qualitative research methods in the methodology chapter.

2.1 Options for Strategic Change: Responsible Autonomy versus Direct Control

In this section, I consider some of the management strategies that have been documented in the literature on the management of change and what the literature suggests about the reasons why managers select one strategy or another. Commentators have pointed out that managers continually face tensions between a wish to control employees and their wish to gain the commitment of employees through various strategies that imply empowerment rather than control

The underlying conflict, between labour and labour power in labour process theory, is that there is an inescapable compulsion to produce surplus value and there is a resultant antagonism between the functions of capital and labour and the need for managerial mechanisms of surveillance and discipline. At the same time, the labour process does not represent the whole 'circuit of capital [Thompson, cited in Spencer, 2000: 232]. It does not provide the whole explanation for production, accumulation and realisation of surplus value. Furthermore, this rather abstract theorisation of the imperatives characterising the capitalist labour process does not in itself provide sufficient tools to understand variations in management policy towards labour and broader repertoires of management strategy.

I will therefore consider the debate about the relationship between responsible autonomy and direct control as a less abstract way of addressing management options, but one which retains a concern with the extraction of a surplus from labour. This will allow me to elaborate upon the various ways in which employees are perceived at different points of time by the organisation, collectively as well as individually, and consider how projects designed to empower or control them influence their responses to change management. Within mainstream management literature, by writers who hail from the competitive advantage perspective like Michael Porter [2011: 4] identify the main features of corporate strategy, the adoption of which influences the extant adoption of its responsible autonomy or direct control to manage its employees:

> Strategy is the creation of a unique and valuable position, involving a different set of activities. Strategy requires you to make trade-offs in competing to choose what not to do. Some competitive activities are incompatible; thus, gains in one area can be achieved only at the expense of another area. Strategy involves creating "fit" among a company's activities. Fit has to do with the ways a company's activities interact and reinforce one another.

However, it should also be recognised that Hyman uses his broader discussion of the challenges management faces in organising the extraction of a surplus to make a crucial point about the limitations of neat functional typologies of management strategy such as the above definition, when he emphasises that:

> Managerial strategy is best conceptualised as programmatic choice among alternatives none of which can prove satisfactory. The internal coherence of managerial activity as a collective labour process cannot be taken for granted. [Hyman, 1987: 30]

Nevertheless, managers manage their workplaces and understand change management in different modes, and we first need to understand the ways in which managerial activities are perceived in terms of both their consequences and the ways in which managers perceive themselves. Dealing with and managing other managers and workers within management is, as Thompson and McHugh [2002: 12] point out, a fundamental challenge of management begins with an undercurrent running through 'managerialism' They write:

> Common to all versions of rational efficiency is that the logical basis of action is held to reside with the manager. In contrast, employees who restrict or oppose such action are frequently held to be acting irrationally, governed by a 'logic of sentiment' rather than one of efficiency.

The challenge for management is to encourage employees to do their best on their own volition through a range of employee initiatives that exclude conventional collective bargaining but involve representative participation, including joint consultation and Japanese-style company councils; downward communications, including team briefing, employee Financial reports, and other media; Financial Employee involvement, including Employee Share Ownership Plans and profit sharing/ bonus schemes; and upward problem solving, including suggestion schemes, quality circles, and Total Quality Management. [Ackers, 2010: 68]

The panoply of these measures are otherwise also known as Quality of Working Life initiatives (QWL)[Katz, 2004: 301] which according to Katz and Kochan [Katz, 2004: 301], are "oriented towards improving organisational performance and working lives of employees. They operate at the lowest level of industrial relations activity, namely the shop floor through the involvement of groups of workers." The obverse critique of autonomy is that the managerial strategy of direct control lays down tightly prescribed procedures, closely integrates production processes, monitors employees minutely, and lays down stringent strictures against their violation.

Andrew Friedman [1977] pioneered the analysis of this strategic dualism, whilst also seeking to grasp the tensions and limitations of each end of the spectrum of managerial

control and employee discretion and thus the complex mixes of policy that could actually result. He started from the observation that management is not a two-tier process where work organisation designed by engineers is primary, and the exercise of management counter pressure to worker resistance is secondary. Both are managerial problems that are measured in terms of profits. If the costs in terms of worker resistance are too great, alternative strategies would have to be tried and these will involve changes in the organisation of work [Friedman, 1977: 45].

As Friedman [2000: 68] in his later writing suggests, "There are systematic, predictable influences on the direction management moves along the continuum in response to changing product and labour market conditions, changing technological conditions and internal interactions." Friedman [1977: 48] argues that the "responsible autonomy" approach entails allowing workers a wide measure of mental and physical agency over the direction of their tasks whilst getting them to identify with the competitive aims of the enterprise so that they will act 'responsibly' with the minimal amount of supervision, thus saving senior plant management time and money. This characterisation is given a distinctive twist by a perspective from labour economics, which argues that it is cheaper to pay efficiency wages where it is costly to monitor the performance of employees and when the overall long-term goal is to attain a lower wage-cost equilibrium in an employer's iso-cost curve [McConnell et al., 2007: 254]. The expectation on the part of the employer is that higher wages and the feeling of autonomy will offset the tendency of employees not to identify with corporate management targets and goals. Empowerment policies can be seen as one form of such a strategy of 'responsible autonomy', and as such have also been depicted as a requisite stepping stone for 'High Performance Work Organisations' applying strategic HRM practices. [Applebaum and Batt, 1994].

Both Friedman and the 'efficiency wage' theorists suggest that strategies emphasising 'responsible autonomy' may be more attractive to some managers and firms than to others. One influence noted by Friedman is the level of trade union organisation and worker

cohesion, which may represent a particular challenge to policies of direct control and encourage managers to co-opt or bargain with well-organised workers. Another influence noted by economists is the level of complexity and uncertainty of the production process and the product market. This suggests, for example, that if the product market for commercial vehicles needed polyvalent workers with extended training, it might make sense to adopt some variant of a 'responsible autonomy' strategy.

Thus Friedman's argument about 'responsible autonomy' versus 'direct control' provides a valuable point of departure for the analysis of varied and changing management policies, particularly in regard to the organisation of the labour process and the management of labour, and especially if Hyman's point about the tensions and limitations facing all policy options is borne in mind. Thus I will shortly draw upon Friedman's discussion of 'responsible autonomy' and 'direct control' to review the concept of empowerment. Before doing this, however, I also wish to note that Edwards [2003: 348] draws on his own work and also that of Marsden to develop a more sophisticated version of this typology, and uses it to analyse a wide range of issues including skills, labour market structures and the organisation of pay and incentives, though he does not choose to evaluate the substantive value of his analysis other than using it to organise a wide range of materials.

In my opinion, the utility of these approaches is to situate in a broader historical context the modes of controlling labour and extracting surplus value from it. Edwards suggests that empowered staff were more likely to engage in a beyond contract effort, i.e. beyond the normal call of duty, and he also argues that there has tended to be little union negotiation concerning the principle of such initiatives (an empowerment paradox) with design and planning excluding union involvement. In practice, however, issues arising out of the implementation of empowerment often become industrial relations matters. For example, job enlargement can threaten traditional demarcation lines as well as raise remuneration issues. As the case studies of such researchers as Milkman [1997] and Graham [1995] illustrate, employees tend not to question the principles of empowerment but turn the

promised discourse of empowerment against itself and ask management why it did not deliver on its claims. Edwards [2003: 348] also incorporates the discussion of 'bleak house' strategies where employers impose poor terms and conditions and exclude unions, a phrase first used by Sisson [Sisson, 1993: 1108, cited in Marchington and Grugalis] as well as consideration of areas of employee agency and resistance into his model.

Edwards and Belanger [2006: 306,308] analyse the empirical evidence relating to the extent of control and autonomy, which illustrates the need for careful consideration of such case-study data before arriving at theoretical generalisations. Their appraisal of case studies of workplace ethnographies case studies indicated that "managements applied a top-down and unitarist approach, and trust relations were absent or weak. The participation "schemes were operated at the discretion of management since there was no commitment by management to be bound by discussions". A valuable insight offered by is the requirement of combining the analytic findings and insights of several ethnographic case studies bearing in mind the underlying determinants of industrial relations such as market conditions, technology and production organisation and managerial strategy in order to explicate the effects of managerial policies of control or discretion upon employees I will return to their arguments and analysis in Section 5, which considers worker responses to change management initiatives.

The implications of this discussion of managerial control and autonomy culminate in the following research themes that form the subtext of my first two research questions: first, 'What overall strategies for the organisation of production and the management of labour have managers in my case-study company developed in recent years?' and second, 'How far do these strategies involve a focus on 'responsible autonomy' or how far are they characterised by 'direct control'?'

The next section takes its cue from the discussion on responsible autonomy and investigates, given an a priori assumption that if employees were granted responsible autonomy, what would be the main features of this employee discretion, and in what ways would employees be expected to exercise it. The definitions may be as broad and all-inclusive

as 'any form of delegation to or consultation with employees', or as narrow as a 'formal, on-going structure of direct communications' such as through the mechanism of team briefing. Some authors refer to involvement as participation while others use empowerment, voice, or communications, often without extracting the conceptual meanings or differences that are used in practice [Wilkinson and Dundon, in Wilkinson, Golan Marchington and Levin (eds), 2010: 168]. The features of direct participation and its effect on employees are broadly termed as empowerment, comprised of: 'information sharing' of the companies' challenges; future plans and why and where employees' active participation beyond their employment contract is needed; 'upward problem solving'; 'task autonomy'; and, finally, through 'voice systems', which broadly implies various modes of granting voice to employees' concerns through downward communication of management's plans [Wilkinson and Dundon, in Wilkinson, Golan Marchington and Levin (eds), 2010: 171-178]. I will now turn my attention to understanding empowerment and its main features.

2.2 The rhetoric of empowerment and changing employees' attitudes

It is argued by some authors that empowering employees promotes more egalitarian workplaces, where through effective leadership practices and by deploying Total Quality Management, managers and the managed go beyond a contractual transactional relationship and strive to achieve quality and productivity that could not come out in a more authoritarian frame work [Guillen and Gonzalez, 2010: 186]. Wilkinson [1998] identifies some of the key elements of the rhetoric associated with empowerment. In this new discourse, managers are exhorted to trust and involve employees; different forms of control are demanded from earlier supervisory arrangements. Wilkinson [1998: 150] refers to "simultaneous loose-tight properties" of the resulting arrangements, with specific reference to control through shared values (of 'customer service', etc.) so that employees have greater discretion with regard to how they carry out their jobs to meet these core corporate values. In this context, he directs the reader towards Morton's [1994] idea that workers have two jobs: one is to carry out

designated tasks and the other is to search for improvements. In this view, middle managers [Wilkinson, 1998: 43] become facilitators, coaches and motivators, encouraging participation, teamwork and the delegation of responsibility and accountability which helps foster pride, job satisfaction and better work. At the same time, there are rival justifications of an empowerment strategy within the business studies literature, ranging from perceptions of employees as resources associated with the 'Hard' model of HRM, to regarding them as agents that can develop the organisation's core competencies, to seeking them as sources of individual competitive advantage [Legge, 2003: 87]. A related strand of the mainstream management literature claims that if line managers are delegated greater power and freedom to take quick decisions, they will participate more robustly in realising their immediate senior management's objectives. This is because they will feel a sense of ownership over the tasks they perform, feel responsible and find meaning in their work. This implies they will be accountable for the tasks that they perform [Bowen and Lawler, 1992: 33].

Meanwhile, the practice of continuous improvement is seen as increasing employee involvement in decision-making, although there is little discussion as to whether it is relatively low grade, task-centred involvement or a more significant form of participation and shared decision-making. In practice, there is a basic ambiguity in TQM in that, while employers seek the commitment and empowerment of their employees, increased employee responsibility for the work process is a cornerstone of the approach [Hill and Wilkinson, 1995: 14-16].

As these comments suggest, there are varied conceptualisations and interpretations of 'empowerment', and the effects of such policies are also strongly contested. Indeed, there is no clear agreement in the literature on what the term 'empowerment' implies, and disagreements cover basic questions around what powers or capacities are granted to the empowered, how their power is enhanced, what areas of activity or decision-making they cover, and who is included in these processes [Hales, 2000: 502]. For example, empowerment of employees may be seen as an independent project of soft HRM [Legge, in

Cummings and Wilson (eds), 2003: 87], designed to implement organisational attitudinal change, or it may be seen as an aspect of broader changes in work organisation, such as TQM, lean manufacturing or even Swedish versions of group working. This also leaves open important questions about the ways in which such changes in the responsibilities of employees are tied to payment and reward systems, for example through 'performance-related pay' or symbolic rewards and recognition.

Most crucially, there are major questions about the boundaries of any control that workers may be granted. Does management retain a veto over the ways in which workers use their enhanced involvement, over the implications for effort or manning levels for example, so that worker empowerment is only pursued within these limits? Put another way, is 'empowerment' a zero-sum or a non zero-sum game (Hales, 2000: 502): are managers relinquishing power as it is delegated to workers, or can they grant power to workers while also retaining or even enhancing their own capabilities? Relatedly, does empowerment mean the acquisition of power by workers, or rather its passive receipt simply because someone else in the organisation has given up notional charge of organisational functions previously held by employees higher up in the organisation? And does this mean loading more 'responsibility' than 'autonomy' on to non-managerial jobs, even though employees may not necessarily be given adequate means to discharge their new responsibilities? Furthermore, Hales [2000: 502] also poses the question of whether empowerment is specifically about "more autonomy or choice over how work is done or greater voice in the [wider] decisions of the work place or organisation as a whole". Even the optimistic literature suggests that the first option is more likely for ordinary employees, though middle managers may be empowered to encourage wider innovation and change.

Overall, then, it is management that empowers employees, and such initiatives have tended to cover direct workforce involvement over only a relatively small number of issues usually connected with the production process or service delivery. Furthermore, Wilkinson [1997: 47] develops the argument that direct management communication of 'company

challenges' reduces the room for maneuver of operators and employees, and it is in this context that managers allow employees to communicate horizontally so they can collect information outside their workgroup and are able to make effective customer-related decisions (e.g. replacing defective products). Managers can also influence outcomes by their selection and allocation of employees to particular teams. In short, there may be some greater autonomy and responsibility at the point of production or service delivery, but it is usually tightly circumscribed.

Empowerment and self-initiative of employees are encouraged through the direct participation of employees, which is defined by Wilkinson and Dundon [Wilkinson, Gollan and Marchington and Levin (eds), 2010: 168] as, "any form of delegation to or consultation with employees", or as narrow as a "formal, ongoing structure of direct communications such as through team briefing".

Empowerment and participation of employees is achieved through the language of "soft Human Resource Management" practice that communicates "images of care and nurturing in order to develop employees as valuable members of the organization who help it achieve its goals" [Harley and Hardy, 2004: 379]. Paraphrasing Wilkinson and Dundon [Wilkinson, Gollan and Marchington and Levin (eds), 2010: 174-179] who identify the main features of Direct Participation of employees:

i) Information sharing: Information on management plans and challenges is passed downwards to employees to win them over and make them empathise with its business decisions and challenges in order to bring out greater employee commitment.

ii) Upward problem-solving techniques seek to go further than communications by tapping into employee ideas for improvements. As with communication methods, problem-solving practices have been inspired by Japanese work systems and encourage employees to offer ideas for improvement. By leveraging the suggestions of employees management can improve its production practices and seek to promote a more co-operative Industrial Relations climate ...Workers communicate to managers rather than managers transmitting

information to workers. Upward problem solving begins with workers letting management know that there is a problem and allow them to deal with it.

iii) Voice over: Employees are allowed to air their views and grievances openly and independently through a voice system rather than being able to raise just work-related issues.

iv) Task autonomy: Allowing work groups greater control of its activities. These work groups are known as team working or self-managing teams.

> "The work group itself decides details of production and work group norms to a much larger extent than the former job restructuring schemes. Such teams can have autonomy, concerning task allocation and scheduling, monitoring of attendance, health and safety issues, the flow and pace of production, and can also be responsible for setting improvement targets." [Wall and Martin, 1987 cited in Wilkinson,1997,48]

v) Self-Management: Work groups manage their production by themselves but are constrained by limits set by management.

Wilkinson and Dundon [2010:177] also point out that the above mentioned features of direct participation are overlapping and are by no means discrete entities such as, for instance, information sharing, which overlaps all other features as an important pre-requisite rather than an independent feature in its own right.

Expressions of direct participation and self-initiative may range from worker participation in 'High Involvement Management' to varying degrees of Total Quality Management regimes. High Involvement Management practices are characterised by team working, pro-active suggestion schemes, rapid idea generation, functional flexibility in their work, skill acquisition and team work [Bowen and Lawler, in Wood in Wilkinson, Gollan and Marchington and Levin (eds), 2010: 410]. The main features of TQM identified by Hill and Wilkinson [1995: 9] are as follows:

a) Customer focus: its customer centric approach to satisfy the quality requirements of workers who are in the next stage of the line who are termed as internal customers and most importantly the customers of the end product. b) Process orientation. The activities performed within an organization can be broken down into basic tasks or processes (transformations of inputs into outputs). Basic processes are linked in series or "quality chains" to form extended processes. The production process, for example, is modeled as an extended chain of interlinked basic processes. c) Continuous improvement where employees continually strive to improve production processes and quality by identifying and implementing requisite changes.

However, detractors of employee participation couched in the nurturing and empowering vocabularies of soft HRM point out that implications for employees in practice might remain unrecognised by advocates who herald participation and empowerment as the stepping-stone towards employee commitment and organisational excellence.

> Practices, such as work intensification or downsizing, which may lead to 'bad' experiences and material consequences for employees, can be enacted because the convergent, benevolent identity of HRM will conveniently construct them as an ideologically 'good' thing. This combination of convergent meaning and ambiguous practice makes HRM a powerful tool for managers. [Harley and Hardy, 2004: 393]

With these arguments in mind, sceptics about empowerment and indeed many of the detailed ethnographic studies [Graham, 1995; Delbridge, 1998; Durand and Hatzfeld, 2003; Rinehart et al., 1997] point out that the main goal of empowerment is a shift away from joint regulation to forms of participation that do not challenge management prerogative. Sometimes 'empowerment' is specifically framed in terms of eliciting the efforts of individual employees, but more often, where it is directed at clusters or 'teams' of workers, it is management that generally defines the parameters and objectives of such 'teamwork', thus undermining any independent collectivity. Thus, as the case study material mentioned above shows, there have remained vast gaps between the

articulation of a rhetoric of empowerment and its implementation, which often runs in parallel with a reduction in workforce numbers as teams are required to work constantly towards the reduction of labour costs, as illustrated particularly in the Graham [1995] and Rinehart et al. [1997] studies which are considered more fully below.

Later sections of this chapter will: review in more detail the implications of the rich case-study literature for our understanding of management policies; consider the character of worker responses to such policies, with particular attention to the scope and limits of collective mobilisation; consider how to conceptualise the wider context in which firms operate and pursue change management policies; and address the ways in which firms may borrow, adapt or 'hybridize' management policies developed by pioneering firms and/or promulgated by leading consultancy firms.

In the above discussion I considered the rhetoric of empowerment, and registered the manner in which regimes of employee participation manifested themselves and criticisms leveled against them for their distance between what they promise and their actual intentions. The research questions that arise from the above discussion are:

- How far has management at my case-study firm embraced a rhetoric and/or policy of empowerment?

- To what degree has this rhetoric and policy actually evolved in terms of devolved powers and responsibilities and for whom?

- Were there distinctive limits to the extent of empowerment in this firm?

- What features facilitated and what features undermined worker commitment to empowerment?

2.3 Principal themes in the ethnographic literature on the implementation and effects of lean manufacturing

The advocates of lean manufacturing such as Womack et al [2007] tend to present it as a total package of techniques that need to be adopted as a basis for major productivity gains based on a transformation of employment and production relations with line managers and production management interloping into what was considered as the domain of the HRM department and its assemblage of QWL measures. This package includes new forms of team working, just-in-time production, direct worker responsibility for quality and kaizen (continuous improvement). Furthermore, they argue that such innovations generate new, more harmonious and co-operative relationships among workers and between workers and managers, characterised by the practical empowerment of workers on the shop floor. It incorporates the main tenets of TQM schemes and high involvement models. However, the ethnographic case studies which I examine in this section provide a more sceptical view of these changes based on detailed workplace research. In particular, they often draw on labour process theory to highlight the negative experiences of workers and the gap between the rhetoric and the reality of worker empowerment in the workplaces they studied. In addition, case-study research can also raise questions about the varying ways in which lean manufacturing ideas are actually adopted in different firms, rather than simply conforming to a universal template. As such, these ethnographies provide more detailed guidance on key issues that I need to investigate in my own research, building on the issues raised already in this chapter but giving added focus to my research agenda.

The rest of this section starts by looking at ethnographic findings about team-working, because this is often seen as the basis of lean manufacturing. It then considers other key innovations that surround team-working and are claimed to give lean manufacturing its distinctive character, by considering the critical ethnographic

analyses of 'Just in Time' (henceforth JIT), detailed monitoring of the production process, and continuous improvement. It then provides some brief comments on studies of other forms of work organisation as a context for discussing the conditions which have influenced the adoption and adaptation of lean manufacturing methods in the ethnographic case-study workplaces.

Team-working has long been recognised as an important feature of Japanese corporations in their specific national institutional context [Pudelko in Haak and Pudelko, 2005: 189; Sako, 2006: 108-113] but more recently it has also been identified as an important feature of management innovation in the West in recent years. Team-working implies reorganising work tasks: it is a socialisation device aimed at overcoming conflicts between employees and especially between management and workers. In the context of the manufacturing industry, citing Buchanan, Danford, [1998: 410] identifies the main features of team work in the context of modes of work organisation such as lean manufacturing:

> The key features of Japanese teamworking are drawn from a Toyota model which is little different to classic scientific management: 'minimum manning, multi-tasking, multi-machine operation, pre-defined work operations, repetitive short-cycle work, powerful first line supervisors, and a conventional managerial hierarchy'. [1994: 219]

These features of team work differ from the team work of the Swedish socio-technical mode of work organisation, where operators manage themselves within their team with a lesser degree of managerial intervention as compared to lean manufacturing [Danford, 1998: 410]. Workers in the socio-technical mode of work organisation completed a number of complex but varied tasks which provide with them avenues to apply their intelligence and discretion and do a great variety of operational tasks with long cycle times, unlike lean manufacturing,

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where the main components of job routines and cycle times are clearly spelt out by management.

In the management literature, developing a cell-base team structure is seen as helping communication and acceptance of change, and through peer pressure reduces the need for tight supervision and other forms of external control, which in turn facilitates de-layering. Rubenstein and Kochan [2001: 141] identify the advantages team-working brought about in their study of the Saturn plant instituted by a partnership of the UAW and General Motors in America, as follows:

> The key contribution that Saturn's teams (and teams of any other organisation) make are to enable rapid co-ordination and enhance problem solving on a continuous and, as needed, periodic basis. Teams can do so if they bring grounded and diverse expertise to bear on a problem and can act to implement ideas that have merit [.]

However, critiques of the rhetoric of team work in lean manufacturing, such as Legge [2003: 83,84] citing Parker and Slaughter, point out that the nature of job routines within a team dictated by those who regulate the pace of work, the job routines of individual members are characterised by 'peer-surveillance' and the members adhere to "management by compliance" and "the nature and pace of work are prescribed by whoever has the 'whip-hand'.

Gall augments to Legge's portrayal of team work by citing Parker and Slaughter of teamwork being hard, not to say oppressive, and lacking any potential for enjoyment. It also suggests that work will be the same, day in, day out, and relieved only by the odd rest day." [(Parker and Slaughter 1985) p365,cited in Gall, 2010]

According to Cooper [(1973), cited in Wilkinson 1998: 48], such groups can have 'skill discretion' (solving problems with the knowledge of the group) and also 'means discretion' (choice in organising the means and tools of work), but it should be

noted that they are still working within a structure determined by senior management and remain focused on operational rather than strategic issues. In broad terms this means giving more responsibility and greater autonomy to the work team and replacing immediate supervisors with team leaders. At its most basic level this may mean removing inspectors from the production line as workers take on wider responsibility, or it may involve the more significant restructuring of work units into cells (often around product flows) or even the creation of semiautonomous work groups now commonly referred to as self-managing teams. The most ambitious versions of this differ from job rotation, enlargement and enrichment in that the work group itself decides the details of production and work group norms to a much larger extent. Wilkinson cites the observation of Wall and Martin [(1987) cited in Wilkinson, 1998: 48] that such teams may have task autonomy concerning task allocation and scheduling, monitoring of attendance, health and safety issues, and the flow and pace of production. They may also be responsible for setting improvement targets (see the discussion of Kaizen below) and for the recruitment and training of temporary staff, as well as controlling overtime levels.

In the workplace ethnographies, however, the scope of team autonomy is generally much more circumscribed, focusing on guaranteeing work pace and quality, fine-tuning the internal allocation of tasks and contributing to continuous improvement. On this basis, Graham [1995: 148] argues that the team concept in the firm she studied, a non-unionised Japanese green-field auto 'transplant' in the early 1990s, obfuscated the capitalist worker relationship because it created tensions within the team which had to meet defined production targets and monitor each other rather than facing direct supervision. Graham shows that worker socialisation takes place informally through the team culture and formally through orientation and training, and in her opinion this constitutes an invasion of the territory within which workers had maintained control in

more conventional manufacturing firms. As a result, Graham argues that social control was attained by management through the self-regulation of team members, which involved expressions of the team's displeasure over lagging team members, though she also notes some limits to worker consent even in this unorganised factory. In turn this control over shop-floor culture, combined with technical control through JIT and kaizening, provided the basis for work intensification. Rinehart et al. [1997], in their study of the Canadian CAMI plant (a unionised joint-venture between General Motors and Suzuki) undertaken through the 1990s, note the top management vision of a social system that reinforces production but focus their investigation more specifically on the development of a form of vocational identity through training programmes and the dynamics of social interaction within the work teams themselves which 'enabled' employees to become team players. On this basis, Rinehart et al. [1997] argue that teamwork, at least in this unionised plant, actually represents a 'contested terrain' and can have varied forms and outcomes. Particular configurations depend largely on how team-working fits into the broader social and organisational context, and the predispositions and power resources of economic actors inside and outside the firm.

JIT "is an important constituent of lean manufacturing where components are delivered as they are required rather than being kept at the store.

> "Graham [1995: 77] identifies an important characteristic of JIT wherein [..the burden of material shortages is transferred to the line workers and material handlers. Each material handler is in charge of stocking all the parts for approximately three times along one side of the line. This involves hundreds of parts ...With just-in-time-production, parts are not often not kept in stockpiled storage areas but are delivered just in time."

JIT minimises buffer stocks between processes by delivering components as needed and seeks to move products continuously along the production line. According to the advocates of lean manufacturing, this makes the production process more transparent, leaves problems and faults visible for all to see and exposes the ability of workers and managers to 'hide behind' surplus components. These features are symbolised by the beeping of the andon lights when the line has to stop. As a result, the company is able to visualise product flow and inventories, and mistakes in the production process can be seen and rectified. In theory this should deliver line stability and flexibility at the same time. A consequence of JIT is that operators are on their toes all the time and because components are timed to be exhausted and replenished at the start and end of a tightly timed job-routine routine respectively and, that workers are under substantial pressure to complete a sequence of tightly coupled tasks within their job routine. Operators' job routines are, in turn, carefully timed to measure every bodily movement and time taken for each operation. The quote below by Parker and Slaughter [1989: 74] identifies the main attractions of JIT for plant managements but point out the deleterious repercussions for operators:

> A JIT program can mean big corporate savings: less capital tied up in work in process, lower costs of warehousing and material handling, scrap, and faster delivery to customers. But the costs of JIT borne by workers are speed-up, the loss of buffers and therefore the ability to vary the pace of work, enormous pressure on the job, and loss of jobs.

The CAMI case study [Rinehart et al., 1997] explores how JIT was used to make the entire job cycle transparent and to remove opportunities for workers to vary or slow their work-rate and hide this within the production process. This was accompanied by speeding up the line without consulting experienced line operators. As in Graham's case study, close

surveillance and rapid feedback avoided stockpiling of components or faulty production and institutionalised standardised tools, components and job routines.

In her case study, Graham illustrates the contradiction in the philosophy of line stop. On the one hand, an operator was empowered to stop the line if she/he found difficulties in completing the job cycle or detected a flaw in the product that was moving to the next stage. On the other hand, however, in reality the line never stopped unless absolutely necessary and vehicles moved on even if parts were missing. This implied that the team had to work down the line installing the part after the other parts had been attached, which was difficult and time consuming. Operators lagged behind and in order to prevent this often ran behind the material handler to warn of the impending material shortage.

My review of this aspect of Graham's case study leads me to question whether lean manufacturing always leads to work intensification and surveillance of the work process, which is the conclusion common in other studies of the operation of lean manufacturing. The question arises whether a particular configuration of lean manufacturing precipitates work intensification or whether it is a case of improper implementation leading to an incomplete realisation of the system effects.

My reading of Rinehart et al. [1997] suggests that lean manufacturing was seen by top management as a dynamic and flexible system. It was designed to respond rapidly to fluctuating production quotas, equipment breakdowns, part shortages and unbalanced workloads through a combination of frequent line speed changes, oscillating overtime requirements and almost constant line rebalancing within and across teams. Rinehart et al. [1997] argue that it was an attempt to standardise the work process while simultaneously aiming for quality and numbers, a feature also reflected in accounts of the operation of NUMMI, a US joint venture [Adler, 1992: 8-14]. Thus the core premise of

lean manufacturing is to maximise output with minimum cost and minimum labour, but as the CAMI study showed, this also amplified worker dissatisfaction.

Another aspect of lean manufacturing, already implicit in the above discussion, is the monitoring process. In the SIA plant studied by Graham [1995: 112-114] employees were monitored through a computerised assembly line which set the pace of work and also focused everyone's attention on any lagging team. The process of pulling the cord above the line indicated that there was a problem for everyone to see and the playing of computerised music unique to each team indicated that everything was normal when the cord was pulled again.

The computer also monitored the number of times the cords were pulled and this set in place a continual process of measurement against other teams' performance, the pace of output and the quality of the products. This, together with time study, increased the stress on individuals in the team by pointing the spotlight on them. The visibility and apparent transparency of the production process was an important measure in keeping up the pace and ensuring that operators would not 'hide' within the job cycle, so they could not 'take a breather' while other members covered for them. The importance of the monitoring process in lean manufacturing is also pointed out by Durand and Hatzfield [2003], in their study of work reorganisation in a long-established, unionised, Peugeot car factory in France through the late 1990s. They note that the coordination of operator skills and the flexibility of the lean manufacturing system were regarded as prerequisites for the plant's survival. The diversity of models required a closer and sharper eye on the operators on the part of the supervisors, but also better-trained operators who now had to deal with a substantially larger mental task list. The training imparted to operators in preparing them for the lean manufacturing mode of work organisation sought to specify 'the exact gestural technique' [Durand and Hatzfield, 2003: 24] to be used in a way quite different from the tacit skills that had

traditionally been picked up on the shop floor. This meant that processes of negotiation and autonomy among line workers were undermined by lean manufacturing, with its emphasis on written codified rules and the visibility of the production process through measures such as value stream mapping.

In terms of kaizen, the core premise is that worker control is limited to the area of work methods, and even there it is constrained by the parameters of the production process as a whole. SIA, the case study company of Graham [1995], summarised the core message of kaizen as that of always searching for a better way. Thus on the one hand workers were expected to make suggestions and continuously take part in improving their productive efficiency, eliminating waste in their bodily movements and reducing the cycle time of their job routine. But on the other hand, management persistently intervened in this process, through constant time study [Graham, 1995: 106] and appropriate workers' creative tacit knowledge to 'use it to its advantage'. On this basis she argues that a combination of kaizening, JIT and team work concentrated the work, increased peer pressure through team work and accelerated the pace of work. In her view, kaizening led operators to feel that their knowledge was being appropriated, and indeed she agrees that it formed a means through which management attempted continually to gain control over workers' creative knowledge and use it for its own advantage. It also meant constant disruption as changes in the workstation were suddenly introduced, interfering with the learning of work routines and undermining the scope for finding some space in the process, or 'making out'. Graham [1995: 106] who draws this term from the sociologist Michael Burawoy [1985], uses 'making out' to mean "The idea that workers play games to create spare time yet still make quotas and, by doing so develop a consensual relationship with production- was effectively undermined at SIA".

Just when a worker had a station under control with a few seconds to spare, he or she ran the risk of being kaizened, as management intensified the job by

appropriating that worker's knowledge of ways of saving time in the job routine. In summary, then, Graham argues that kaizening is not only designed to capture workers' secrets to gain spare time, but also when, how and where these ideas are implemented. It therefore is an extremely effective procedure. It essentially convolutes the making out process which, under other management systems, benefits the workers into a process that puts continuous stress on the worker and forces workers' compliance [Graham, 1995: 138]. Indeed, as Durand and Hatzfeld [2003: 165-173] document, workers are required to follow tightly prescribed job routines, while still being expected to suggest improvements to the ways in which they perform each operation to ensure requisite end product quality.

An integral aspect of management policy in the CAMI case study by Rinehart et al. [1997] was that, alongside the elimination of production buffers and pressure to minimise line stoppages, kaizen was used to eliminate floating workers, despite the priority that the union gave to such floaters to allow for rest periods and cover for injured workers. Thus in this case, kaizening threatened to reduce the number of workers in each team, with visible consequences for work intensity and worker wellbeing, and this became a big bone of contention between the workers (and their union) and management. The CAMI case study [Rinehart et al., 1997] also points out the importance of management-led kaizen teams alongside operator-led kaizening, which lead to the implementation of management-designed measures without taking on board operators' opinions. Though worker suggestions could lead to cost saving and improvement in the efficiency of operations on the assembly line, such suggestions were often not recognised, while rather routine or mundane suggestions were highlighted just to give the impression that workers were genuinely involved in the kaizen process. This then led to disenchantment among workers and their non-cooperation with management. More broadly, kaizening often intensified the pace of work, which made operators

sceptical about management's discourse that it empowered workers. Against this background the workers and the union at CAMI were only prepared to accept kaizen if it matched a worker's interest. Thus they characterise the union stance on kaizen in the following terms: if these practices jeopardised workers' rights, degraded working conditions, and eroded union independence, they should be contested.

> Rigid standards must be rejected because they inhibit worker discretion. Kaizen should be resisted if it intensifies work and makes it more stressful. And if lean manufacturing translates into the company's inability to accommodate older or injured workers, it should be opposed. [Rinehart et al., 1997: 185-6]

Shimizu [2000] classified Kaizen into one form that is led by the supervision of senior management and the middle managers as a part of their functional roles and another kind of kaizen which stems out of suggestions offered by workers through quality circles and a suggestion system. Kaizening changes in Japanese firms such as, for instance, redesign of production lines in practice and any other far reaching production related changes, came through working of integrated teams of managers. Kaizening for workers was viewed "as training them to look for problems, searching measures to take and solving problems" [Shimizu: 2000:14]. In practice, major production related operational changes are imposed from above. These far reaching changes lead to widely known "management by stress" [Parker and Slaughter, 2001: 74] and inevitably have to be accepted by workers which, as the above quote from Rinehart et al. [1997] points out, gives very little room to maneuver for workers.

I will now discuss ethnographic evidence about the contexts and variations in management policies. The ethnographic studies that I have discussed above offer detailed accounts of the day-to-day operation of lean manufacturing policies and the

shop floor responses to these policies. However, they also show that management policies and worker responses vary, and these variations are linked to wider contextual differences between the companies and workplaces involved. Here, I simply wish to register the relevance of some of these differences in a summary fashion, as a basis for later discussion of the particular circumstances surrounding my own case-study company and factory.

First, some of these case studies are of green-field sites, but many involve firms and workplaces with a much longer history. In this regard, Durand and Hatzfeld [2003: 160] make an important point about continuities between Fordist production and lean manufacturing. Team work is often imposed over plants that have much older supervisory arrangements. In their case-study, standardised work, short job cycles, line based work, JIT pull processes, and several layers of production management precluded anything other than the most mundane existing team discretion, underlining that in such circumstances, management only implements what it prioritises at a given point of time even if the results are partial and incomplete.

Durand and Hatzfeld [2003: 44] suggest that management at Peugeot attempted to "rationalise" the line, to halve cycle time and double the speed of the operators, and that it was these targets that were crucial to management, rather than imposing discipline on workers as an end by itself. However, even within this seemingly inflexibly and top-down model, there was negotiation and adjustment between different agents [Durand and Hatzfield, 2003: 107]. First, within the quality monitoring process there was perpetual ongoing negotiation between different departments. Second, they note that the notion of quality in the lean manufacturing process has now become all encompassing, and subsumes such issues as negligence and discipline, which were traditionally the subject of negotiation between the worker's representatives and

management. As such, the quality control system acts as a source of pressure but also forms a (limited) space for negotiations and adjustment between actors.

Therefore, Durand and Hatzfeld [2003: 172-175] explore a multi-leveled field of negotiation between the production control department, the programme controllers, and the assembly line managers with their supervisors, and at the two ends the sales department, which procures the orders and provides the rigid yardstick within which negotiation occurs. On this basis, they suggest that the detailed operating rules in the assembly plant are never absolute but are in a perpetual state of redefinition and interpretation, at least by management. At the same time they also register the strengths and weaknesses of trade union efforts to contest management's lean manufacturing policies, the strengths being linked to a longstanding tradition of militant workplace unionism while the weaknesses reflect increasing divisions among workers, especially along educational and generational lines. Second, the implementation of lean manufacturing is also influenced by changing pressures on the plant, reflecting both changes in product markets and shifting senior management agendas. Thus the CAMI study highlights how the optimistic premises of lean manufacturing, celebrated by Womack et al [2007] as a return of job enrichment and intelligence of the worker, were undermined by the evolving policy priorities of CAMI management. The talk of empowerment was very real at the outset and was represented by the practices of a few managers, but their departure had real implications for many operators' prospects of empowerment. Furthermore, job rotation and flexibility were often ignored when production demands intensified. When market conditions dictated production, much of the empowerment rhetoric was abandoned and the aspect of lean manufacturing that increased the pace of production replaced the empowerment rhetoric. Thus Rinehart et al. [1997: 177] quoted the observation of one manager:

> When you're not at full production you have the luxury of a lot of
> things – a slower line or downtime. There was time for people to work

on suggestions, head over to repair to work on a quality program. Now

that we're at full production, we have to run at maximum speed and

everyone is assigned to their teams, and that's pretty much it.

This discussion connects with the earlier observation of Marsden [in Edwards,

2003:348], that a developmentalist discourse could be fast replaced by a more urgent cost

reduction discourse leading to direct control. Additionally, many of the specifications in

the lean manufacturing manual of the company were rendered irrelevant because of rapid

shifts in market demand and the product mix that was needed for the day. Changing

conditions, especially in product demand, were so rapid that it was impossible to keep

lean manufacturing manuals constant, which meant that the lean manufacturing system

was subject to continuous modification and compromise because the standards and

baselines kept shifting in response to every crisis of production.

At the same time the union representing the workers at the plant, the Canadian

Auto-Workers Union, was endeavouring to develop new policy responses to the

challenges of lean manufacturing, in a way that was perhaps more sophisticated than the

Peugeot unions discussed by Durand and Hatzfeld [2003], highlighting the potential

importance of different labour movement traditions and strategies as well as market

conditions and management policies.

Thirdly, Delbridge's [1998] comparative ethnography of two factories which he

labels Nippon Co and Valley Co respectively – one characterised by the capacity of

management to insulate the workplace from many sources of uncertainty, and the other

characterised by being buffeted by a turbulent environment – underlines the ways in

which such wider conditions influence the policy options open to plant management and

the whole character of the 'negotiated order' of management-worker relations.

In the firm Delbridge calls Nippon Co, the firm had a dominant position in its product market and had integrated a compliant trade union into its management process. In this context, production was planned in terms of a managerially pre-ordained set of shop floor activities. The key features of the lean manufacturing ecosystem in Nippon Co entailed tight coupling of internal processes, making individual workers' pay contingent upon group performance, and decreased reliance on informality but increased clarity and visibility of responsibilities. These policies had resulted in intensified pressure on workers to attend work even while feeling unwell or finding it difficult to keep up with the line.

The system of 'internal' or 'bounded' JIT, which tied production to the preceding assembly line, minimised the number of occasions where workers could negotiate with each other or secure better terms in the wage-effort bargain. Overall this process control exerted by Nippon Co was experienced as intrusive, restrictive and stressful by the work-force, who felt obliged to comply but were also consistent in their refusal to participate in any discretionary activity such as problem solving. Consequently the dynamic improvements claimed by the lean manufacturing model were missing and in many ways management engaged in quite conventional forms of "direct control" [Delbridge, 1998: 192] but Delbridge also shows that this company could benefit from lean manufacturing techniques even without much operator participation and involvement.

By way of contrast, the management at Delbridge's [1998] other company, Valley Co, could not implement lean manufacturing. It was reliant on personal relationships amongst line managers and operators and informal solutions to cope with unanticipated developments in the system. Several specific features of the context of the firm contributed to this state of affairs. These included relations with suppliers, the unpredictable nature of customer demand and the state of the equipment in the plant, all

of which compromised the formal management systems established by plant management. When these systems did not deliver what they were designed for, then what Delbridge [1998: 28] calls 'directed chaos' involving a meeting ground between getting people to do that little bit extra and turning a blind eye to the breakdown of designed rules. In particular management relied upon the cooperation of operators in taking responsibility for more than their designated job tasks.

In this context the management style could be characterised as opportunist, habitual, tactical, frenetic, reactive, ad hoc, and fragmented [Delbridge, 1998: 180]. Furthermore, the resulting porosity in the formal system opened possibilities for workers to exploit, as they sought to wrest control over their work experience from management. In some cases such worker resistance could then be a further source of uncertainty for management.

This comparison between Nippon Co and Valley Co raises important questions for my own research project, because it emphasises how management policies in regard to work organisation, the control of workers and the work process, including patterns of pressure and compromise, depend on (changing) technological and market conditions, but also the earlier history of management practices and worker/union responses in the company. In some ways these observations echo earlier discussions in industrial sociology about how different manufacturing processes, such as process production or assembly manufacturing, provided distinctive contexts for the evolution of management policies [Fox, 1966: 16-17, 26], but they also emphasise the importance of changing market environments and the ways in which managers could sometimes reconfigure the contexts in which they worked. One specific feature noted by Delbridge [1998], which may be a feature which plant managers have to cope with but may also be one that they can change, is the role of suppliers.

In another extreme case, such as Volkswagen's Resende work organisation experiment, the component suppliers were brought inside the factory as assemblers. Here, their role has been transformed to one of "*subcontractor* and an involvement in the day-to-day running of their part of the assembly process. In recognition of this, they were directly involved in the construction of the new installation and contributed $50 million of the initial $300 million investment in the plant. [Ramalho and Santana, 2002: 759]

By having all suppliers under one roof, while each remains an independent entity, and plausibly subcontracting labour even amongst these suppliers, it becomes difficult for such workers to find a collective voice. However, though the role of suppliers has recently been given some attention, it can be argued that their impact on the labour process and industrial relations has not been dealt with in sufficient detail in the literature, especially in regard to changes to assembler/supplier linkages within the global supply chain.

This discussion surveys the debates around the features that lie at the heart of modes of work organisation such as lean manufacturing and its implications for workers. It reiterates the main analytic focus of this thesis, which is to understand the means deployed by managements to achieve organisational objectives and its resultant implications for employees. Valuable insights from studying the ethnographic literature are: its undercutting of the "one best way" [Danford et al, 2005: 8] status as being the only road to corporate success declared by evangelists of lean such as Womack [2007] through "working smarter not harder" [Danford et al, 2005: 8]; underline its contextual nature and compromises and in reality its role as a means for management to exercise control over its employees; and its leading to greater work intensification for workers.

With the above discussion in mind, the questions to the research agenda of understanding change management, its experience and implications for employees within my project are as follows:

- What were the key features of the change management strategy in my case study firm?

- In what ways did they involve JIT, kaizen, monitoring, etc.?

- What aspects of these policies were successfully implemented?

- What tensions and limitations arose in the implementation of these policies?

- How far did lean production gain the consent of the workforce and in what ways did it face resistance?

2.4 Worker and Union Responses to Management Policies and Prerogatives

The workplace ethnographies discussed above suggest that significant elements of many workers' experience of lean production are quite negative, primarily because of work intensification and declining job security, and that these features can undermine management claims that workers will be empowered in a more positive way by the changes they are introducing. At the same time these ethnographies document a wide range of worker responses. Some workers, such as those in Delbridge's [1998] Nippon Co (which dominated its market and recruited in an area where employment prospects were difficult) largely accommodated management demands, though they resented overtime and tried to avoid involvement activities where these were discretionary. In this case there was a union at the firm but it was largely quiescent and accepted management priorities. Some workers, such as many of those in Graham's [1995] study, tried to resist some management demands, such as acceptance of unscheduled overtime, in more subtle ways, through informal understandings whereby they obstructed the work flow. The

degree of resistance varied with the position and gender of workers. Women workers who had children to care for were forthright and blunt with management and even refused when there were calls for overtime, though others participated in management's attempts to 'manufacture consent'. However, there was no trade union as unions had been excluded from Graham's factory, helping to explain why worker resistance was limited and largely covert.

In other cases, trade unions articulated worker grievances in a more active way, as was the case in the firms studied by Rinehart et al. [1997] and Durand and Hatzfeld [2003], but even in such cases there were important differences in the coverage, unity and efficacy of trade union representation. At Peugeot both the workforce and the unions were divided, partly along inter-generational lines, though this did not preclude substantial resistance and bargaining by the more militant union. Thus the older permanent workers had seen change management programmes come and go they had survived and were more likely to participate in resistance, though some were more eager to fade into the background. Meanwhile, the younger workers on probation were often enthusiastic and eager to embrace change management as they aspired to upward mobility and career growth. Furthermore, both the NUMMI [Adler, 1992] and the CAMI [Rhinehart, et al,1997] cases illustrate how the trade union of was initially a cooperative partner in management's intensive attempts to implement lean manufacturing and in the latter the case the CAMI's union was initially only lukewarm in its protest against the slew of incremental lean innovations rolled by CAMI's plant management. [Rinehart et al., 1997]. It was only later in NUMMI [Adler, 1992: 45-52], with the growth of workers' resentment, that the union was forced out of inaction to protest at management's policies, and in the CAMI case the union was forced to protest more robustly and take a proactive stance against lean manufacturing [Rhinehart et al,1997,187-188]. Meanwhile, subcontracted workers and temporary labour in some of

these factories found themselves fighting a day-to-day battle just to hold on to their jobs and had little scope for resistance. Indeed, their responses were determined primarily by the character of the supplier relationships, whether or not there was a trade union in the plant [Graham, 2006: 343-346].

In the rest of this section I will look briefly at some wider discussions of industrial relations and trade unionism to locate my ethnographic findings in terms of a broader framework that addresses the articulation of workplace grievances and the role of trade unions in the collective organisation and representation of workers. In particular, existing debates on the manner in which different categories of workers and types of unions respond to change management, and when and who might or will resist, will be examined here. This will be set in the overall context of the widespread decline in trade union coverage, membership [Hyman, 1999: 3] and activity in many countries over the last thirty years or more.

Against this broad background, Kelly [1998] has drawn particularly upon 'mobilization theory' to explore the processes involved in the formulation of shared grievances and the pursuit of common interests by workers, especially through union organisation and activity. This leads him to focus first on the conditions in which workers may develop a sense of grievance and injustice, and then second on the circumstances in which such injustice is attributed to the actions of an employer and respond collectively to them. A central feature of Kelly's argument concerns the presence of an effective organisation through which worker mobilisation could occur, coupled with confidence among those workers that collective action will be efficacious and result in the righting of some injustice. In particular he highlights the intervention of leaders who frame issues and legitimise collective action in the face of collective opposition. In this respect he develops a theme that was emphasised earlier by Eric Batstone and his collaborators [Batstone et al, 1979] in their discussion of the role of 'leader' stewards in articulating

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union principles (see below), but gives this argument a more radical form by explicitly recognising that the ideological horizons of trade unions may go beyond collective bargaining.

While Kelly's [1998] discussion focuses particularly on the role of union leaders and activists in articulating grievances, it has also been recognised that wider patterns of work and community socialisation and processes of intergenerational transfer play important roles, while management traditions and ideologies can also become influential in forming worker responses. Thus the formulation of grievances and wider conceptions of shared interests involve social complexity and can generate ideological ambiguities. In this context, rival conceptions of injustices and shared interests may come into play, which can lead to mutual recriminations and accusations of, for example, 'selling out' or 'sectionalism' [Batstone et al., 1979].

This leads to an appreciation of the wide variety of perspectives on employment relations and understandings of workers' interests both within specific unions and across different trade unions that may have prior ideological commitments, or represent specific interests or espouse wider agendas that go beyond their functional role of representing workers. Thus unions may be linked to larger ideologies and may embody different degrees

of pragmatism, and, as a result, differ in their inclinations to challenge the dominant structure of industry, whether through strike action or political mobilisation. At the factory level, Batstone et al. [1979] emphasise, through their comparison of manual and white-collar and also leader and populist stewards, that workplace trade unions are not uniform or timeless entities, but differ in their orientations to bargaining with management and in their relationships with their memberships. Meanwhile, Hyman, writing in the later half of the 1970s [Hyman, 1979b: 42, in Darlington and Upchurch,

2011: 89] has emphasised that the process of bureaucratisation could alter the relationships between union leaders, activists and members in the manner described:

> Shop stewards too [became] "managers of discontent": sustaining job control within the boundaries of negotiation with management authority and capitalist priorities, rather than (apart from the most exceptional circumstances) pursuing frontal opposition.

Hyman termed this phenomenon 'the bureaucratisation of the rank and file' [Hyman, in Mcllory, 2012: 63] which may mean that the effectiveness of workplace union organisation becomes compromised, either by becoming an end in itself or even by unwittingly becoming an agent of management. The main characteristics of this trade union bureaucracy identified by Hyman [1989a: 181-182, in Darlington and Upchurch, 2011: 79] are comprised of three sets of social relations: a separation of representation from mobilisation, a hierarchy of control and activism, and the detachment of formal mechanisms of policy and decision-making from the experience of members. However, as an analytic heuristic, it may be valuable to register a departure between Hyman's writings in the 1970s-80s, and his subsequent later writings, which place less emphasis on these tendencies and instead highlight a series of dilemmas that face all unions and which are only partially resolved in different ways by different union traditions.

Against this background, many students of industrial relations have emphasised that bargaining between unions and management can create a web of rules that forms a basis for accommodation and relative stability, but there has also been recognition of the fragility and potential disruption of such agreements. This forms the background to the discussion of the role of shop stewards in "the organization of workplace conflict and accommodation" by Batstone et al. [1979]. In particular, these authors suggest that those they call 'leader stewards' were most effective because they were aware of the

balance of power and the nature of rules existing in the plant, and by articulating their demands at opportune times were able to give legitimacy and plausibility to them. What mattered were the gains these stewards could make for their members, on the one hand by articulating grievances in a way which generated membership unity and (where necessary) mobilisation, and on the other hand by a realistic calculation of the bases for a deal with management. This was captured in a quote from a management informant at the plant, who commented that:

> "The personal approach is important. You've got to be able to talk to the stewards without them immediately taking a conflict line. I like to keep an open door. The real stewards who lead their men get rewards for them; [the men] may have a lot of moans against them but you find that they're very rarely defeated in elections and they're [Leaders] not soft on management. Often they're very tough but you know that if they agree to something the section will follow them and they'll tell the section off if necessary. [Batstone et al., 1979: 166]

This emphasises that there were incentives for management to make concessions to workers represented by such 'strong bargainers', even if the concessions also imposed costs on the firm. Similarly, there were incentives for leader stewards to impose discipline on their members as well as to articulate their grievances and protect their interests. That is why managements sometimes prefer stronger bargaining arrangements with unions and leaders who have a steady pair of hands instead of populists and stooges who might lack the authority to defend the agreements reached.

On this basis, managers might refuse concessions or unions might resort to strike action, but such decisions would reflect careful assessments of the costs and benefits

involved, a feature that has been emphasised in Chamberlain's analysis of the calculations informing the offers made and the sanctions deployed during collective bargaining. It should also be recognised, however, that both Batstone et al. [1979] and Kelly [1998] emphasise the significance of the active articulation of grievances and mobilisation of union power, rather than simply pragmatic calculations of existing power relations. At the same time, workers and trade unions face dilemmas about the demands they make and the settlements they accept because, apart from exceptional circumstances, they still retain an interest in the survival of their workplace and, though more equivocally, the profitability of 'their' company.

Thus the existing frameworks of locally agreed rules that guide management and labour are widely acknowledged in day-to-day union activity, while challenges to these rules are usually specific and piecemeal, operating alongside continual accommodation between workers and managers which may take varied forms in different workplaces and even parts of a single workplace. This reflects the risks and limitations of more radical or revolutionary union action, even if union members wanted it. In recent years, however, it has more usually been management that has challenged existing workplace agreements, underlining the limitations of traditional forms of union bargaining in hostile conditions. After all, Batstone et al. [1979] conducted their study in a period and at a workplace where trade unionism was particularly strong and well organised. Contemporary capitalist firms beset with intense competition in their search to maximise financial performance and to satiate the interests of their shareholders and other stakeholders inevitably marginalise trade unions.

I am of the view, based upon my readings from a wide range of commentators, including accounts of managerial strategies by Jackall [1988: 91-95], that with an eye on financial expediency and faced with the threat of withdrawal of mobile investor capital [Wilkinson and Wood, 2012: 379], managers focus on short-term goals, adopt cost-

saving strategies, which Jackall terms as "milking", and optimising their use of existing plants rather than investing in new equipment which would dent profits. This runs simultaneously alongside the devolution of management decision-making towards line management [Davis, 2006: 71; Sisson and Marginson cited in Edwards, 2003: 178] which in my view undermines the HR function, "linking of individualised fortunes to organisational fortunes" [Wilkinson and Wood, 2012: 379]. Line managers, faced with high levels of accountability, then focus on the delivery of the short-term results that will protect their own positions to the exclusion of other concerns. All of these trends over time have cumulatively influenced managerial avoidance of trade unions and their marginalisation.

In summary, management and labour are in a constant state of realignment of rules, for the intensity of worker response and resistance varies in time. In times of crisis, workers may face workforce reduction, plant closures, wage curbs, wage cuts, work intensification and the replacement of collective bargaining by joint consultation, and sometimes an increasingly hostile state response to workers' interests, a trend that continues to hold true in India from the early 1990s until the present [Ramaswamy, 1983: 976-977]. Another repercussion on workers, common to India as well, as Teitelbaum [2011: 38-39] points out, is the trend of managements resorting to increasing capital investments as a means of supplanting workers and reducing headcount. Many companies have sought to adapt their organisational forms and impose new sets of rules that suit their interests, and even creating what some writers theorise as the transitions into newer "regimes of accumulation" [Corriat and Dosi, in Boyer, 2002: 308-309]. All of these developments have weakened union capacities to resist, though as Kelly [Frege and Kelly, 2003: 9-14] emphasises, this has also prompted efforts to renew and remobilise the labour movement.

Some of these developments and also their contradictory features can be seen reflected in the varied and changing patterns of worker response, accommodation and resistance documented in the workplace ethnographies discussed at the start of this section. There have not been many attempts to draw out the wider implications of the findings of such studies, but Edwards, Belanger and Wright [2006] and Edwards and Belanger [2007] have made one such attempt, which is useful in helping me to refine my research questions.

These authors are interested in explaining the varied mixes of conflict and cooperation that characterise different workplaces, and in particular the rare conditions in which participation and involvement schemes offer substantial gains for both management and workers. They recognise the conflicting character of employment relations, but their starting point is a critique of a simple conflict of interests model because it fails to recognise several points. First, the underlying interests of both workers and managers may be quite complex and even contradictory (keeping a job but also gaining better terms and conditions; controlling workers but also eliciting commitment). Second, both parties act upon their own understanding of their 'concerns' rather than on the basis of imputed underlying interests. This provides the basis for mapping different patterns of conflict, accommodation and cooperation in different workplaces, according to how employers prioritise and seek to combine detailed control and long term productivity gains, and how workers prioritise and seek to combine their control of the work process and their longer term influence and security within the enterprise. This allows them to locate and compare a range of detailed workplace studies, to explain why certain options don't exist and to explore the specific dynamics of those that do. In this regard the authors devise two analytic constructs: developmental concerns and control concerns. The firm's developmental concerns address the issue of efficiency as reflected in the reorganisation of work, training, and the development of skills, technological

change, or organisational innovation more generally. These concerns are linked to the firm's ability to respond to new competitive pressures and the continued improvement of the forces of production. On the other hand, control concerns have to do with rights and power in day-to-day relations – that is, the regulation of the forces of production as they are at a given time, in a given context. Edwards, Balanger and Wright [2006: 131] say that they relate to 'power over', the ability to control the other group, with the threat of sanctions for non-compliance. They concern the wage-effort bargain and the managerial prerogative to hire and fire. Labour, they argue, has concerns such as the need for the company to continue to be profitable so that they can continue in employment, but have other concerns such as the secure working conditions and job security. Edwards, Balanger and Wright [2006: 132] develop a nice analytic tabular column model with the column spaces delineating scenarios that extend from the situation in which the managerial agenda is characterised by 'developmental concerns', but with marginalisation of labour and where managerial objectives overpower workers and collective representation, to a mutual gains enterprise scenario in which workers' concerns and interests reflect long-term developmental concerns, often in post capitalist or socialist conditions, and capitalism is at its weakest [workers management of firms for instance], to another where the firm's developmental concerns are under-emphasised and the tussle between management and workers is confined to control. Within these analytic constructs they fit in the ethnographic case such as studies and analyse the points of convergence and departure of capital and labour's concerns, and locate the case studies in the columns wherein either management or labour's interests prevail. For instance, Rinehart's [1997] case study plant, where capital's developmental concerns outweighed labour's concerns – in spite of it being a highly unionised plant. The obverse was true in Volvo, where control of workers was economically unviable because the prevalent wage structure was unsustainable. Finally, they link the survival and erosion of different

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patterns of workplace relations to wider technological, market and (crucially) institutional conditions, which facilitate, preclude or erode workplace cooperation.

As Allan Flanders [1975: 135-137] points out, the workplace is comprised of management and organised labour whose interests vary from one another. Hyman [1978] points out that these interests are rarely reconcilable. In this section, I have tried to excavate how and in what manner workers and trade unions react to managerial prerogative and the extent to which they support or inhibit it. The rhetoric of lean manufacturing, celebrated by its evangelists [Womack et al, 2007], is undermined by ethnographic studies that show the obverse of empowerment and participation that is to say, greater managerial control. Batstone et al.'s approach, for me, breathes fresh air into the study of trade union strategy, trade union alternatives and the dilemmas and circumstances under which trade union policies are formed and the conditions, challenges and constraints under which different categories of trade union leaders operate and how they respond to workers' concerns and attempts to impose organisational change upon them through lean manufacturing. Finally, the above discussion registers the increasingly difficult circumstances under which trade unions operate and, as pointed out by critics, identifies the manner in which changing management policies, with their instruments such as HRM and lean manufacturing, seek to individualise the employment relationship and do away with trade union representation.

I will now turn my attention to the following research questions the above discussion raises herewith:

- What forms and traditions of trade unionism and collective bargaining are found in this workplace?

- How are grievances articulated within this workplace?

- How far do workers act collectively to seek redress or bargain on their concerns?

- What role do union leaders/representatives and/or union activists play in articulating grievances and mobilising workers?

- What patterns of resistance, accommodation and cooperation characterise the different groups of employees in my case study plant?

- Does management support and/or discourage union representation and bargaining in this workplace?

2.5 Conceptualising Management

There are varied ways of conceptualising the process of management and the choices corporate managements make in guiding their organisations and seeking to bring about change. Managements function within the rubric of an organisational hierarchy. Hales [1995: 89] defines hierarchy as "a system of delegated power and responsibilities and graded rewards and status where the power attaching to a particular position is commensurate with responsibilities. Occupants of positions "lower down the chain of command are permitted indeed obliged to take certain decisions, but within the constraints of rules decided centrally".

Broad statements about the modus operandi and objectives of the organisation and the rules of the organisation aiming to modify behaviour are the two main functions of top managerial activity [Hales, 1995: 92], while the degree of control and the degree of delegation of power vary and are partly contingent on market competition and the other institutional parameters within which the organisation operates.

Within an organisational hierarchy, the degree of centralisation and devolution of powers may vary considerably and although bureaucracy may be decentralised in the nominal sense, it is nevertheless the case that in a substantive sense the key decisions which set the axis on which managers operate and define the parameters for detailed

operational decision making are made by a relatively small number of senior managers. In recent times the focus of managerial literature has shifted from formal information systems and strategic planning systems based on hierarchy towards the realisation of organisational forms based on interpersonal communication and relationships. Ghoshal and Bartlett [cited in McGee, 2003: 147] signal this shift in organisational priorities towards a learning organisation where, "ideas embodied in organizational learning are important for companies that are trying to redraw their mental maps. The move to flatter, more informal structures requires a managerial mind-set conducive to information sharing and to the diffusion of knowledge and expertise from individual or localized domains into the wider corporate resource pool".

One interesting starting point in addressing these issues is to consider the different ways in which senior managers may mobilise and control their firms within their organisational structure and I examine this by outlining and discussing the typology of different styles of top management. While there are limitations to this typology, it succeeds in raising important questions about the mobilisation, motivation and conduct of middle managers: the managers who actually have to implement the policies set in train by top management. The rest of this section focuses on these questions by considering how best to conceptualise managers, especially middle managers, as active agents in the co-ordination, control and transformation of enterprises.

The typology proposed by McGee [in Cummings and Wilson (eds), 2003] views top managers as either lion tamers, or mentors, or leaders or trainers, each with distinctive priorities, styles of decision-making and impacts upon different categories of organisational employee.

According to McGee [2003: 154] the lion tamer mode of management focuses on "operational efficiency, employs systems that provide financial data about business and evaluates industrial output against present internal targets using financial reward

mechanisms to reinforce 'appropriate' business behaviour. The communication infrastructure is characterized by formal protocols for linear communication through formal hierarchies".

The '**leader mode of management**' is subtly different in according less weight to financial data and more to productivity measures.

Thus it focuses on economic performance through process-efficiency, employs systems that provide performance figures about the business and evaluates individual business performance against external benchmarks using 'best practice' transfer mechanisms to implement appropriate business behaviour. The communication structure that follows from this approach is predominantly formal in style and characterised by vertical control channels with transverse integration linkages (or networks) between businesses for the purpose of tactical and operational co-ordination. [McGee, 2003: 153-44]

The '**trainer mode of management**' moves further away from financial measures, to link performance measures with the longer-term development of organisational competencies. Thus it focuses on internal effectiveness based on business competencies, employ[s] discrete function-/task related measures to monitor business performance using formal standards and protocols to orchestrate the development of specific competencies in individual businesses so that these map on to the 'headquarters' blueprint for a corporate competence matrix in a complementary fashion along with other businesses in the portfolio. The communication structure tends to reflect the matrix structure with formal function/ process integration. [McGee, 2003:154]

Finally the **mentor mode of management** gives even greater weight to the development of competencies oriented to handling change and uncertainty. Thus it focuses on developing capabilities that can both generate and survive discontinuities in the competitive and strategic contexts, and will employ progress and positioning indicators

to assess the nature and value of competencies being developed by the individual businesses and to learn about the mode in which these capabilities are leveraged by the businesses. The mentor is concerned with aspects of effective organisational learning and perceives the headquarters-business relationship as one within which the learning partnership exists. Accordingly it reinforces appropriate business behaviour through continuous empowerment of the business through the relationship context. The communication is organic, characterised by a fusion of formal and informal communications (and relationship networks) linking individual businesses to each other and to headquarters. [McGee, 2003: 154]

First this typology devised by McGee [2003: 153-4] recognises the importance of financial and bureaucratic control in many businesses. The inherent logic of bureaucracy and its features and the manner in which its rationality and inherent logic conditions the behaviour of its practitioners has been an object of enquiry from writers such as Weber [in Blokland, 2006: 34, 38-40, 44], Mannheim Karl [in Blokland, 2006: 112] to Henry Fayol [in Pugh (ed.) 2007: 1916].

As Weber [in Mintzberg, Ahlstrand and Lampel, 1988: 194] points out that managerial activity needs to take place within a framework he termed as an "iron cage of rationality" and was marked by an endless march of technical and managerial rationality. A bureaucracy in its various formulations is therefore viewed as a basis for exploring the social word within which managers function.

Bureaucracy is defined by Bendix [cited in Styhre: 108-9] as one that "refers to the universal tendency of men who are employed in hierarchical organizations to obey directives and to identify their own interest and ideas with the organization and with all those persons in it who shares this identification". I characterise this bureaucratic governance structure as broadly having the following attributes: comprising an employment relationship; an elaborate division of labour; a centralised yet delegated

decision-making system; a vertical coordination and control system; and the proliferation of rules and a focus on predictability and control. All of these attributes remain central towards an understanding of the functioning of contemporary corporate management and how within it varied modes that modes of work organisation are envisaged.

Second this typology devised by McGee [2003: 153-4] also provides a valuable reminder that top level managements may have different organisational priorities and that the implications of these priorities can ramify through the organisation in terms of rather different patterns of co-ordination and control and distinctive ways of defining, developing and rewarding middle managers, both as heads of specific businesses, and as implementers of policies within those businesses. Third, it highlights the ways in which middle managers are not merely constrained by organisational structures, but come to be active agents within a matrix of objectives and control mechanisms set from above.

At the same time, however, the trainer and mentor types within this typology appear to offer an over-optimistic vision of the scope for the non-bureaucratic mobilisation of unified and co-operative management within a 'matrix' or 'organic' form of organisation.[2] Instead, investigators such as Burns and Stalker [1994] and Jackall [1988] suggest that efforts to move away from classic financial and bureaucratic controls involve tensions between rival middle management groupings, leading top managers to seek to reimpose traditional forms of bureaucratic authority and financial control. For example Burns and Stalker highlight the ways in which top managers may cultivate micro-political rivalry between different management 'cliques and cabals', but at the same time

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[2] "A matrix is an organizational structure in which employees report to multiple managers, such as a functional manager and a project manager (Sy and Cote, 2004). The ultimate goal of the evaluation exercise is to improve the employee's future performance (Schweiger and Sumners, 1994)" [in Applebaum, Nadeau and Cyr, 2008: 236].

seek to contain and channel such rivalry through the control of promotion, demotion and financial rewards. On this basis, it can be argued that, however much we may be attracted by the apparently flat organisations, learning campuses and informal structures that have been pioneered by information technology companies such as Apple, Google and Microsoft [see e.g. Gates, 1995], corporate management is predominantly characterised by some form of bureaucratic control.

Nevertheless, such attempts to develop typologies of styles of senior management and their implications for middle managers suggest that, in analysing the formation and implementation of corporate policy, we need to consider both the frameworks within which middle managers act and the ways in which they conduct themselves as active management agents in relation to those frameworks. Most analyses of the character and impact of change management policies, including the ethnographies discussed earlier which map the implementation of lean manufacturing, focus primarily on the substance of such management policies and the ways they are experienced by workers, and therefore provide little insight into the detailed character of managers as active agents of change. However, Nichols and Beynon [1977] provide an early exception to this rule, while classic discussions of the moral framing of management conduct have been developed by Jackall [1988] and Watson [2002], and these authors provide important conceptual resources for undertaking such an analysis. Accordingly, the rest of this section will examine managers and management as a human activity involving managers trying to account for and rationalise their actions within a moral economy of management action. Nichols and Beynon [1977] emphasise how the orientations and activities of the middle managers they studied were nested within an overall logic of capitalist enterprise, involving control over the production process in pursuit of profitability. On the one hand they show that some managers, especially younger men with expectations of rapid promotion, embraced and celebrated management policies that cut costs, placed tighter

constraints on operators and diminished job security, though in so doing they could provoke crises that might ultimately damage their career prospects. But on the other they also document the agonising and the uncertainties that beset many conscientious middle managers who tried to reconcile policies of corporate rationalisation and corporate responsibility. Thus one such manager, reflecting on how workers might judge who was responsible for making redundancies, remarked:

"The thing is I don't think they think it's me. I don't think they think it's my boss. They think it's "them". But we're "them". But it's not us. It's something above us. Something up there. "[Nichols and Beynon, 1977: 41]

For Nichols and Beynon]1977] such managers were living through the complex and contradictory character of contemporary capitalist management, primarily committed to making the firm successful but sometimes also bemused about the consequences. While Nichols and Beynon emphasise the ramifications of profitability and surplus extraction for the conduct and the subjective experiences of managers, Jackall and Watson make rather different contributions to an understanding of managers as active agents.

Underlying two conflicting managerial discourses of facilitating participative regimes of troubleshooting and empowerment versus that of cost-cutting is the interpretation individual managers bring into their implementation and the degree of power they possess within their sphere of influence, either to thwart or go ahead with these decisions. I will now dwell upon the indeterminate nature of managing and management, the dilemmas of managers tiptoeing through the organisational hierarchy, organisational interest groups and corporate rituals. I will return to this concept of strategic exchange in Chapter 6, and indeed I will keep revisiting the writings of Watson's and Jackall's study of managers in an American corporation to illuminate the analytic arguments of my case study.

Watson [1995; 2002; 2008] provides a direct engagement with the subjective orientations, managerial self-identity and moral conduct of managers. He emphasises that such managers have distinctive material, emotional and psychological aspirations because of their personal life conditions. From my review of Watson, I argue that managers and their immediate colleagues constitute a distinctive habitus, in which they create meanings and react to orders, strive for targets and aim for their own career goals by interpreting and reinterpreting their situation and exchanging rewards that are not only material but also symbolic and cultural.

As Watson [1996: 337-338] observes:

> Managers, like all other human beings, constantly shape and reshape their self-identities throughout their lives. A key component of a concept of self is a set of values, and this is seen as expressing itself among the managers studied here in the variations which were heard on the theme of 'the sort of person I am'. This notion is worked out through processes of 'internal conversations' which are always informed by the external dialogues which people have with others – directly and indirectly through the cultures within which they live and through which they find available to them sets of discursive resources to use in making sense of their situations.

Managerial identities are imbued within their workplace and they locate their identity fused with their work place in terms of what the German philosopher Heidegger calls as "daisen or being" or thrown projection [1998: 685-6] which manifests within the organisation through taken-for-granted managerial self-awareness, an individual self-understanding and deeply ingrained acquaintance of their workplace, its people and manufacturing processes

upon which evaluations of themselves and of others are made. Using the accomplished familiarity managers have acquired within their work place, they deploy discursive resources depending upon their position in the hierarchy to deflect blame, justify actions to themselves and others and avoid the opprobrium of their superiors.

This exchange of organisational vocabularies by managers enables them to categorise and create meanings which become dominant, allows them to legitimise and reiterate their positions of authority, and thus to manage the organisation and create a hierarchy within and across the organisation. In this regard, Watston highlights and even celebrates the commitment and capacity of senior managers to orchestrate a broad, system wide, conception of organisational priorities and policies. Thus, summerising Watson's overall narrative of managerial strategic exchange [Watson, 2002: 202-6]:

> 'Managerial activity is all about a process of strategic exchange: those directing the organization [which are sets of patterned understandings, relationships and practices] and entails balancing meanings and resources all across those constituencies are made whose support is needed for the continued existence of the organization, whether it is junior employees, key customers, senior managers, shareholders, state agencies or pressure groups. For example, within an organisation there are different groups of individuals who are compensated differently.'

Some individuals are high-value managers, while others are individuals upon whom management have directed considerable resources to train them. As Watson observes: "Within these constituencies of the organisation managers prioritise areas of exchange activity where there is greatest uncertainty with regard to supply of resources necessary for future viability." [Watson, 2002: 205] Hence managers are always transacting cultural and social capital and meanings within the work place in which they operate. Even as managers within the

organisation continually reassess their identities and relationships with colleagues and superiors, and engage in this process of exchange, the degree to which they can varies depending upon their position in the organisational hierarchy. Managers seek to make what Jackall [1988: 30] terms as cognitive maps of other managers consisting of "old loyalties alliances and associations" which alerts them to the requirement of making new alliances and being on the winning side if they or their areas get targeted for 'restructuring'.

Thus, one theme in Watson concerns the ways in which the construction of meanings by effective managers seeks to transcend the more specific sectional-management priorities of the competing coalitions of managers and departments highlighted by many commentators on middle management [e.g. Hyman, 1987: 30]. At the same time Watson's own empirical research in his case study firm ZTC Ryland highlights the ways in which such ambitions can fail. His study of the fate of a top management programme of strategic organisational transformation, designed to forge a 'winning culture' with a 'commitment to excellence', shows that a combination of financial constraints, existing organisational traditions, saturated markets and employee redundancies undermined the credibility of the change programme. As a result different discourses of management remained in play, on the one hand highlighting empowerment, skills and growth as a part of a culture change within the organisation that was being put into place at Watson's case study firm ZTC Ryland and on the other a discourse that emphasised control, job redundancies and cost-cutting measures. The currently dominant figures in ZTC Ryland were increasingly applying short-term financial controls and regular cost-cutting measures which repeatedly involved employee redundancies and the Finance Head's cost cutting anxieties became the butt of employees' jokes.

The manager was said to epitomise an old-timer manager hero who did not sugar-coat his words and was said to be "unthinking and absolutely, uncaring

about the people aspects of management" [Watson, 1994: 175]. Thus within an organisation there were different generations of managers, each having her or his distinctive world-view and perspective towards management.

Instead Watson [1994: 196-7; 2006] notes that middle managers may be disappointed that they are not in control because their well-meaning objectives have been blocked by superiors, and hence they may feel they are doing only a part of a task which if done fully would have satisfied them. Thus such managers across the organisation may express disappointment with their inability to realise what, seen in moral terms, they thought would be good for the organization as a whole.

> "Managers widely disapproved of the short-termist cost-cutting approach which had arisen within ZTC regime as much as they resented the behaviour of senior managers effecting such policies and practices. Yet the stories and jokes about foolish, self-cancelling cost cutting practices and about the bullying behaviour of Ted Meadows were as current in areas of the plant where he rarely directly intervened in the manufacturing area where he held particular functional responsibilities he provided the focus for the development of a cynical and defensive unofficial culture."

Thus Watson recognises that there are contradictions in management policy, but he also emphasises the role of competing management discourses, because the ways in which managers interpret their conduct as individuals has consequences for the conceptualisation, realisation, and implementation of specific policies such as those associated with the idea of change management. In the literature [Cunningham, 1999: 198, 205], this has been illustrated by the tension between managers who prioritised immediate objectives as they faced the pressures of the line and senior corporate management which wanted to disseminate a new discourse of empowerment. For instance, Milkman [1997] discusses

production managers who have to meet immediate production targets by resorting to measures, such as tweaking up the speed of the line or compromising on quality by asking the team to carry on production with defective parts in plants in which top level corporate management wanted to apply lean manufacturing's emphasis on the team being accountable for the quality of the component it produced.

By discourse Watson implies "a connected set of statements, concepts, terms and expressions which constitutes a way of talking or writing about an issue, thus framing the way people understand and act with respect to that issue" [Watson, 1994: 113].

More broadly, Watson argues that the rhetorical tools needed to manage and the linguistic choices employed by managers need careful consideration by researchers. This is important for understanding and analysing the tensions between groups of managers (and individual managers) but is also crucial for understanding the importance of strategic systemwide thinking for successful management, both at the top and in the ranks of middle management. Thus Watson argues that there are business goals for the longer term which are obscured by focusing on the attainment of immediate targets. The latter often add to the contradictory, fragmented nature of management policy which prevents managers from viewing the organisation's survival in terms of its overall requirements, instead of merely conceptualising 'strategy as numbers' [Smith: 358-73, in Cummings and Wilson (eds), 2003].

From this vantage point, notions of management control and resistance cannot simply counter-pose strategic top managers and resistant middle managers, but need more careful examination and qualification. Corporate management devising strategy can sometimes face sectional middle management parochialism. This suggests that strategic management requires specialist middle managers – also known as staff specialists – to identify specific problem areas and solutions and then the organisational

ability to integrate such expertise within an overall strategy. They thus face major challenges of co-ordination and control since such specialist middle managers may be expected to possess interests and perspectives that do not match top management's strategic priorities. This argument is important in realising that there are different layers of the organisational structure that may pull in different directions, with different career goals and definitions of their tasks. There are multiple interest groups and managerial agendas within the same organisation.

Different managers tend to prioritise a wide array of dominant values learnt during their socialisation through mentors and their career in the work place. While some managers are dependent on their mentors for their onward ascent in their career pathways, others depend on what Jackall [1988: 45] denotes as the "fealty and alliance structure" in congruence with being conversant with the organisational ethos and style of the organisation, being in the good books of those who matter and being there at the right place and time. However, these prevalent values could be threatened by a new incumbent to senior managerial level given a free hand in formulating strategy who, at the point of assuming office, brings her or his own style of management and a new ethos and who wants a clean slate to start from. These corporate trailblazers bring a formidable reputation of turning things around in their previous employment and the latter's managerial traditions. This is illustrated by Watson [1994: 103].

Whilst in the field, Watson was asked about his notes regarding a new managerial incumbent taking over the reins of a senior managerial position at ZTC Ryland, and about his previous stint in another firm:

"He had claimed to be producing an organisation "focused on customer satisfaction". This meant producing a "not just a new technical strategy" but a "total rebirth" of the company. The Financial Times had referred to his "contempt for the old regime" at BTC and has suggested that he was attempting

to introduce the "informal and dynamic style" of the computer industry, from which he came into telecommunications. Another report said he was going to end the idea of BTC standing for "bugger the customer". [Watson, 1994: 103]

Illustrating the potency of mimetic behaviour within organisations, Jackall points out that, "not only does the CEO bring in what the CEO thinks, changes in the way things are done but also in the process of the shake-up" rearranges the fealty structure of the corporation, placing in power those barons whose style and public image mesh closely with that of the CEO and whose principal loyalties belong to him" [Jackall, 1988: 25]. These organisational rituals become increasingly important within organisations particularly in line with the managerial agenda set by the CEO and have a tenuous correlation with the attainment of corporate objectives. However, they indicate the significant measure of power wielded by a few individuals within the organisation and how managers adopt isomorphic behaviour with the intention of making a good impression on senior management and avoiding their displeasure. Jackall demonstrates this isomorphic behaviour of subordinates who began to arrive to work at 0630 hours and compulsorily partake in organisational rituals.

Between middle management and senior management lie lateral entrants into the organisational hierarchy who have the ear of senior management, are highly qualified but are often resented by careerist middle management. They are well versed with techniques such as lean manufacturing and more often than not occupy a senior managerial position in the change management team overtaking many middle managers in occupational rank. They are central to the implementation of corporate management's agenda. I think Melville Dalton's [1950: 349] analysis of the tension between careerist line managers who wear the grime of the manufacturing area on their sleeve against the well-dressed technocratic and ambitious staff specialists intending to impose their managerial agenda on the former group sums up the prevalent mood of insecurity among line managers: Line officers fear staff innovations for a number of reasons. In view of their longer experience,

presumably intimate knowledge of the work, and their greater remuneration, they fear being "shown up" before their line superiors for not having thought of the processual refinements themselves. They fear that changes in methods may bring personnel changes which will threaten the break-up of cliques and existing informal arrangements and quite possibly reduce their area of authority. Finally, changes in techniques may expose forbidden practices and departmental inefficiency. In some cases these fears have stimulated line officers to compromise staff men to the point where the latter will agree to postpone the initiation of new practices for specific periods.

In the rivalries between middle management specialists and departments there will be winners and losers. For example the HR department may find itself scapegoated for its long-term plans which conflict with the short-term plans made by production line managers. The latter may resent the HR staff who, at the same time, must carry forward the decisions taken by specialists and bear the brunt of other peoples' displeasure. Furthermore such managers might begin with exceptional optimism but face unavoidable problems because of a lack of co-ordination with policies pursued by other managers. On the one hand they may then look to senior management for simple solutions, or on the other hand they may believe that they themselves are benchmark-setting innovators who can ignore other opinions because they possess the 'silver bullet' by way of knowledge of the best change management tools.

Management is therefore comprised of multiple interest coteries and status groups, woven together by an intricate web of relationships of individuals across the organisational hierarchy with changing assessments of loyalty towards each other and networks of influence and power. Managers work within an organisational institutional logic which according to Jackall [1988: 35] implies that "the socially constructed shared understanding of how their world works". For example, there may be important differences between managers aiming primarily to get products made and dispatched

and managers focused on organising processes, such as lean manufacturing, with longer-term objectives.

Indeed different types of managers often have different career goals and Watson argues that this influences the implicit contract that they are prepared to work under, which influenced their motivation and the way they aim to deliver work. While the labour process literature is rich in ethnographic data on how employees make meaning and negotiate their positions in the work place, Watson suggests that they tend to treat organisations as being composed of homogeneous managerial interests. Yet, such managements are comprised of different functional departments, specialisms and individuals, each with their own interests, priorities and management styles, who may be at loggerheads with each other.

However, this discussion should not lead to the conclusion that middle managers are simply self-seeking agents always pursuing advantage and career advancement, though Jackall seems to argue something close to this summation. He does so, when he argues that managers' ethical choices are expedient and if need be on certain occasions managers in his case studies are seen to adhere to the moral option of what is considered either ethically right as against, what is considered as repugnant. Jackall argues that

> 'Morality in the corporate world does not emerge from internally held convictions or principles but some person, some clique some coterie. Since these relationships are always multiple, contingent and dynamic, and in a flux, managerial moralities are always situational and completely relative.' [1988: 609]

Jackall [1988] looks at how managerial activity takes place within the organisational structure, analyses its subjective nature and illuminates how multiple interests groups connive and scheme to survive and climb up in a zero-sum game of rising

up in the organisation. The unfolding nature of managerial activity and the different position of individuals within the organisational dynamic are a pathway Jackall [1988] uses to understand the ways in which ways individuals strategise their decisions and in the process adjudge complex ethical dimensions of right or wrong, using people and betraying trust.

Watson's [1994] managers are concerned about the ethical choices they make but are on occasions unable to do anything but sit back and watch as a colleague loses his job as a part of a cost-cutting drive by management. However, the ethical dimension of managerial action and decision-making is antedated by his primary concern which centres on the use of discourses and how managers created meaning in their work places, negotiated their self-identities in, and engage with, organisational challenges as they arose in an organisation that comprised of multiple cultures and multiple repertoires of management discourses. However, both these writers challenge the assumptions of linear, top down strategy formulation or contingency theory of organisation, and instead view an organisation as an intersection of multiple meanings, priorities and aspirations, as a starting point from which managerial activity is carried out in responding to the external context such as market competition.

This leads me to conclude within an organisation there are multiple interest groups, organisational rituals, unsaid but obvious organisational power structures and always hongoing conversations within and between different groups of employees. Each of these employees brings their perspectives on management to the conversation they have in the workplace.

Given this context, this part of my review of the literature attests to the complex nature of organisational behaviour. It suggests that I need to investigate and analyse the processes of change management carefully in relation to such different departments and different managers, both in terms of the rhetorical devices they adopt and the pragmatic

tensions that characterise the policies they pursue. These subjective dynamics at the workplace and the policies pursued have implications for their work and their relationships with their colleagues. I also need to consider the constraints and incentives that lead managers in my case study plant to act in the way they did.

I will hereupon cite Richard Hyman, who sums up the problematic of managerial strategy and its coherence an aspect accepted implicitly by change evangelists such as Tom Peters [1997]. The internal validity and coherence of the transmission of various paradigms of corporate strategy, within even in the framework of organised managerial dissonance suggested by Tom Peters [1987], is assumed and ingrained in the prescriptive measures to be adopted by senior level management. The measures of corporate restructuring and reorganisation suggested by these mainstream management authors have a considerable traction on senior level management across many firms in the world; however, as Hyman [Hyman and Streek, 1988: 51] point antithetically,

> "More fundamentally, strategic coherence may be obstructed not merely by the inadequacies and idiosyncrasies of managers as human actors, and by the recalcitrance of informal organisational relations, but also by structural contradictions within the managerial process itself. Conflict and division within capitalist management reflect not merely the diverse ideologies and sectional interests of say, marketing, production and personnel staff: different elements in the production and realisation of surplus value may be in principle incompatible. 'For individual capitals- as for capital in general there is no "one best way" of managing these contradictions only different routes to partial failure. It is on this basis managerial strategy can best be conceptualised: as the programmatic choice among alternatives none of which can be satisfactory."

Managers have to realise surplus value from the resources of production and, therefore, deploying the "sociological imagination" in order to understand how multiple managerial interpretations of managerial strategy of change or the status quo intersect at the site of manufacturing, and inform the labour process all of which constitute an important sociological project of enquiry for me in this thesis.

I return, to the question that has constituted the undertone of the discussion of the above sections. How do managers manage and exercise control? What are their understandings of the activity of management and how do they go about managing and implementing regimes of organisational change such as lean manufacturing? Managers operate within an organisational ecosystem that could mirror many metaphors as a family, including paternalism or outright control. Quoting from Hyman [1988: 51] again:

> "Within specialisms too, inconsistency and fluctuation of policy may derive from contradictory pressures. The function of labour control, for example involved both the direction, surveillance and the discipline of subordinates whose enthusiastic commitment to the corporate objectives cannot be taken for granted: and the mobilisation of the discretion, initiative and diligence which coercive supervision, far from guaranteeing, is likely to destroy. As Burawoy put it [1979: 30], the capitalist labour process "must be understood in terms of specific combinations of force and consent that elicit co-operation in the pursuit of profit". It is of course a familiar argument that discretion is most likely to be permitted and encouraged among certain types of employees and in certain types of work context."

I will now enunciate my research questions arising out of the above discussion. What visions and priorities are being pursued by the top management of my case study firm? Do the actions of specific individuals at senior level managerial positions shape or change management outcomes? What are the constraints and incentives that influence management actions at the workplace I studied? Overall, how should we characterise the role of middle managers in this case study firm?

2.6 The Wider Context and Its Influence on Management Policy Options

This section considers why context is such a crucial question when considering change management. Several of the previous sections have noted the importance of the wider context surrounding the firm and the workplace. For example, my review of the ethnographic literature highlighted the importance of product markets and technologies while the discussion of workers' responses registered the significance of different trade union and industrial relations traditions. In much of the mainstream management literature about lean manufacturing, however, it is treated as a universal recipe for executing large scale changes in the production process regardless of context. Womack [2007] and Florida and Kenny [1993], for example, have equated lean manufacturing with Japanisation, but do not regard this approach as permanently conditioned by the Japanese context. Instead they see its elements as being installed as a package globally in the same shape and form, provided that first principles are adhered to.

Subsequent commentators have challenged this over generalised picture and have emphasised the crucial role played by the wider political economy within which firms operate, while also seeing this political economy as characterised by significant sectoral, regional and national variations. Commentators, such as Aglietta [2005], Freyssenet [2009]

and Boyer [2002] have developed an ambitious 'regulation school' analysis of the adoption, adaptation and hybridization of production models on this basis. Meanwhile , Elger and Smith working in the labour process tradition, have offered a more modest heuristic device which also treats context as a crucial dimension of the introduction of changes in work organisation and employee involvement. Both of these approaches have challenged the view that change management takes place in accordance with the linear process envisaged originally by Womack and his collaborators [Womack et al., 2007] and have tended to see policy selection and implementation as more selective and even piecemeal. At the same time they have tried to specify the kinds of dimensions of context which shape different change management policies and determine whether they succeed or fail.

Drawing on the above discussion on the quality, intensity, causality and completeness of change, we can see that that in much of the literature including that of the regulationist school [Aglietta, 2005; Boyer, 1998; Freyssenet, 2009] there is a tendency to treat lean manufacturing as a distinct and complete production system, though Boyer and Freyssenet are also at pains to emphasise the contextual and contingent nature of the functioning of such 'production systems'. This means that they tend to identify the modification of such systems as a product of the failure to implement the key features of the model because of the impact of macro-structural contingencies, instead of addressing the contested micro-political nature of the workplace that underlies the implementation of managerial policy.

The remainder of this discussion tries to understand the varied and shifting nature of modes of work organisation in relation to the contextual conditions under which they operate. It starts by considering the claims of the GERPISA school of thought in this regard represented by some of its primary exponents Boyer [1998; 1996], Durand [2007] and Freysennet [2009]. They suggest that the adoption and adaptation of modes of work

organisation, such as lean manufacturing, are contingent, often piecemeal and are conditioned by the context and institutional framework they operate under. We will review this argument to understand how they and others have attempted to explain changes in work organisation by reference to changes in political, economic and institutional arrangements. Thus the regulationist literature attempts to characterise changing modes of work organisation and their impact on the labour process and on relationships between the various constituents of the plant (the main area of enquiry of my thesis) and contextualise these in relation to political and economic transformations. The three components of changing regimes of work organisation which they identify are: changing paradigms of production and consumption; changes brought about in relation to suppliers; and the consequences for corporate decision-making, all of which are related to fluctuating world automobile markets and globalisation.

As a prelude to considering the arguments of Freyssenet and Boyer and also Elger and Smith[2006], it is helpful to register some important distinctions in terms of the scale, completeness and intensity of the processes of change that are being considered here. In this sense we need to unpack the word 'change' in the way that Erickson and Kuruvilla [1998] do when they survey the literature on how the extant, intensity and degree of change within industrial relations systems are affected by points of departure. These fundamental punctuations in industrial relations systems are characterised by changes in underlying understandings on managerial policy, collective bargaining arrangements and employment policies. Changes may be either gradual, discontinuous or ritual.

Changes in the industrial relations system may be evolutionary or incremental in nature rather than discontinuous [Erickson and Kuruvilla, 1998: 9]. The authors inspired by Darwinian theory venture to identify that important external and internal developments over time affect the contiguity of the industrial relations model being

followed within various countries. These points of rupture in the industrial relations

system are marked by periods of equilibrium, discontinuity and transformation.

They describe a process of discontinuous change, where the structures and functions of

the industrial relations system undergo modification after remaining under extended

periods of punctuated equilibrium, wherein the industrial relations system undergoes

experimenting in policy and practice, finally doing away with the prevalent system as

whole. These points of departure in the industrial relations system could arrive after a

relative period of equilibrium or relative system stability and quiescence marked

economic upheavals and changes in the industrial relations system. These intervals of

non-transformative industrial relations and discontinuous change are termed by them as

punctuated equilibrium.

They argue that industrial relations systems are dynamic, and continuously

evolve and change, at key historical junctures or moments of transition they undergo

rapid change, "deep structure" is seriously altered, and there is a great deal of

experimentation in industrial relations policy and practice. Between such critical

junctures, the systems typically undergo relatively minor modifications (or, in other

terms, they evolve). The key historical junctures represent punctuations or

"discontinuous transformations" [Erickson and Kuruvilla, 1998: 12].

Erickson and Kuruvilla (1998) identify the manner in which changes in the deep

structure of the industrial relations system within which workers and employers interacted at

times of economic crisis and tumult whereby the internal validity and coherence of the

assumptions informing the industrial relations system were under deep interrogation by the

state, the public and employees. For instance, the post-war era in the USA brought about

fundamental questioning of the elements that comprised the industrial relations superstructure

that operated under the rubric of democratic capitalism, which, as they illustrate, precipitated a

change in the industrial relations system. They [1998: 16] cite Priore and Sabel who comment on the far-reaching changes the great depression of the 1930s-40s brought about.

During the 1930s and 1940s, arguably, the network of fundamental social choices (or "deep structure") underlying the U.S. industrial relations system was brought under serious reconsideration with questions that challenged the institutional Industrial Relations arrangement of the state, firms and workers: would unions be socially accepted and formally sanctioned by law? What would the basic mechanisms be for certifying a union and for conducting labour-management relations? Even more crucial, how, exactly, would a union be defined, and how would the workplace be governed? These changes in deep structure under periods of revolutionary change as suggested by Hannan, Freeman and Gersick [cited in Erickson and Kuruvilla 1998: 11] are comprised of:

- The network of fundamental assumptions and principles underlying the system seriously comes under question. In other words, there is a reconsideration (and, ultimately, change) of what Gersick calls the "deep structure".

- Change is rapid, by comparison with change during the longer periods of relative stability.

- There is great experimentation and increases in speciation and diversity, as various new forms are tried out before one dominant form takes root.

Erickson and Kuruvilla [1998] also describe another form of change as one where changes made earlier on during the founding stages of the system, but unrelated towards its "working integrity", later push it towards evolving new pathways, which may thus be owing to historical decisions taken in the distant past [Erickson and Kuruvilla, 1998: 9]. The deep structure comprises of intricately linked choices to which actors have access, and if the constituent elements of this deep structure have undergone

far-reaching change, then the industrial relations system has indeed undergone transformation [Erickson and Kuruvilla, 1998: 12].

Over time, "socioeconomic conditions driven by globalisation and intense competition" drive through instability in the deep structure of the system by affecting coherence and internal validity of constituents of the system through 'wear and tear'. These events overtake the system which was designed for another time, and therefore render it redundant and incapable of taking on new developments leading to its changes in the workplace practices.

As evident below continuing on the theme identifying defining moments of rupture and continuity of change in the industrial relations system industrial relations scholars have tried to pick out specific political economic contextual developments over a long period of time. These developments may have either favoured or inhibited managerial prerogatives to organise production, on the level at which managerial decisions are taken and where there is impact on trade union mobilisation power. Even as they disagree, they identify specific causal mechanisms that have triggered changes in the industrial relations system and have had repercussions for workers.

Some commentators such as Kochan et al [Erickson and Kuruvilla, 1998: 17] to say that the industrial relations order on which much of the discipline's literature was founded is no longer relevant. Others like Hyman [Hyman cited in Erickson and Kuruvilla, 1998: 6] beg to disagree, arguing that industrial relations was not transformed by such events to the extent that old tensions were abandoned and that continuities did not recur in the movement towards a new regime of industrial relations. The move towards the features such as "an enterprise focus (as the locus of human resources and industrial relations decision-making and strategy), increased flexibility (in how work is organised and labour is deployed), the growing importance of skill development, and union membership declines" characterised the main causative

features indicating changes in the industrial relations system in the 1990s [Kuruvilla, 1998: 4].

Furthermore, decentralisation in bargaining, management's increased autonomy, and the switch to a bundle of workplace practices that included teams, contingent pay, employee participation, training, and employment security amounted to a transformation in the United States of the industrial relations system towards post-Fordism, all of which challenged the foundational arrangements on which the industrial relations system is premised.

For instance, using their model, I argue that the regime of industrial relations brought about by lean manufacturing may imply some rupture in this equilibrium but it nevertheless contains essential ingredients that represent continuities with Fordism, and therefore mirrors many of the elements that comprise the deep structure of Fordism. The analytic payoff of Erickson and Kuruvilla [1998] is the importance they grant towards the political economic context in their attempt to freeze specific macro epochal trends over a finite period of time, that have in turn gone on to alter the internal elements of the industrial relations system under which managers, workers and the state operate. At the micro level a case study enables singling out of the definitive epochs of rupture that have caused far-reaching transformation in a firm's industrial relations history and understanding the causes in the long term that triggered that rupture. Studying how significant events in reaction to the evolution of managerial policy provides me an impetus to consider the big picture of viewing present developments against the continuum of changes occurring in the industrial relations system over a finite time period.

This attempt to identify the macro context of varieties of change is relevant to my research project because it seeks to illuminate distinctive macro-economic variables including globalisation, competition and institutional class compromises in specific

locations and the ways in which these are related to the changing trajectories of work organisation and industrial relations. Durand [2007], for example, considers the implications of these factors for a cross-section of actors including operators, middle managers and senior plant managers. On this basis, Boyer [1995; 1998], Freyssenet [2009] and Durand (2007: 3-19) and other writers – though not from this school, such as Korczynski and Ott [2004: 590] – identify a fundamental shift in the compromise over time between the company, government (especially through legislation), productive value chains and trade unions, and related changes in the distribution of the welfare state. This shift becomes possible because the state shifts its role from being a guarantor of jobs and regulator of the economy (by means of legislation/encouragement of collective laissez faire and superintendent of industrial relations institutions), to becoming the sponsor of a cluster of apparently efficacious decentralised or outsourced services to its 'customers', with only limited regard to protecting levels of employment and working conditions, both of which are left to the market to determine.

Unpacking further the issue discussed earlier regarding linear causality, it is important to register the arguments made by Freyssenet et al. [2009]. Though these arguments remain contentious, they provide a foundation and starting point for further unpacking of the literature to illuminate my research questions. They characterise an older regime of production and accumulation in both Europe and America, in which, particularly after the war, the welfare state [Drache,1998: 23] and growth driven by internal consumption with a reasonably clear consensus between state, industry and workers produced a moderately hierarchised income distribution which underpinned moderately hierarchised social and professional category and satisfactory social protection [Freyssenet, 2009: 8]. An important highlight of this regime of accumulation was that mass production was well synchronised with mass consumption [Drache, 1998: 1916] for a consumer who had a finite sense choices of mass produced automotive

products to make in the course of his purchase. The welfare state sought to be achieved through "high productivity, stable international order and strong workers movement" [Drache, 1998: 3]. Freyssenet then argues that the oil crisis of the early 1970s upset this 'punctuated equilibrium' mode of mass consumption of standardised automobile models within a product-led industry, in which companies driven by the need for economies of scale alone decided what consumers would be offered. After the oil crisis, the tastes of more assertive, price-conscious consumers forced companies to become more market sensitive in their models, catering to different segments, and this affected their production strategies and product platforms.

Against this background Freysennet [2009: 11] emphasises first the ambivalent nature of the assimilation of a new production paradigm in terms of their transferability, as he questions the 'technicist' strand of thought embodying a recipe-book approach where individual paradigms if implemented in accordance with tried and tested principles of their individual proponents would synchronise perfectly without losing any of their individual features. Thus the implementation of new modes of work organisation intended to bring about changes in production is often selective and piecemeal because management actors had to interpret the relevance of varying 'production models' during the process of their application in different production environments, and under different pressures. This is illustrated by Freyssenet [2009: 10] in the following terms:

> For example, some people assimilated Toyota's lean flows with Honda's responsiveness, yet the former implied rigorous production planning whereas the latter was based on innovation rents derived from innovative models being launched before competitors could copy them. What followed was the construction of a number of systems that were cut off from their original objectives and even contradicted them on occasion, leading to some disappointing results. The sum total of best practices can

only be transformed into profits for a firm if they are compatible with one another.

Second, he also argues that any given 'functional' paradigm of lean manufacturing in any specific plant was based on a specific company-governance compromise between the company, state and operators. On this basis the analytical payoff of describing the post 1980s counter oil shock was to highlight the important role of the local governance apparatuses of particular firms, including the relationship between state and trade unions, as industrial relation arrangements influenced the production strategies of companies and their choices of product platforms and modes of work organisation. One response to this was what the regulationists term the 'volume and diversity' strategy for profitability:

> Many carmakers continued to follow a 'volume and diversity' strategy based on increased sales volumes and a commonalisation of invisible components, on the one hand, and on a diversity of bodies and visible equipment on the other. [Boyer and Freyssenet, 2002: 10]

Freyssenet [2009: 20] argues that the rapidity of capital flows associated with financial opportunism, and an unequal distribution of national income based on merit and good fortune, commenced the process of globalisation. This phase was marked by a wave of consolidation across various segments of the automotive industry, including the takeover of Nissan by Renault, even as demand across various segments stagnated. In post-recessionary Japan after the bubble of the 1980s such processes of consolidation also had to deal with the demographic aspect of an aging labour force, especially as, according to Ohle [2009], younger workers appeared to have a declining interest in taking up production jobs and looked to other sectors for employment. This implied that Toyota had to turn to European repertoires of work organisation based on the Scandinavian experience to offset the shortfall

in the availability of employable young operators, who previously provided the dexterity to meet the requirements of tight lean manufacturing job routines.

Returning to Freyssenet's [2009: 15] overall attempt to map the trajectory of changing market conditions and consumption patterns and their impact on the mode of work organisation in auto firms, the mid-1990s marked the emergence of the new economy and a rapid upswing in the fortunes of one section of the populace in America and elsewhere, coupled with the stagnation of the old economy where income inequalities widened and job security could no longer be assumed. Freyssenet characterises this as a case of differing social trajectories and heterogeneous expectations. Against this background it was gradual economic revival throughout the 1990s and careful attention to specific model ranges such as pickup trucks – rather than attention to Japanese modes of work organisation – that allowed automakers in the US to balance the books. However, there was no guarantee that particular attention to specific models, in response to the changing consumer income distribution and demand, would produce profitability in the bottom-line of the company.

Third, then, Freyssenet [2009: 14] points out the diversity of strategies, product mixes, bases of cost-reduction, and changes in ownership patterns that were adopted by companies in response to such changing market conditions. The changing distribution of national incomes in different countries affected the purchasing power of consumers. Those who were able to find better employment prospects at the end of the economic depression cycle were still buffeted by changed rules of employment which favoured merit-based remuneration and hire and fire policies which carried through the 1990s.

Thus Freyssenet shows how larger institutional structures, consumption patterns and market demand affected ownership patterns, modes of work

organisation in global automotive companies, thereby underlining the importance

of the context in which the plant and its parent company operated.

The nature and character of each economic crisis was different, ranging from the East Asian crisis of the 1990s to the more recent events precipitated by the failure of Lehman Brothers and the sub-prime crisis [Brown, 2010: 27] that affected the global economy and whose after effects continue to this day. However, the difference between these two crises was that global linkages between national economies, now including China and India to a greater degree, only became stronger in the intervening time period, which led to uncertainty for manufacturing plants. This uncertainty affected corporate and plant management's production decisions on inventory management, work organisation, the size of workforces to be deployed and the models used to scale down production. A trend that has accelerated through the 1990s, and through the recent economic crisis, saw the larger automotive makers set up plants in countries such as China with a hope that the large internally-driven consumption economies will make up for fluctuating demand back home while being confronted not only with the demand heterogeneity, but also differing state regulatory regimes and varying customer expectations in each of these countries. Freyssenet [2009: 2] argues that an important sequel to lean manufacturing was an accelerated emphasis on modularisation where companies outsourced production to the suppliers at the top of the value chain, with an aim of spreading the financial risks; this was quite different in intents and purpose from the Japanese sub-contractor sub-ownership model. Through this action they hoped to concentrate on what they felt were their primary technological core-competencies in addition to having time and effort to branch out because of modularisation into areas such as targeted marketing and financial services to complete the production and consumption cycle. This was because the market, irrespective of whether it is the passenger vehicle or commercial vehicle segment, is segmented with different customers having differing requirements. Since 2000, environmental concerns

and fuel prices have forced manufacturers to move towards innovative, alternative fuel vehicles. It could be argued that the world may be waiting for the emergence of the next big idea in work organisation through modularization [Boyer, 1998: 288-91] which is illustrated through Volkswagen's modularisation experiment in the Resende case mentioned above. In recent times modularisation has come to be a much sought after production paradigm amongst corporate management, of conceptualising work organisation in their plants. Perhaps this will punctuate or disrupt the present equilibrium in the 'deep structure' of lean manufacturing, on the basis of JIT, kaizen and tighter relationships down a chain of hierarchised suppliers who are always pushed by manufacturers to reduce costs.

Finally, against this background Freyssenet [2009: 31] lists six ways in which companies can achieve profitability: economies of scale; productive efficiency with reduction of costs with constant volumes; innovation in quality assurance; product diversity; product quality; and product innovation. Each of these must be possible and viable in the specific conditions in the countries in which these companies operate. Freyssenet also argues that decisions on products, productive organisation and employment relationship must be congruous with the strategy being pursued, compatible with one another and acceptable temporarily to the main actors in the company. Thus he argues:

> Insofar as these are appropriate ways to envisage general conditions of profitability, thinking about the future must be rooted in two types of studies: one category that: updates possible profit strategies depending on differential evolution of national and regional growth models; the other that outlines possible government compromises between main actors in a firm (shareholders, banks, executives, employees, trade unionists, suppliers state

authorities etc.) as well as the means used to implement whatever of the chosen profit strategies is viable. [Freyssenet, 2009: 31]

This also sets the scene for considering the range of possibilities open to top managers as they seek to adopt and adapt influential models of management strategy and modes of work organisation propounded by dominant exemplar firms and especially by consultants. In this context a key concept in 'regulation school' analyses is that of 'hybridization', highlighting the scope for specific modifications and combinations of policies, but also noting that only some of these represent viable hybrids. Boyer makes the point that no mode of manufacturing technology is exclusively coterminous with any single organisational form and that neither is there in any society a particular organizational model that is so strong that specific societal effects become irrelevant. On this basis Boyer [1998: 38] maps out many different scenarios to illustrate how modes of work organisation, such as lean manufacturing, may work in adapted form in different countries and organisational settings. A few of these are touched on briefly below, even though the extent of hybridization may vary in completeness and degree with each configuration, which I list hereafter.

In the first configuration Boyer [1998: 33, 38] considers the scenario where the transplant might utilise

the heterogeneity of economic agents to select individuals, in a sense deviants, who are willing to accept the rules of the game associated with the new model of production which it intends to transplant. In this case there may be a coexistence of a dominant form with a number of enclaves organized according to different principles through a simple transposition of modes of technological diffusion.

The second configuration of hybridization is characterised by:

In this model specific production arrangements are identified as core best practices which must be pursued by the subsidiary. The latter are seen as a replacement by alternative arrangements which are similarly supportive but are tailored to the circumstance of the local subsidiaries. [Boyer in Fernar, Quintetanilla and Runde (eds), 2006: 58]

The third intermediate configuration cited in Boyer is that the implementing company might transcend the production paradigm it is trying to imitate and come out with something far superior because of the learning process involved in adoption. Boyer outlines a special type case where neither the transplant nor the local production model is in a position to eclipse the other. For instance, in the FASA Renault study [Boyer, 1998: 47-9], prevalent contextual conditions of local training institutions producing skilled labour, corporatist paternalism in its treatment of workers and "workers who made clear demands in response to corporate strategy", were juxtaposed with Fordism. The latter comprised of a system in which management were required to turn out large volumes whilst at the same time maintaining diversity and running into an industrial relations system marked by periods of management/labour conflict.

'Given these circumstances, he contends that the encounter between the initial profit strategy of the parent company and the local conditions faced by transplants there arises a logical conflict which appears to lead to failure or poor performance. This process may lead to failure or stagnation but it may also lead to the exploitation of a management model which resembles neither the parent company or the indigenous firms.' [Boyer, 1998: 47]

Management and labour could arrive at a compromise which mirrored a compromise that resembled neither Toyota or a Fordist-Sloanist corporation [1998: 47]. In Rubinstein and

Kochan's case study, the local UAW Union was willing to "play in accordance with the new rules" which promoted competitiveness and quality that met corporate concerns of competition and a flexible strategy, both seemingly incompatible with each other. Boyer [1998: 48] calls the Saturn case a relatively short-lived experiment in management union co-operation as representative of hybridization without a transplant. Others like Rubinstein and Kochan [2001], who systematically traced the evolution and limitations of the experiment, attributed the following underlying assumptions that formed the basis of the experiment state: "Within the American Car Industry, managers wished to measure up to Japanese efficiency, workers sought employment stability with a say in management decisions."

The main point to reiterate again is that local contexts, whether trade union configurations, market conditions or state policy, have crucial bearings on the development and functioning of management repertoires. Therefore in the view of Boyer, lean manufacturing has progressively detached itself from its local surroundings as it has developed in different contexts, but this has also meant a variety of forms of selection, adaptation and hybridization. If the model had remained static it would have been incapable of influencing the global history of firms and production methods. Lean manufacturing within the Boyer framework therefore cannot be regarded as a singular model, but should be seen as a grouping of traits belonging to two or three evolving models.

The regulationist literature recognises that when managers propose changes in modes of work organisation, there are questions of choice, especially in regard to the application and adaptation of particular models of product design and development, marketing, and work organisation and employment relations. To address these issues they have developed a sophisticated analysis of transplantation and more especially hybridization, but they also make strong claims or assumptions about functional fit and economic viability when they map the emergence of a limited number of successful

variants of emergent production regimes. By comparison Elger and Smith [2005; 2006] offer a much more modest heuristic device for thinking about the ways in which the adoption, adaptation and implementation of well publicised production models by senior managers are influenced by the cross-cutting and interacting features of dominant production paradigms, underlying production relations, and specific societal institutional arrangements.

Elger and Smith [2005; 2006] draw upon the labour process strand of argument to explore the implications of different contexts in these terms. In particular they analyse the tensions in the applicability of different aspects of popular management repertoires and the ways in which these are addressed by managers located in different types of establishments within international firms, with particular supply-chain linkages and corporate competitors, and operating in specific localities characterised by distinctive state policies, labour markets and industrial relations traditions. The arguments of Elger and Smith [2005; 2006] can be summarised in terms of three parameters that they delineate, namely societal effects, dominance effects and system effects. They argue that each of these has been the focus of a distinctive set of arguments about influences on management policies, on employment relations and on work organisation, but that all are actually in play in the selection, adaptation and implementation of such management policies.

First, dominance effects have been the focus of much of the prescriptive management literature on lean manufacturing. This recognises that key practices of management, and especially regimes for organising production in manufacturing, were developed in response to local conditions in leading national economies, sectors and firms. But such innovations within dominant economies and enterprises are then seen to have a generalised relevance across a wide range of businesses spanning various sectors, as in the application of variants of lean manufacturing beyond Toyota and even the automotive industry, into other sectors such as the call centre industry, and across a

range of local and host settings. However, the lean manufacturing paradigm gave rise to a cottage industry of consultants offering recipe books for corporate change (epitomised by Womack et al., 2007), whilst the tensions and contradictions inherent in this approach were glossed over and long standing structural tensions within leading exemplars were overlooked and the success of dominence effects were taken for granted. One example of this perspective is exemplified by Abo who identifies the main features of this enterprise union perspective, which discounts the fact that even within the paternalistic system traits of loyalty and life-long employment that purportedly gave lean manufacturing a distinctive edge over their western counterparts. In his view the Japanese industrial relations system where workers are trained and groomed within the firm is opposed to a job-centred market which comprises a formalised education system through which an individual is required to go in order to find employment within the firm.

Quoting Abo [cited in Boyer and Drache (eds), 2008: 112] to substantiate the above observation:

> In terms of industrial relations, the critical problem is the extent to which a 'them and us' consciousness exists in the workplace. For Western kinds of industrial trade unions principally organized in 'job-centred' labour markets, it is more essential to keep a horizontal relationship with their rank-and-file members and this tends to create an 'us' feeling. On the other hand, for Japanese-type company unions, the more important issue is the vertical relationship between the union and the company where a 'them and us' consciousness is blurred. Trust building is another area where institutional arrangements matter a great deal. It is difficult to say which comes first - the industrial relations system which creates a high level of trust between workers and employers, or the process of trust

building through workplace participation which leads to an industrial relations system reinforcing this goal. In Japan, the so-called 'my company' consciousness supports an 'us' sentiment among all employees in a company. This sharing of a common concern is an important basis for developing multi-skill training programmes which need a broad perspective and flexible framework of industrial relations.

However, there are detractors of this totalising perspective such as Ohle [2009] who brings out in detail the changing pattern of employment relationships in Japan across different firms in various sectors. Another ethnographic study of Roberson [Roberson, 1998: 122] carefully maps out different categories of permanent and temporary workers within the firm and maps out the tenuous commitment of some to their jobs in Shintani metals which repaired watch cases and jewellery items [Roberson, 1998: 127], a medium scale company employing about fifty-five employees [Roberson, 1998: 1]. He, instead, points to a state of flux and rapid change in the employment contract that was influenced all the time by economic crisis. First they failed to explore the problematical features of Japanese industrial relations associated with the limitations of enterprise unionism and the existence of many small, subordinate supplier firms, which facilitated the development of lean manufacturing in Japan. Second, they failed to register sectorial and even company contrasts in management strategies regarding employment and production, even among Japanese companies themselves. Boyer [1998: 40] notes that even while broadly adhering to lean manufacturing percepts Toyota and Honda adopted significantly different production regimes.

Finally, Elger and Smith [2005; 2006] emphasise that wherever other firms in other countries pursued such dominant models, their adoption and implementation nevertheless involved processes of selection, modification and even negotiation of elements from the overall repertoire of lean policies.

Second, the notion of societal effects not only recognises the origins of a given set of innovations in particular social settings, and the degree to which those settings have a bearing upon the conduct of managers and workers within the firm, but also emphasises the persistent importance of distinctive national configurations of work, employment and industrial relations. This suggests that particular regimes of production developed within a particular country, such as the Toyota Production system from which the variants of lean manufacturing originate, might indeed be affected considerably by conflict, differentiation and reconstruction, as they are adopted and implemented in somewhat different national settings. At the same time Elger and Smith [2005] also highlight the importance of tensions and conflicts within specific 'national employment systems', which may mean that there is some space for the sponsorship of internationally dominant models even when they conflict with established national practices. Thus, the impact of societal effects should not be overstated or taken for granted. While institutional conditions are important in understanding the context within which specific management decisions are taken at a given point of time, their consequences need to be unpacked through empirical evidence. As Rubery and Wilkinson [2005: 45] observe:

> Employment policies and practices may need to be regarded as having emerged out of a range of influences, including production and marketing requirements, labour market pressures and contradictions and the interplay of management policy and labour organisation and bargaining strategies.

Finally Elger and Smith [2006: 53] identify System effects, and for them this notion:

> identifies fundamental social relations and processes that underpin and condition specific institutional patterns and organizational practices that characterise the evolution of competing capitalism and competing firms.

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Despite national variations between competing capitalist countries, they share certain fundamental systemic commonalities that are sometimes overlooked in the discussion of societal effects. When certain management practices, such as quality control, become generalized as shared standards of performance they may thus become 'systemic'.

However Elger and Smith also argue that the systemic status of such management approaches remains provisional because of the inherent tensions and contradictions that beset the employment relationship and thus colour the development of those practices, a phrase that itself is at the crux of the discussion on work organisation.

Having made these distinctions, Elger and Smith draw out the implications in terms of a research orientation by developing the notion of the varied repertoires of practices available to corporate managers in a way that links to my earlier discussion of the agency of management. This notion of varied managerial repertoires suggests that enterprise managers may draw upon home- or host-country models, internal corporate, or wider sectorial or network recipes, and or exemplars drawn from dominant countries or leading firms. We need to be sensitive to the ways in which these elements are brought together within specific firms and workplaces, as managers and employees address and mediate the effects of globalising capitalist forces, national institutional rules and 'world-best practices' of work and employment standards within distinctive local contexts. It is only through micro-political processes of argument, interpretation, conflict and compromises that groups and individuals negotiate how these different (often competing) ways of working, standards of quality, authority relations, and forms of employment will actually shape particular work situations [Elger and Smith, 2006: 54].

This highlights the scope for different management coalitions sponsoring particular repertoires, in terms of competing managerial practices and production arrangements. It recognises the possibility of active management choices at various levels

of the corporate hierarchy in responses to specific forms of corporate competition, economic conditions (including crises), state regulation, industrial relations traditions, and local institutional arrangements. These responses by managers have been varied and selective: they may sometimes generate new forms of work organisation but they can also involve piecemeal 'bolt-on' changes that leave much of the existing production system intact. At the same time, corporate management decisions may also alter the wider institutional contexts in which they operate, for example, by pressurising the state to change policies or by recasting the relationship of the company with its suppliers, in order that causal influences do not simply run from context to management decisions to forms of work organisation.

Overall, the literature reviewed in this section highlights the importance of placing my specific analysis of change management in one company and vehicle plant in its wider context, both in terms of developments in the wider Indian political economy and in terms of the specific sector and locality. Furthermore, it also suggests that the development and implementation of management policy options can usefully be conceptualised in terms of, first, processes of transplantation or hybridization of production models, and/or second, the contested and selective recombination of elements from a varied repertoire of management models and recipes. More specifically it suggests the following agenda of research questions, which I list below.

What market, regulatory and institutional conditions influenced the formulation of top management strategies for work organisation and employee involvement at my firm? How far did these policies reflect the simple adoption of existing models of lean production, and in what ways did the managerial policy hybrids that drew on varied exemplars, combine them in distinctive ways? What role did dominant models of international best practice play in the formulation and implementation of management policies? To what extent did national and local market and institutional conditions have a

bearing on the development and implementation of management policies? What tensions and limitations characterised the formulation and implementation of these change management policies?

2.7 Conclusion

This literature review identifies a continuum with control of workers on one end, and autonomy on the other, and tries to understand the means managers deploy to gain the acquiescence of their subordinates. Managerial vocabularies of technological innovation coupled with empowerment and individual employee growth project an idealised summit of organisational excellence and corporate success. High performance and high commitment were promised by adherence to the recipes of management 'gurus', such as writers like Tom Peters. However, managers operate within an organisational chain of command and their managerial agency is constrained, facilitated, censured or rewarded. Moreover, managers – particularly middle managers – have to confront market competition and pressure from their superiors which encourages them to manage through expediency and cut cost control, even short circuiting procedure so well laid out in the recipes suggested by corporate management, and engaging in "organised chaos". Cost control ranges from "milking production facilities", to reducing head count. The literature points out the criticisms of participative QWL measures of direct communication and TQM; for instance Wilkinson [1998] contends that it is a means to secure managerial control through subtle means by building adequate institutional mechanisms emphasising aspects of benevolent paternalistic concern. The latent objective is to ease out trade union dissent, and possibly facilitate soft HRM objectives to morph into hard HRM when warranted.

The main agenda of writers such as Jackall [1988] is the existence of multiple interests, priorities and attempts to justify managerial actions and problematise the objectivity of managerial strategy and the bureaucratic rationality under which various

conceptualisations of managerial strategy function. Managers act in many ways that mimic their superiors who wield power, and these actions have nothing to do with rational means alluded to by organisational efficiency. Managers have their careers and jobs to worry about, and they with varying degrees of power are on the chess board with other colleagues and must keep an eye on others' moves and accommodate organisational objectives with their future plans. Watson takes a sympathetic stance and tends to view managers as passive subjects reacting to competing discourses and having to justify their actions, while Jackall tends to be condescending towards managerial morality.

Literature informed by the Foucauldian perspective of discourses and power, in my view, is not very helpful to this project because I share the concerns of critics like Spencer who point towards the preoccupation of Foucualdians (represented by the likes of Knights and McCabe [2002: 582-6], for instance) who, in their various writings, while being fundamentally concerned with the interconnection between 'subjectivity and capital', do not identify "the sources of capitalist (class) domination" [Spencer, 2000: 236]. This source of domination occurs at the site of extraction of surplus value, and is comprised of real individuals who create, resist and obliterate vocabularies of change management and status quo. Wittgenstein's conceptualisation [Kramer in Crary (eds), 2007: 159-63; Wittgenstein, 1998: 34-9] of language sheds light on how particular vocabularies have contextual implications and can be understood by the community of actors who belong to that organizational context which is continually in transition. Understanding how people react, their lives and their compulsions under which they pursue a particular course of action is a strength of Jackall's and Watson's approaches and, if I may say, builds on an earlier sociological mould of understanding, social interaction and action by Goffman [[cited in Brannaman, xiv, 2005]. Their focus lies on identifying how managers act the way they do, and the underlying reasons for managers acting and pursuing a course of action the way they do, rather than just viewing the effects of policies within an abstract

panopticon of control and resistance that are conditioned by regimes of discursive practices under which actors are constituted.

Within this overall organisational framework, managerial paradigms of change management are implemented and have embedded within lean manufacturing the rhetoric of participation and empowerment on one hand, and the lion tamer model of management on the other. These two competing managerial rhetorics characterise the tension within lean manufacturing. The ethnographic literature debunks the sanguine claims of Womack et al.'s [2003] lean manufacturing and, as Parker and Slaughter [1989] summarise it pithily, a means of "management by stress", leading to work intensification and eventual reduction in head count. Furthermore, studies such as Ohle [2009] point out that even within the idealised environment of enterprise unionism, there exist different categories of workers and enormous complexity in the employment relationship with varying degrees of commitment. These counter narratives posed a challenge to an idealised conceptualisation of Japanese employee commitment, and further highlighted the tensions of the employment contract within Japanese organisational structures. This implied that constructs such as team-work and the perfect system like status lean manufacturing model was untenable. As writers such as Shimizu point out these idealised first principles such as JIT for instance were themselves, in a process of transition within Japanese automotive firms in response to changing worker profile and to the crests and troughs of the Japanese economy. All these changes in first principles would have a bearing on industrial relations, supplier chains and the network of social relations prevalent within the firm. If lean manufacturing is undergoing transition within Japan there is no reason to believe that it can be selectively implemented elsewhere which calls into attention the importance of context under which managerial templates of change management are implemented.

Context therefore assumes importance because it is the site of extraction of value of firms who adopt varied repertoires of work organisation to efficiently organise the interaction of human and machine capital [Brown, 1992: 191-2]. The immediate political economic context and history of Industrial Relations around the firm influences the selection and adoption and diffusion of modes of work organisation. As Elger and Smith [2005] and the hybridization literature points out, there are no linear pathways and a particular production paradigm such as lean manufacturing can adapt in many ways, conditioned by system and dominance effects of the immediate context under which these paradigms are sought to be implemented under. My review of the literature suggests that there is a need to merge an understanding of managerial agency and rhetoric with the selection and implementation of production paradigms, which the regulation theorists seem to suggest are independent of subjective nature of managerial decision-making.

Having laid out the managerial aspect of implementation of policies and the context under which they are selected and implemented I will turn my attention towards workers. As this literature review suggests, trade unions and workers are beset within an environment that is increasingly difficult for them in recent times. However, the industrial relations of a particular firm and industrial relations over time are shaped by definitive events whose causal mechanisms need to be singled out. Performing this task becomes important in order to analyse trade union response to changing managerial strategies which is the main pay off of the Erickson and Kuruvilla [1998] paper and builds on the earlier discussion that stemmed from regulation theory which highlighted the importance of context under which influence the manner in which firms, workers and managers function. In this challenging environment the question that follows is: how do trade union leaders mobilise workers and how do workers react. Aforementioned critiques of the trend towards excessive bureaucratisation of trade unions, such as the

earlier writings of Hyman, which worry about its repercussions for the rank and file members and others like John Kelly [1998], which identify how and under what circumstances trade union mobilisation takes place. But the analytic nuts and bolts of delineating the manner in which trade union leaders function, their compulsions, the manner in which they go about mobilising workers and manage their expectations is only provided by Batsone et al.[1979]. This provides a valuable analytic payoff of picking out specific features of trade union organisation, mobilisation and leadership patterns over time, keeping in mind a firm's industrial relations history. My reading of Batstone et al. on individual first person accounts, patterns of leadership and mobilisation styles will help me to understand how and the manner in which workers, trade unions and their leaders respond to managerial strategies, some of which they perceive as inimical to their livelihoods.

I have inductively derived my research questions and the concepts enunciated in the literature review to form the analytic spinal cord upon which the later chapters of this thesis rest. But first I discuss my methodological decisions and their justification in the following chapter.

Chapter 3 Methodology

3.0 Introduction

This chapter outlines my methodological decisions and discusses the ways these shaped the data output and interpretation. In particular, I seek to explain and justify my belief that qualitative research methods, and in particular conducting an ethnographic study of a single firm, would be the most appropriate method for answering the questions I outlined in Chapter 2.

My original research interest was in the relationship between management and workers as it was affected by the reorganisation of the labour process under repertoires of 'lean manufacturing' in the automotive industry, where, owing to cost sensitivity throughout its extensive supplier chains, lean manufacturing is seen as the dominant paradigm to maximise efficiency and minimise costs. For reasons discussed below, however, I came to focus on the particular change management strategy adopted by my case study firm, seeking to identify its appeal to senior management, how they sought to implement it, and the responses of middle managers and workers. I hoped in that way to produce a textured picture of the bricolage of social relations that were prevalent in the plant. Moreover, I hoped to build on the industrial relations and sociologically literatures outlined in Chapter 2 to challenge further the lingering mainstream managerial literature's naïve, linear understanding of the implementation of managerial strategy. While the question of change management may seem narrow, I see the study of the dynamics of corporate level change programmes, such as my own thesis, as contributing to the recognition of the irreconcilable nature of management-labour relation and to research which provides, as Tony Elger [2009: 10] puts it, " a critical analysis of power relations and social inequalities that characterise employment relations, and encourages the

contextualization of research on contemporary changes in work and employment within a broader, inclusive conception of the evolving political economy."

This chapter is divided into eight sections. Section 3.1 will lay out my primary methodological considerations by exploring the extensive literature on ethnography and case studies and their justification. I also want to explain the influence of Wittgenstein and Critical Realism in the way I think about research. Section 3.2 then explains how and why I chose my case study firm and how I gained access to it. Section 3.3 summarises the main types of data collection, namely, participant observation, interviews and primary and secondary documentary evidence. Section 3.4 provides a reflexive account of the ways my fieldwork evolved over time and pulls out the main roles, dilemmas and challenges I had to face as an inexperienced fieldworker. Section 3.5 explains the hindrances to recording data on the spot and how I dealt with that. Section 3.6 explains how I analysed my data. Section 3.7 considers the ethical decisions that I had to take as a fieldworker. Section 3.8 concludes the chapter.

3.1 Methodological Choices

In research on the labour process, employment contract and managerial decision-making qualitative research has played a major role. Influential qualitative research has included the early work of Flanders [1964] on the Fawley productivity agreements at 'Standard Oil' Great Britain, which gave rise to the Blue Book; Crozier's[1969] studies of organizational power and authority by studying the nature and distribution of power of managers and workers in a bureaucratised French tobacco monopoly firm; Batstone et al.'s [1979] construction of archetypes of trade union mobilisation in response to management policies on the shop floor and Burawoy's [p129,1985] understanding of the making of worker consent working as an operator in of south Chicago shop floor. In the Indian context, the legacy of qualitative research into HRM, organized labour and trade union leadership

has been provided by E. A. Ramaswamy [1977; 1995] over the past three decades, and, more recently, by Teilttelbaum [2009] and others.

Within qualitative research overall, ethnographers undertaking case study research have played a pivotal role in developing an understanding of the implications of changes sought by management, based on detailed workplace research. As shown in Chapter 2, vivid descriptions of field settings has always been central to understanding the labour process and explaining the wage effort bargain emanating out of the interaction between human and productive capital. These are enumerated in Nichols and Beynon [1977] on the labour process and how it was shaped by managers and workers in ChemCo England, in Watson [1994] in understanding the roles, motivations and accommodations of managers and the work of Delbridge [1998], Elger and Smith [2005] and Milkman [1997] in understanding the repercussions of Japanisation.

It was logical therefore for me to consider the merits of plant-level ethnography and case study research and their components, participant observation and the analysis of primary and secondary documents, in relation to my research agenda. This would enable me to look at "how work gets done" in the workplace [Edwards and Belanger, 2001: 291] as well as the relationships between individuals and groups.

3.1.1 The ethnographic method

There are numerous accounts of ethnography and its epistemological foundations. Drawing on Hammersly and Atkinson's definition of [in Strausss, 1998: 144-5] ethnography as the ethnographer participating, overtly or covertly, in people's lives for extended periods of time. Hammersly and Atkinson believe that by observing and talking to people at first hand, in the immediate context of their everyday environments, ethnography can allow us to describe and understand much better what happens in the contexts we are studying and appreciate how the people concerned view their actions,

interactions and circumstances. Ethnographic studies are able to bring out the "special languages, unique and particular problems and more generally, distinct patterns of thought and action" [Van Mannen in Strauss, 1998: 115]. However, this does not mean that ethnography is limited to understanding micro-processes. What happens within the worlds that ethnographers observe is not independent of the cumulative effects of the multiple forces acting upon and influencing people's actions and ethnography can illustrate the interconnections of these forces and the ways in which they affect people's lives. As Fetterman [in Strauss and Anselm 1998: 115] points out, it is in this way that ethnographic studies can help us build a rich understanding of cultures and their importance in determining how organisations and societies work.

The actual process of conducting an ethnographic study involves a continual process of data generation, interpretation and analysis (Frake in Emerson, 1983: 64]. Through compiling a 'record of events' over the period of fieldwork, the ethnographer arrives at an ethnographic statement which is added to continually as new understandings emerge. The main objective of ethnography is to discover in the words of John Brewer, "social meanings and understand social behaviour from people's own perspectives" [Brewer, 2002: 58]. I feel therefore that the ethnographic method requires insight, intuition, guesswork, and an openness of thought, warranting a reconstruction and framing of events beyond what is set down in the field notes in order to better illuminate the framework within which events portrayed fit together.

3.1.2 The role of language in ethnography and ethnographical writing

My understanding of ethnographic research and writing gives a lot of importance to the role of language: as the social anthropologist Clifford Geertz [1983: 50] observes, the ethnographer "inscribes social discourse: he writes it down" in the process of

writing field notes, for instance, as well as in the final account. However, my interest in the centrality of language has been more influenced by the legacy of Wittgenstein, with its view of the role of language and its representation of reality, which I see as having provided an important legacy for the sociology of work and workplace ethnographies in particular. Following Wittgenstein, an important objective of ethnographic research is to understand and make sense of different vocabularies used by managers and workers, within the specific spatial and temporal context in which they are created and used.

Utilising Wittgenstein's insights on language and meaning I see the ethnographer as seeking to become a part of the 'linguistic community' of managers and workers in the plant, whose language and representations of reality emanate from the social context of the plant, their personal experiences, and their work histories. The understandings of language and meaning that managers and workers share are specific to the field setting [Hill, 1997: 565]. Context is critical because words have meaning in the stream of life they are being used to project reality [Reed, 1999: 292]. This conceptual space is challenged and contested by rival vocabularies, some more powerful than others (such as the more sophisticated participative tone wherein my case study firm often spoke of engineering the customer's tomorrows).

This idea of the shared community of meanings by actors, is captured by commentators such as David Stern [1995: 125, 137, 128, 201] who, while citing and paraphrasing the thoughts of the later Wittgenstein, notes that:

"Our explicit beliefs and interpretations are only meaningful against a background of shared practices, which include the skills and customs we have learned – ways of acting that were not acquired as beliefs, even though we may express them in beliefs. It is this "way of grasping a rule which is *not* an *interpretation,* but which is exhibited in what we call 'obeying the rule' and

'going against it'" that ultimately ends the regress of interpretations. In other words, "it is our *acting*, which lies at the bottom of the language-game".

These often irreconcilable, multi-textured and multidimensional vocabularies, such as those of workers and managers, arise out of accomplished phenomenological familiarity with their institutionalised roles. These roles are the mediators of specific sectors of the common stock of knowledge of work and departmental routines shared, for instance, by middle managers and which are both implicit and explicit. Therefore, by virtue of the roles an individual plays, she or he "is inducted into specific areas of socially objectivated knowledge not only in a narrow sense, but also in the sense of 'knowledge' of norms, values and even emotions" [Berger and Luckmann, 1991: 94]. Roles and linguistic vocabularies are managed and perpetuated by actors in their 'front stage' interactions [Goffman, in Branaman, 2005: xlii] and therefore we have access to, for instance, determined rhetorics of empowerment, and responses to it.

This requires becoming part of a linguistic community of meaning by observing and listening to participants unobtrusively; gradually developing trust and friendship with key informants; and observing attempts at what Goffman termed "impression management" [Morean, 2006: 59]. Vocabularies may start out as performative, bringing into being that which they name, an idea usually associated with the philosopher J. L. Austin [cited in Butler, 1995: 197]. Over time these vocabularies may come to be taken for granted by subordinates in the organisation and are transformed into action in order to push corporate management's rhetoric of its change story forward. Understanding these vocabularies allowed me to participate in conversations at the later stages of fieldwork, and this was in turn necessary to understand the vocabularies fully.

My approach to learning the linguistic vocabularies of informants is different from that of authors who adopt a Foucauldian perspective, who, like Knight [2002], see discursive practices as constituting subjects, who may not even recognise the extent to

which discourses are disciplinary and attached to power. According to critical readings of Foucault, actors unintentionally reproduce discourses and become "disciplinary subjects" [McKinley, in Clegg 2010: 113].

This to me appears a very top down theoretical pathway to guide an ethnographic study, and also philosophically problematic. It does not illuminate how agents resist or inhibit attempts to discipline them and, also does not capture the effects of political economy on the construction of power and narratives in organisations. Hence, the Focauldian strand of explanation of power and analysis-of how discursive practices are created and consequently reproduced – lacks the dense empirical variety and analytic depth of data brought to studies such as that of Elger and Smith [2008]. Theirs and other ethnographic studies [Huxley et al., 1997] bring together in their analysis an array of political economic factors which in turn have a bearing on the employees' experience of power, the operational consequences of the implementation of modes of work organisation, such as lean manufacturing on employees which finally considers employees' varied perspectives on power, resistance and their experience of work

Moreover sociologically, I follow Margaret Archer [2007] and other Critical Realists in seeing subjects not as the puppets of discourse, but rather as thinking, deliberative individuals who affect and modify their social worlds – for instance management policies – and reflect upon them themselves. By deliberative I draw on Archer's view of people's 'internal conversation' which for her is "is a continuous process of people evaluating their situations in light of their concerns and evaluating their projects in light of their circumstances" [Archer, 2007: 34]. In the empirical chapters I will try to allow everyone to speak with their own representations of management and industrial relations that, "by saying clearly all that can be said clearly" [Kramer, in Crary, 2007: 149].

3.1.3 Case study research

The case study method is a common means of enquiry adopted by researchers, and, while not coterminous with ethnography, highly compatible with it. Case studies aim to reconstruct "the intricate complexities of specific sites or processes and their origins, interrelations and dynamics" [Kuper and Kuper, 1996: 129]. The extended period of stay and engagement case study required [Burawoy, 2009] makes ethnographic reconstructions of the case study possible.

A case study is defined "as an approach that uses in-depth investigation of one or more examples of a current social phenomenon, utilizing a variety of sources of data. A 'case' can be an individual person, an event, or a social activity, group, organization or institution" [Keddie in Jupp (ed.), 2006: 20-1].

Single case studies will focus on one setting, while multiple case studies study two or more settings with the aim of comparing them and allowing the researcher to verify the research's results internally and externally. As Yin [2003] cited by Ridder [2009: 142] explains, in that way researchers may be able to generate fuller understandings of local phenomena than may be possible in single case studies or develop hypotheses on which further research can be based.

However, for an individual student researcher, only conducting a single case study is practicable. It still allows the researcher to look at more than one set of circumstances within the setting, for instance those of specific constituencies of managers or worker as sub-cases in their own right. In my case study of EWS, as discussed below, these sub-cases demanded individual attention and their study was essential to my overall understanding of what was taking place in the plant and my appreciation of the various interests, interactions, accommodations and conflicts.

The methodologies used in case studies can be further categorised as descriptive, exploratory, or explanatory, depending upon their intended objectives. Yin [2003] cited

by Ridder [2009: 142] says that a descriptive case study seeks to paint a complete picture of a phenomenon within the setting, whilst an exploratory case study will be less structured and will be aimed instead at identifying questions for future research. An explanatory case study will seek to identify and analyse the causes and effects of phenomena. My case study of the implications of change management in CompCo is an explanatory case study category. An ethnographic case study, which involve the exploration of a case as it presents itself in front of researchers in the field and by the researchers' direct involvement and participation in them, seems particularly suitable for identifying the causes and effects of phenomenon that an explanatory case study requires.

3.1.4 The validity of case study and ethnographic methods

Because case studies are inevitably bound by space, time and the practical constraints faced by the researcher, the choice of case study research raises questions of how far data can be generalised and thus how valuable and valid the findings of case study research can be. Problems also arise regarding the soundness of the conclusions reached by ethnographers and the extent to which they are generalisable.

A single case study is bound, first because the researcher is tightly bound by the field site and even as the researcher leaves the field setting she or he needs, out of necessity, to endure a continual iterative process of constantly thinking about the field as though still living inside it, imagining that setting and its relationships constantly.

Second, the fieldworker is continually beset with choices of strategies that need to be made and the selection of the optimal techniques to be adapted for the particular setting, which means they must establish methodological boundaries. Fieldwork is therefore limiting, context bound, and the context of fieldwork decide the choices the researcher makes. Third, the case study research process can be limiting as a method for an individual researcher. As I found out in the course of my fieldwork at EWS, the

inability of solitary researchers to be in two places at once may therefore mean that they miss out on opportunities to collect interesting data. Thus, whilst one interview is being carried out, important events may be taking place elsewhere of which we become aware only later. At the end of the fieldwork the researcher must question whether she or he is satisfied by fulfilling the limited scope of the initial research question, conceived before entering the field or whether the questions have evolved and diversified the scope of enquiry needed. In this way the case study is bound by space, time, and practical constraints and cannot for instance even attempt to offer universal explanations of changing industrial relations in the whole of the Indian auto industry at different times and places.

Finally, case studies are bound because they may lose their relevance after a particular date and events may overtake the researcher and challenge her or his conclusions. This cannot be avoided by the student researcher who cannot overstay her or his invitation and has to complete their thesis.

Yet, in spite of all the above limitations of boundedness, case studies do not necessarily impede depth of analysis, possibly because a robust framework of theory and method supported by qualitative data may emerge out of comparison with and detailed study of other cases addressing similar themes. I am of the view that the valuable contribution that can be made by individual case studies stems from their potential to provide answers to complex questions regarding the changes in the labour process and managerial strategies and can confirm the internal fit and validity of the emergent data through triangulation [Given, 2008: 892] and extensive analysis.

The question of the generalisability of ethnography is often seen in terms of whether other researchers would come to the same conclusions. This question is closely connected with the debate about the rejection of positivist research, which seeks findings which are replicable, uncontaminated by reinterpretations or revisiting of the data

[Blackburn, 2005: 162]. As identified by Denzin and Lincoln [2005: 148] the non-contextual non-situational model assumes that "a morally neutral, objective, observer will get the facts right" but this ignores the 'situatedness' of the observer, associated with class, race, gender, sexual orientation, ethnicity and rationality.

In contrast, ethnography sees this situatedness as inevitable, and therefore different researchers are unlikely to produce the same analysis. Acts of perception are fraught with interpretation because although both researcher and the researched are a part of the same world, there is no certainty that any researcher will achieve a completely accurate interpretation of the circumstances being researched, and even less likelihood that any two researchers will produce the same analyses. This inescapability of differences in perception and interpretation was recognised by the phenomenologist philosopher Merleau-Ponty, who underlines the evanescent nature of our reflections and emphasises that however much we try, interpretation is inevitably part and parcel of the object of our enquiry. Commentators quote Merleau-Ponty [1962: xiii], who said that "we are through and through compounded of relationships with the world".

Further interpretations are conditioned by our beliefs, which are socially structured, and therefore require "parentage" [Blackburn, 2005: 170]. We are intimately bound to the world by "intentional threads", as Merleau-Ponty puts it (in Mohanty, 2006: 76] (which can only be loosened by our withdrawal from the world and reflecting about the world but is never obliterated). In Merleau-Ponty's [2005: xv] own words

> Reflection does not withdraw from the world towards the unity of consciousness as the world's basis; it steps back to watch the forms of transcendence fly up like sparks from a fire; it slackens the intentional threads which attach us to the world and thus brings them to our notice; it alone is consciousness of the world because it reveals that world as strange and paradoxical.

Wittgenstein, in coming from the analytic tradition of philosophy, also agrees on the foundations of our certainty without evidence which lie in our contextual embedded link to our world we inhabit: "The existence of external objects was certain, but it was not something that could be proved, or that was an object of knowledge. Its location in our world-picture (Weltbild) was far deeper than that." [Kenny, 2007: 166]

As the pragmatists would argue, at any given point of time these implicit beliefs condition our ensuing truth claims [Rorty, 1995: 96] and consequently have a role in deciding the final form of our findings in ethnographic case studies. We cannot escape these beliefs and, furthermore, they may vary between researchers examining the same case. This subjective nature of human belief, which may also be transient, undermines positivist claims to validity and theoretical generalisability.

Ethnographers seek to recover situational knowledge, representations and understandings of actors and reflect the position of different actors within the social situation of ethnographic sites, and this understanding of the social relations therein cannot be achieved without being reflexive and being aware of one's limitations as an intruder who invades the social space occupied by actors [Burawoy, 2009]. This is an interactive process in which the researcher is an active participant.

Yet many ethnographers insist that there should be some yardstick for discerning the validity of research results; otherwise, the researcher simply lapses into an unending cycle of "relativism" [Huberman and Miles, 2002]. Critical Realism in particular tries to find a middle path between positivism and the eschewal of objectivity by postmodernism, by continuing to seek a reliable picture of what actually exists in the real world while acknowledging the fallibility of research, and recognising its limitations in terms of time, space; it recognises that the researcher is also located in the world he or she studies.

Critical Realism retains the sense of the "objectiveness" of reality, since the retention of "an unbiased interest in things as they actually present themselves to the

perceiving subject is the foundation of realism in fieldwork" [Hammersley, 2002: 7]. According to Hammersley

the aim of social research is to represent reality, but this is not to say that its function is to reproduce it (that is to say represent it in its own terms). Rather representation must always be from some point of view which makes some features of the phenomena represented relevant and others irrelevant. There can be multiple, non-contradictory and valid descriptions and explanations of the same phenomenon.

However, as Cerwonka and Malkki [2007: 30] point out, this ethnographic dialogue, though rich, is limited in its validity by time and space and the ethnographer makes evaluative decisions in the field that affect how she or he interprets data. The solitary researcher can 'freeze' a particular element of the social relations observed in the field but cannot provide a timeless explanation because the researcher herself or himself and the social relationships within the field are in a state of constant flux. To quote from Cerwonka and Malkki [2007: 30]:

"Ethnographic fieldwork is a rich and demanding activity where questions about the relationships among experience, self, and the alterity of the research object are more readily explored than in other research practices."

Of course, this applies as much in research in the sociology of work or organisation as anywhere else. The researcher may try to explain the data in the best way she or he can but in the process may miss out important data that other researchers might identify. Or the explanation may be valid in itself at the point in time it was reached, but market conditions and the individuals and hierarchal arrangements within an organisation may change, with newer repertoires of managerial activity, which mean that a study loses its validity. This

temporality of time and space as pointed out in the discussion on the bounded nature of case study research does not discount the validity of outcome of the study because as Hammersley [2007: 189] says of ethnographers, "We develop analyses by making connections among the conceptual categories of our local data and also by relating them explicitly to generic ideas that transcend them."

3.2 My Case Study

In this section I explain the choice of my case study company, and how I gained access to it.

3.2.1 My Rationale For My Choice Of The Case Study Firm

Fieldwork for this explanatory single-case study was conducted in the EWS plant of CompCo in Southern India from August 2008 until the first week of June 2009. EWS and CompCo are pseudonyms of the case study plant and company respectively. CompCo is a leading commercial vehicle manufacturing firm in India, which, during the fieldwork period, was in the process of implementing major changes within its plants which seemed to me to be likely to be of significant interest.

At that juncture, I wanted to understand how commercial vehicle manufacturing companies in India were reacting to the dominant paradigm of change management in the automotive industry, which was lean manufacturing. I also wanted to examine the challenges corporate and plant management encountered and to explore the understandings and outcomes for workers and managers in a company that had a difficult industrial relations history. Studying change management in the initial stages of its implementation and institutionalisation had an advantage over studying the effects in companies that had already institutionalised lean manufacturing to an advanced degree and where those effects are well documented in the literature [Rinehart et al., 1997]. The

choice of CompCo was advantageous because I was able to observe an evolving corporate strategy, the outlooks and interactions of workers and managers, and the measures they accepted or rejected, the changes in their work routines and the labour processes being imposed upon them. I hoped that extrapolation of the findings from this firm, which has been a dominant player in the commercial vehicle sector in India, would illuminate the challenges of implementing managerial strategies of change management in the changing commercial vehicle manufacturing sector in India.

My other reasons for choosing CompCo as a case study firm were entirely pragmatic. One of its main production sites is in Hubli, a town an hour and half away by bus from my family's home, and where I could live during fieldwork. Recording and storing my data at home meant I could be sure of maintaining its security and confidentiality. Moreover, I had spent the best part of my childhood in Bangalore, India so I knew the area fairly well. As important, I had a connection to the company through my uncle, who had worked at CompCo and still had acquaintances there.

3.2.2 Gaining access

The difficulties of getting management's agreement to pursue fieldwork have been well documented in the literature. As Morell et al. [1997] observe, the start of any ethnographic study begins with a search for gatekeepers and the simple question, "Whose approval do we need to obtain in order to conduct our research in this organisation?" Identifying gatekeepers is also useful in providing pointers to the structure of an organisation and may help to clarify differences and similarities in the agendas of the researcher and the gatekeepers [Morell et al., 1999: 58]. Moreover, since gaining access is a continuing process, it involves continually explaining the research agenda to participants as the research progresses.

The preparations for my fieldwork commenced with a letter from my academic supervisor to the HR Director at CompCo corporate headquarters in April 2008. Initially, the Director was reluctant to grant permission to allow me to study one of CompCo's plants. At that stage, there was some discussion as to whether a study of a plant in Hubli manufacturing motor cycles, TVS, might be more productive than a study of the commercial vehicle plant. TVS had a long standing collaboration with the Warwick Manufacturing Group. A Professor there introduced me to the HR manager of TVS. However, in the TVS plant was at an advanced stage of impelementing the process of lean manufacturing and also had a waning trade union voice. This made TVS less attractive as a case study site because I wanted to study how trade unions receive lean manufacturing from the beginning and in any case, I was unsure whether I would get sufficient access to pursue participants over an extended period or be able to plumb the managerial networks at TVS,

However, a relative of mine who had worked in a senior position as GM in CompCo and who had retired recently succeeded in convincing Mr. N, who was heading the company's change management programme, to allow me to carry out my fieldwork study in the company. Mr. N believed that my research could provide valuable insights into the effectiveness of CompCo's change management programme, which could help him in managing the process and deciding on what he described as "course corrections". Mr. N's views convinced corporate management to grant me permission to start my fieldwork initially at WAP4, although eventually I ended up spending almost all of my time at EWS, which became my field site.

The kinds of data available to researchers are dependent on the access they obtain and the position they adopt in carrying out their research. Initially, it was clear to me that I needed to establish my credibility with management, who were sensitive to any potential criticism, so I could both gain the insights only they could provide and access to

the data I needed. Nevertheless, as my research progressed I found that as management began to treat me more as an established part of the social fabric of the plant I was able to use the freedom of movement I had gained to establish a network of contacts and interact with workers. As I discuss further below, much depends on obtaining a role in the case study setting that allows one to meet and talk with people in the setting on a regular basis. However, any particular role will also have drawbacks, insofar as it limits the scope of where the researcher can go and whom he or she can talk to. A particularly good example here is Milkman's [1997] study of the impact of technology on workers and workers' rights in the US car industry. She was able to obtain access to an automobile plant only because at the time, the United Automobile Workers union wanted to study the impact of new technology on the job security of its members and approached Milkman asking for her help [Milkman, 1997: 192]. Although the two had different agendas, there was a confluence of interests and using its relationship with the employer, the UAW was able to secure access to the company. Milkman was therefore able to gain the access that she needed for her research in return for providing a study of how the union's recently negotiated job security programme functioned; something at that point that the implementation of new technologies had triggered.

As identified by Milkman [1997: 197], the researcher's agenda will usually not be in exact congruence with what the company would expect or hope would be delivered and this was true in my case study. I wanted to interpret and understand what change management would mean to operators and middle managers, whereas the company wanted me to help them assess first their change management programme and later their inventory reduction project. For me to gain the access and trust needed to obtain a deep understanding of the effects of lean manufacturing driven change, I had to show a coalescence between my research agenda and the interests of plant management and its perception of what a student's research project ought to contain. As I discuss

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further below the role given me by management, while providing access to managers limited my access to and possibly credibility with workers.

3.3 Types of Data Collection

Before proceeding to elaborate upon the particulars of my fieldwork and its dilemmas I will describe the three sources of data for this project in brief. I agree with Burgess [1995: 3] that whilst in the field and during the process of fieldwork the ethnographer's attention should focus on the way in which different people experience, interpret, and structure their lives. My ethnographic experience informs me of that for an ethnographer to experience Burgess's prescriptions requires forbearance, a friendly disposition, and empathy, with the aim of creating friendships that abide within an extended conversation rather than just finding respondents and fitting them into an interview format. Whilst being methodical and systematic with data collection is necessary, flexibility needs to be factored into data documentation to make it flexible to accommodate new developments in the field. This, in turn, illuminates aspects of the phenomena that did not occur to the fieldworker's commencement of fieldwork. Accordingly, Burgess suggests that the methods of investigation that are used be developed in relation to the theoretical perspectives or theoretical orientations, that themselves are structured to provide a better insight into the social world that is structured by the participants.

Burgess describes the usual means by which the ethnographic method gains an insight into the social worlds of the actors it seeks to study as: participant observation; in-depth or unstructured interviews; and documentary evidence so that during the course of their work researchers can discern the meaning of social situations [Burgess, 1995: 3]. I will elaborate on participant observation, interview, and sources of primary and secondary data

3.3.1 Participant observation

Among the many definitions of participant observation in methodology texts Tony Watson [Watson, 2010: 207-8] captures the meaning well in saying that participant observation

> "is a research practice in which the investigator *joins* the group, community, or organization being studied, as both a full or partial member, and both participates in and observes activities, asks questions, takes part in conversations, and reads relevant documents. It is a practice in which the researcher engages with the people being studied, shares their life as far as possible, and converses with them on their own terms."

My fieldwork adhered to all the parameters delineated by Watson, including that "the observation has to occur over a period of time which is sufficient for the researcher to appreciate the range of norms, practices, and values, official and unofficial alike, which characterise that research setting".

My participant observation included pure observation – for instance, walking for extending periods of time around my case study plant to observe workers within the shops, memorising the plant's layout, and trying understand its labour process – as well as frequenting the places where managers had lunch, such as the canteen and the eateries where workers drank their tea. I also undertook extensive walks around the town, which was known for its industrial manufacturing firms, and walking around the residential colonies in which CompCo workers and managers lived. Other forms of observation consisted of taking long bus rides after the shift to get a sense of the town when the day was 'quiet'. On many an occasion I would encounter a group of workers from CompCo and would endeavour to get an idea what workers were talking about, and also in hope of finding potential new informants, I would interject and ask open-ended questions and use

the technique of snowballing. This was in addition to the intense interaction I engaged in within the plant, especially with managers.

As a fieldworker, I used to used to spend at least five days a week lasting for an average of about seven hours or even more in the premises of plant as a part of the GEMBA team, and later on some occasions at Mr. AB's residence, which was not far away from where I lived. Regular participant observation carried out at the EWS plant premises was also backed up by additional opportunities. I was always ready to rush to Hubli, if a manager or worker was willing to talk to me at his residence, which used to happen every now and then on Sunday afternoons.

3.3.2 Interview data

My ethnographic fieldwork included many informal interviews with senior and middle managers, as well as detailed unstructured interviewing of senior and middle managers and workers. In the course of my participant-observation I interacted frequently with over twenty-three managers, and was often able to ask them questions for at least half an hour, in most cases on several occasions. The senior managers amongst them included the Change Management Head, the Head of Production and staff specialists, such as the Deputy Head of the Change Management Project. Amongst middle management, my informants ranged from senior middle managers, comprising shop floor heads, to intermediary middle management and line management. Additionally, shortly before leaving the field I had interviews that ranged from one hour to two-and-a-half hours with twelve people out of these twenty-three, I also interviewed six graduate engineering trainees and interacted with two out of the six frequently during my stay in the change management nerve centre of EWS, where I also met a cross section of managers from other plants of CompCo in the training centre. In addition I had three interviews with the General Manager (GM) of EWS, whom I met in person only towards

the end of my fieldwork. I interviewed him three times, once during the main fieldwork period, and twice, for two-and-a-half hours at a time, when I visited on a follow-up trip in 2011. I also visited the home for destitute children run by a middle manager who was of intermediate rank, and had six interviews with him at weekends. I was also invited for dinner to the house of one line manager in the last week of January 2011 and spoke with him for about an hour-and-a-half.

My interactions with workers were less intensive, and my discussions with them started as my exit from the field drew closer. Most of the interviews with workers were arranged either through a particular trade union convener of EWS, Mr. VDVN, or a manager, Mr. RGPN, who had very good rapport with workers because he interacted with them on a daily basis. Mr. SMGN, now a quality inspector who had "crossed over" to the other side of the fence from being a worker himself, also introduced me to workers to interview. Altogether, I carried out detailed unstructured interviews with sixteen permanent operators, who comprised two union conveners and fourteen operators who were involved in production, manufacturing and stores-related activities within EWS. These were semiformal interviews with an informal, conversational character, "shaped partly by the interviewer's pre-existing topic guide and partly by concerns that are emergent in the interview" [Bloor and Wood, 2006: 104]. I would also try to create opportunities for further interaction during the course of my interviews. In addition to these sixteen permanent workers employed in EWS, I interacted with two temporary workers, in the Medium Duty Vehicle Assembly area, who were not yet regularised, one outsourced employee who whose salary for his work within the engine dressing section of EWS was paid by another firm, and one temporary worker from the machine shop. I also interacted with six semi-skilled workers who did peripheral jobs such as cleaning industrial waste such as iron fillings, janitors and those who

maintained CompCo's facilities. I also spoke with two suspended workers, one of whom I met at Mr. VDVN's trade union office.

In addition to interviewing managers and workers within CompCo I was able to meet with individuals outside it. This included in particular my uncle, who had retired as a GM at CompCo, whom I spoke to for two hours at weekends in his home in Bangalore. I also had detailed discussion lasting for over two hours in the Pune plant of a firm called Cummins with one ex-CompCo employee who now worked in Cummins and the Head and Deputy Head of the Cummins Pune plant. The three of them helped in giving me an industry-wide perspective and some insights into CompCo's organisational culture. Whenever there was an opportunity I also tried reaching out to management consultants who were particularly well versed with industrial relations aspects of the Indian automotive industry. I had four detailed interactions with management consultants over the weekends for about two hours each in Bangalore, after seeking an appointment with them with a hope of excavating further data garnered from experience and from their contacts with retired and serving managers in EWS and other plants of CompCo. I also visited a trade union leader, Mr. VDVN, at his office outside the plant several times. I also met him again for about an hour-and-a-half on two occasions during my visit to the plant in January 2011.

3.3.4 Primary and secondary documents

I was also able to obtain primary data supplied to me through the inventory change management project in which I became directly involved. This included company magazines directed towards conveying the gospel of change to workers, and enabled me to acquire written versions of the new vocabularies adopted by senior management to represent what it saw as the new changed reality of the firm's capacity to "Engineer Tomorrows Together", graphs and trend charts, regularly published brochures

describing the changes made in production processes, company documents describing

present limitations and future states to be attained and photographs portraying

enthusiastic workers and line managers participating in implementing lean innovations.

With regard to workers, pamphlets issued by the trade unions, their notice boards

and material given to me by union activists were extremely useful, although their

collection was fraught with danger as I risked antagonising management by undermining

its change 'story'. These were published in the local language, Tamil, and later translated

for me by a native Tamil speaker.

Other documentary evidence included publications from automotive industry

consultants and exhaustive weekly updates delineating an array of indicators and

challenges for automotive firms in the commercial vehicle industry in India. I also

made a habit of exhaustive perusal of the Indian financial press and the *Financial*

Times.

3.4 The Fieldwork Process

An understanding of the plant's social relations cannot be achieved without being

reflexive and being aware of one's limitations as an intruder who taps into situational

knowledge and invades the social space occupied by actors. Burawoy [2009] characterises

this as a montage of the actors' contextual experiences and knowledge, an interactive

process in which the researcher plays a role, too. Ethnographers are obliged to relate their

experiences of fieldwork in some depth, since their data are produced through their

interactions with informants in their fieldwork setting. Hence the author's account of the

data production process must acknowledge the reflexive role of his or her own social

positioning in the construction of their relations with informants. My identity as a male

from an upper caste habitus, and as middle-class south Indian was crucial to gaining access

to my case study firm, but afterwards relatively unmarked in my interactions with

managers, partly because some of them came from a similar background. Making contact with trade union leaders relied to a small degree on previous contacts I had made as an MPhil student. Inherent in the process of ethnographic research is a continuous process of identity management [Coffey, 1999: 26], which in my case involved deference to the older managers I met and fellow feeling with those closer to my own age. My social background was no doubt more of an issue in my relations with operators, but hardly ever commented upon. But more important to my experience of fieldwork, and in the account I now provide, was the roles that my informants assigned me, and my awareness of the gains and costs of the ways they were positioned.

In retrospect it seems that my fieldwork fell into three distinct phases, each revolving around different sites, particular informants and strategic dilemmas. The first phase lasted between my arrival on 28 June 2008 and 10 September 2008. In this period Mr. N, the Head of the Change Management took me under his wing and located me in WAP4, the smaller CompCo plant in Hubli. I also got to know Mr.NNK, a Head of Purchasing in one of the CompCo plants, who was essential in guiding me in the early days. I also attended internal training classes on lean manufacturing and related manager strategies. This was invaluable, not in terms of acquiring knowledge about lean manufacturing and the company's approach to change management, but because it allowed me to absorb the organisational culture of the company.

The second phase of fieldwork lasted from 11 September 2008 to 10 February 2009, during which I was based mainly in EWS working as an analyst on the inventory programme. This phase saw me becoming further entrenched into the field and building rapport and establishing relationships, particularly with middle managers. Significantly, I also became a part of the change management project myself. My key informants became Mr. AB, Mr. N's deputy who was in charge of implementing GEMBA in the inventory management process; Mr. RGPN, a senior manager of stores; Mr. AK, Mr.

SMU and Mr. ISC, line managers in the Production Control department; Mr. SVM who was a Production Engineer who oversaw the industrial engineering aspect of GEMBA; and Mr. TJN who managed the GEMBA reward system. This phase was dominated by the advent of the recession period that lasted from November 2008 to mid -May 2009. The third phase, from 11 February 2009 to 12 June 2009, marked an intensification of my efforts in fieldwork and my attempts to capture the views, attitudes and motivations of the GM, Mr. AB and middle managers through longer and more systematic, although semi-structured, interviews. I also carried out a programme of intensive and detailed interviews with workers. I also undertook an interview with the GM of the factory, and repeated that on my return for ten days in 2011.

3.4.1 My introduction to the field

Like Delbridge [1998: 18], I believe that the fieldworker's initial foray into the field is important for the reader to know about. It shows how the fieldwork has to cope with unfamiliarity, uncertainty and dependence on gatekeepers who have their own schedules that do not make much time for the researcher. But this can also help him or her to grasp some of the tensions present in the setting.

Although my first day felt momentous, I got off to a slow start. On 28 June 2008 I found myself at a busy road junction waiting for the bus that would take me to EWS. An hour's waiting was filled with nervousness about the research project and quite how I would get to my research setting in an unfamiliar town. Two hours and a change of bus later saw me getting off the bus at the town's makeshift bus station. I remember haggling with the driver of the auto rickshaw (called a "tuk-tuk" because of the noise its small engine makes) over the fare and his justification for it, which was that he would have to return empty from there back to the town centre. He took me to the plant where I was told to report first and stopped in front of the main entrance. I was dressed in a

collar and tie and more formally than would have been usual. I waited in the queue, in the security enclosure, along with company representatives and other people waiting for their appointments with the managers of relevant departments.

The security staff asked questions about my academic work and when I said that I was visiting Mr. N they became even more apprehensive, and I had to call Mr. N, to whom a security guard talked with respectful reverence. Once satisfied, the security guard called Mr. K, the person designated to meet me that day. I thanked Mr. N soon afterwards and he told me to call him if I ever had a problem entering the plant and said that he could always be reached by telephone, except when he was flying. He then told me that he would be available to meet in three days' time and invited me to come to see him then. After having got an initial overview of the atmosphere, and since Mr. N was away, I returned back home.

On the second day, at around 11.30 a.m., I went to the administrative building and searched out the comfortable GEMBA discussion room, where the running air-conditioning numbed the perspiration, and I glanced through an array of graphs and charts and photographs. I had to wait there for about an hour, first establishing a rapport with the caretaker of the conference room, who told me he would be busy when the London based proprietors came and that it was his responsibility to see that lunch reached the GM's "cabin" (suite) on time. I made some friendly talk with him as I glanced though the company magazines and the GEMBA Empower Prize distribution photographs and literature, which emphasised again and again the value of teamwork. Later, in the GEMBA discussion room, I was introduced to Mr. NNK, who managed relationships with prospective parts suppliers in the WAP4 plant. He continued my tour of the administrative building explaining the trend charts, and showing photographs of employees who had won prizes for kaizening; he hoped to construct an impression of a company that cared about its employees and wanted to adapt to future challenges. On day

three, Mr. N told me that he was not able to meet me as we had planned, because he had to go to corporate headquarters at Nellore. I therefore decided not to attend the plant that day.

Day four saw the arrival of Mr. N, one among the key gatekeepers of my project, who was all pomp and circumstance with his busy Blackberry phone trying to represent the energy, dynamism, renewal and all that GEMBA may be seen to represent. If I recollect correctly, he tried to show urgency and immediacy of purpose. He spent time discussing my academic background, my uncle who had been instrumental in arranging my access and how I could assist the company in the GEMBA project. Days five and six saw me finalising paperwork and getting an identity card prepared for entry to the plant, which at that stage was WAP4, and I could not do much other than seeing Mr. NNK operate in his cabin. He told me to take leave because Mr. N was pre-occupied with work and could not provide me with what he termed a "focussed agenda" to follow.

3.4.2 My changing roles

I had to play a variety of roles in order to gain the trust of respondents and senior managers, on whose acquiescence my access to the field was premised and who would be important in my initiating contact with other informants. Already in the first few days of fieldwork I could see that a key issue would be adopting an appropriate role, one which would make me acceptable to my gatekeepers but which was not entirely under my own control.

My position as a student stood me in good stead, and I did not have to dissimulate to play this role. I adopted the role of the innocent inexperienced in the ways of the world and new to industry, which to a certain degree was true, as I was making my way through unfamiliar surroundings in a large manufacturing setting. It was a role of passive

observer, but it also meant that I had to be shown round the factory, and have the role of the different departments and important managers explained to me.

In fact, the role assigned me by Mr. N, as a 'trainee', was ideal in so far as it meant that he had to explain things to me. My academic background did seem to be a positive factor in my favour, but he was also clearly convinced that for a student to succeed in his research he needed to be guided in the 'proper' manner. To accomplish that he needed to explain and make sure I understood how GEMBA was working and point out the need for 'course correction'. He told me that was the precise reason for supporting me was so I could strengthen the on-going project which he was heading.

In order to put him at ease I requested to be "guided" and my career be shaped by his valued inputs brought by many years in the industry. I adapted to the role of a willing 'project trainee' who needed to be provided in his words as a senior manager with the 'right perspective'. He was my primary gatekeeper until I met Mr. AB, his second in command on the GEMBA project. All this meant both he and others had to explain things to me explicitly that they might not have done otherwise. Moreover, he and others had a model for this role in the trainees from management institutes who worked on the programme.

So although I did make the move from a rank outsider to being a member of the community, it was largely by being deferent and respectful, friendly but not ingratiating, and attentive to others, as Yin [2011:119] suggests. Conscious that I should not emphasise my other role as an independent researcher I restricted my queries to asking apparently innocuous questions and trying to 'stay around', completing a 10:00a.m. to 17:00p.m. routine in the plant, reading GEMBA tracker charts in the first half of the day and later attending meetings and talking walks around the assembly areas. I was very occasionally taken to lunch in the executive canteen by Mr. NNK and could see who showed respect to whom, who the important visitors were, and so on. Managers and

operators ate separately and managers enjoyed a much better overall environment than that of operators. I also observed that special guests such as senior managers from other companies, including important suppliers, were served special lunch menus that were different from the main menu. Japanese visitors seemed particularly well treated.

It also meant I could watch Mr. N perform *his* role. I was able to see how Mr. N managed his subordinates in subtle but powerful ways and came to appreciate the 'performativity' of his change programme phrases by seeing how his subordinates sought to adopt them. I watched him conduct long distance teleconferences with a series of vendors and the Head of the Corporate Purchase department in Nellore apparently seeking its advice before asking for approval for the purchase of new computer peripherals. Mr. N was careful to keep people of influence 'in the loop', a phrase that would become repeated many times until it became ingrained in the minds of subordinate managers who dared not to use Mr. N's favourite vocabularies

Sometimes, Mr. N would give me a lift back to my home in his car and he would talk nostalgically about himself, my uncle and other erstwhile colleagues. But I realised that along with trying to induct me into the company, the senior managers were also seeking to 'chaperon' me, as [Yin, 2011: 127] says, in order to monitor me and to see what I was learning.

> The host may have two different motives. One is to monitor the site visitor. The other is to see or hear what the site visitor appears to be learning. For instance, when organizations are the setting for field research, the site visitor may have access to a higher official who might not normally give such access to the host.

Luckily, however, I had opportunities to meet other people in CompCo. For a month from September 2008, at Mr. N's suggestion, I attended training programmes at the training

institute located midway between WAP4 and EWS at Hubli. This was meant to give me a deeper understanding of the implementation of lean manufacturing at CompCo and gave me an opportunity to witness first-hand the hierarchical pathways in which graduate engineering trainees were being groomed for future managerial positions, to discern their educational background, and the challenges these young recruits mostly male faced in their training course, and whether they would continue to rise up through the CompCo hierarchy and become company men or conversely leave at the first opportunity to a better job in the less physically taxing IT industry. During these training classes I started building up a small cohort of friends who were younger than me and worked with Mr. N's deputy Mr. AB. The training classes also provided me with another opportunity to examine how functional roles in different specialisms were apportioned, understand different middle managers' work histories and how they got to their present occupational position, how they addressed superiors such as Mr. N, and the extent to which they embraced these training programmes.

I date the second phase of my fieldwork to beginning the inventory project for Mr. N. I was now able to develop a 'hands-on' understanding of the company's lean manufacturing innovations with regard to its inventory management system. I got to know a number of middle managers and an important actor, Mr. AB, whom I will discuss further below.

Later, before my exit from the field, and with the increased acceptance of my presence and the trust of many managers, I became more confident and independent in my demeanour and was able to ask for meetings and interviews I felt the research required. In this role I was able to pursue more detailed unstructured interviews, asking questions that previously would have been impossible.

3.4.3 Building relationships with key informants

From the time I joined the GEMBA team in EWS I was able to build another set of relationships. EWS became my field, "the site of my personal engagements between the researched and me" and I began to be able to enact "the social roles and relationships which places the self at the heart of ethnographic enterprise" [Coffey, 1999: 23].

As mentioned earlier, in November 2008 Mr. N asked Mr. AB to work with me on the inventory project and then report back to him. He was waiting for Mr. AB to come back after his absence owing to the death of a close relative in his family. I still remember the day both of us met. Mr. AB was an easy-going young man from north India who was perhaps still trying to come to grips with the well set ways of the southern Tamil, Telugu and Kannada speaking plant. Mr. AB's office was like a data analysis room full of young graduate engineering trainees immersed in graphs and pie charts and statistical calculations. This was where the real action of GEMBA took place and provided many invaluable insights into peoples' real attitudes to GEMBA. It was here also that inventory meetings would take place.

At that point, Mr. AB designated me as the point of contact to move the reporting aspects of the change programme forward and I had to alter my role to behave more assertively in order to ascertain whether quantitative targets were being met. The middle managers were under the impression that if they failed to cooperate they would have to face a flustered Mr. N, and therefore co-operated, believing that my participation was intended to help Mr. N and Mr. AB. With Mr. AB's authority I was able to spend long periods talking to managers ostensibly to get them to go through each and every anomaly in the inventory accounting process and identify the faults. But at the same time, I was given much wider access to the plant and was better able to fulfill my own research agenda. I would later realise that if it had not been for Mr. AB and the inventory project I

would not be writing this thesis. Both of us have left the field he is no longer Mr. N's 'Man Friday', and I am no longer mapping his career trajectory.

In addition, I was able gradually to spend more time with Mr. AB who would sometimes accompany me on the way back home, and in those evenings I learned more about the unstated structures and organisation politics within EWS and reduced my dependence on Mr. N. Mr. AB would open up to me about the problems of managing a company such as CompCo and his difficulties as a young manager from north India. He seemed to appreciate the need for my developing an understanding of employee relations and work histories at a more interpretative level.

I was also able to observe Mr. AB during his telephone conversations with colleagues who rang him. Whilst I could not always discern the precise subject of the calls, they did enable me to observe the enactment of power relationships within the company and the problems faced by Mr. AB in dealing with the organisation. I was able to ask Mr. AB questions, and sometimes made statements about the organisation to draw out his personal opinions about the state of the organisation.

At the outset I was very uncertain how long the inventory project would last and I was apprehensive that I would find that my usefulness to Mr. N would cease and I would lose my access to the plant. With time and the advent of the recession it became evident that the project of change management was going badly, because there were other priorities to attend to, and as a result I was able gradually to enter into friendships with other individuals who in turn introduced me to other managers. Moreover, although during the recession many managers were not at work, in another respect this was serendipitous for me because between November 2008 and April-May 2009, Mr. N was so preoccupied with dealing with the recession that he was hardly able to meet with me. Therefore I did not have to fear his getting to know how much time I spent talking to people on matters that were not strictly devoted to promoting his change project.

Some middle managers were very formal and were unwilling to give much insight into their work or what they felt about change management. However, interesting operational details would emerge in the course of discussions about the completion of the statistical returns. Yet by the middle of December, participant observation in the Production Control office enabled me to understand middle managers' world-view, and by discussing with them a wider array of general topics, their attitudes towards loyalty to the company and how changing management policy affected them. I also was able to explore how the department as a whole coped with pressure. These were people who had spent the best part of their lives and perhaps waking hours in the plant, and however much they criticized other departments and their higher-ups, they were generally loyal to the company when there was a crisis. But when they were subject to pressure they would often pour out their hearts to me and complain about the stresses they were under and protest the unfairness of the treatment meted out to them by their superiors. Being conscientious in implementing corporate management's lean manufacturing agenda, being involved and sympathetic with their concerns but at the same time not appearing to bat for their grievances passionately, was a difficult balancing act for me as a fieldworker with regard to line managers.

By late December 2008 three managers in Production Control, Mr. AK, Mr. SMU and Mr. ISC and I became great friends and before my exit shared their grievances and their feelings towards the company and would also introduce me to their colleagues who dropped by, and allow me to have informal interviews with them. During this process of colleagues dropping in, casual conversations would begin with Mr. AK assuming the role of another key informant. This would lead to interesting group discussions between them, their colleagues, and operators who dropped by for a chat. Towards the end of phase three of the fieldwork, I was in a position to undertake extended tours of the plant, taking longer routes compared to regular direct ones to reach particular departments. By making these

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extended walks I could pick up news of industrial accidents, overhear gossip, observe foul language used against selected adversaries (usually managers), shadow some operators and get a grasp of the main issues, whilst at the same time maintaining my position as a management analyst.

Similarly, I was able to build a relationship with the change management coordinator in the engine stores, Mr. RGPN, who was the driving force behind a local orphanage. Initially our discussions were confined to change management, but eventually I managed to extract an invitation to visit his orphanage. I remember being there on a Sunday evening with a box of chocolates and sweets for the children. I had eight separate conversations with Mr. RGPN, including visiting his home, although his willingness to speak to me was lubricated in part by my asking my uncle to speak to him. But our dialogue was interrupted by the recession which caused prolonged shut downs in the plant and therefore denied me the reason to be present in the plant. This was the lowest point in my fieldwork because people remained at home, which meant that I had to work hard and persuasively to be invited to their houses if I wanted to converse. Nevertheless, Mr. RGPN and myself became friends and he introduced me to other colleagues.

In the final stage of my research I was able to gain invitations to the homes of Mr. AB and Mr. AK, and Mr. AB visited my own family. At this stage we were on very good terms with one another and they could speak to me without inhibition. I also persuaded my relative to talk to the GM of the plant, Mr. SDM, whom I had previously deliberately avoided. His friendship as a long-standing colleague of my relative, who started his working life three decades back, helped a great deal in breaking the ice. I had three long conversations with him, with the last one being the most memorable just before I left the field. The instinctive judgment of mine of not meeting the GM until the very end proved to be invaluable because doing so at the earlier stages would have alienated Mr. N and I might have lost the confidence of Mr. AB. A further visit in January 2011 proved to be an

unexpectedly rich interaction with the GM who spoke extensively about the company and its problems and he became my sixth critical informant.

3.4.4 Accessing the operators on the 'other side of the fence'

During roughly the seventh month of my research, from January 2009, I began to take greater chances and secretively started collecting pamphlets dropped by the union, grabbing them before anyone could see and shoving them into my research bag. Earlier I noticed in our car rides that my innocuous question regarding these would incur Mr. N's opprobrium and bring out his inherent antagonism against workers. He tried very hard to 'protect' me from the views of workers, preferring instead that I should concentrate on his core themes of achieving mind-set change amongst a critical mass of middle managers and proffer suggestions of course correction of their implementation of lean manufacturing. I was therefore in fear of being seen by the security staff as someone who would have sympathy with workers and their problems.

A visit to Nellore in December 2008 and a contact's lead took me to a Union officer who gave me the contact number of Mr. VDVN, the leader of a left-leaning trade union confederation with members in CompCo. My trip to Madras also introduced me to a disgruntled operator and I took this opportunity quietly to take a look at CompCo's Nellore plant WDP4 and read the union's publications at the notice board outside the plant. It took a while to build rapport and to help do so I met the operator not in the factory but in a variety of other settings, including the union office, a small, run-down building in the back streets of the town, and a local restaurant in which he and other operators he introduced to me would speak freely. This was the most difficult and delicate parts of fieldwork for me because I had to make sure this was done casually and discreetly without offending managers such as Mr. N and letting down Mr. AB.

Pursuing fieldwork with both ends of the spectrum of opinion proved to be a tightrope walk. I will explain my methodological strategies and elaborate upon the reasons for measures I undertook for maintaining the balance below. During the course of weekends, in addition to meeting Mr. RGPN, I would fix up to meet with Mr. VDVN in the left aligned party union office. Operators were disgruntled at that juncture and he would answer my questions posed as an student eager to know, punctuated by satire of management generally drawing from my reading of labour process literature and books by Elger and Smith [2008] and Durand and Hatzfield [2003], whom I would read just before catching the bus to pick up ideas for leading questions and to recollect the grievances of operators cited in the labour process literature. Mr. VDVN felt that I was having a go at CompCo and would launch a a whole hog attack at CompCo. He later introduced me to other operators, and with extreme difficulty I managed to get them out of the plant and meet them in a restaurant on the affluent side which I had earmarked in advance.

The last day of my fieldwork, a day before catching the flight to England, proved to be very valuable because the long-awaited settlement had finally been signed. Quite a few operators in EWS felt that the uncertainty over getting a settlement with new terms and conditions for the next two years was over, even though management exerted its prerogative to raise the number of hours worked to reach the earlier threshold of incremental pay marginally, even though the increase implied that the workers had to work for 480 minutes.

3.4.5 Exit from the field

I exited from the field after phase three by early July 2009 when I felt that respondents and myself were getting weary of each other and there were no further data that were emerging that challenged what I had already learned. Overstaying there would lead to potentially destroying the goodwill I had built up so painfully over time. In

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grounded theory this is called 'theoretical saturation' – the point at which "researchers are comfortable that the properties and dimensions of the concepts and conceptual relationships selected to render the target event are fully described and that they have captured its complexity and variation" [Given, 2008: 875]. However, I was luckily able to revisit the field briefly in January 2011.

3.5 Data Recording

My situation in the plant limited my ability to make on-the-spot notes. The use of recording devices was not permitted because it was against company rules to have cameras or Dictophones, and since I, like everyone, had to declare my belongings at the gatehouse, I could not take them into the plant. During participant observation, including long walks around the plant, I never felt I could comfortably even take out my notebooks to write in. Although aware that it would be better to avoid misrepresentation through faulty memory, I felt that I was limited to recording my observations after conversations with informants had taken place.

Even during interviews, to take out a notebook or Dictaphone was seen as pushing it in their face. If I tried to do so most managers, especially middle managers, became self-conscious and very reserved in expressing their opinions, and I could sense that my taking out a notebook from my bag disrupted the otherwise spontaneous flow of conversation. For instance, I would notice that informants would divert their attention away from me by turning back to their work or excuse themselves from me a few minutes after I took out the notebook. I did manage to write down notes at the later stage of fieldwork while having detailed conversations with a few managers such as Mr. RGPN and the GM Mr. SDN. However, then too their attention to my writing would transform a conversation into a dictation, which is something I wanted to avoid.

Hence my field data were mainly written down after interviews and interactions, in a set of notebooks which I treated as ethnographic field notes – that is, my record of "in-depth descriptive details of people (including themselves), places, things, and events, as well as reflections on data, patterns, and the process of research findings" [Given, 2008: 348].

This also included interview data, which I usually managed to write down as soon as possible afterwards. Usually I would wait for my respondents to become occupied in other matters and then quietly write down what they had said in shorthand. Or I would use the lunch break, excusing myself from Mr. AB or Mr. N and finding a quiet place in EWS sitting on parapet walls to make notes. Then, after dinner at home, I would recollect and write down all the significant events of the day, planning whom else to ask to confirm information, trying to make linkages, draw out categories and think of further questions and themes to ask about. I also tried to expand my shorthand notes by recording them in another notebook in more detail. I also typed out draft notes on computer files, which eventually become the basis for the vignettes I describe later.

Even the notes I had with me once landed me in an awkward situation. On one occasion while I was away using the toilet I saw Mr. AB picking up the notes. But fortunately they were far too cryptic and my bad handwriting saved me from him reading my observations about people, GEMBA and managerial strategy.

I adopted the same tactics of data recording for workers that I followed for managers and my primary objective was to go the extra mile in making them comfortable with my presence. I was very careful not to take out my notebook which would mean termination of all contact with them and they were at first suspicious about whether I was sent by management. People like Mr. VDVN were very conscious of these things and losing their hard -earned trust was deleterious for fieldwork. Instead, I would return home or run to the Hubli railway station benches to transcribe the notes about the workers '.

I divided my nine field notebooks thematically and allocated each theme separately. I allocated separate notebooks for workers, a notebook for scenario management and another for middle management. Within the notebooks I tried to divide its pages into technical factual data, management ideas and strategies and allocated spaces for individuals such as Mr. AB, Mr. N, Mr. AK and so on. Whenever I found information that needed to be probed or an aspect of data that I found important, it would be circled and written in larger text with red pen. Important themes within the notebooks would also be underlined and marked with a box and connecting arrows made. Any other observations about people, or passing thoughts, would be noted down without fail in the notebooks.

3.6 Data Analysis

I will divide the discussion into two parts. The first part will reflect the multiplicity of qualitative methods I deployed in analysing data, and the second will describe the ontological framework that that underpinned the eventual writing up of the analysis and conclude that these analyses aimed at triangulation of data.

I commenced detailed analysis of my field-notes upon my return to England in July 2009 where I began scrutiny of the data with my magnifying glass and wrote them out as coherent sentences. I began to type down data from my notebooks and highlight themes of significance under the following headings: elements of the change programme; labour processes; management strategies; senior plant management; senior management career pathways; senior managers on managing; middle management grievances; middle management career pathways; industrial relations history; and workers. I would then look for repetitive assertions and important items which I had earlier marked with a star in my notebooks. Once I started analysing my data I returned to them over and over again and they were in addition to the pamphlets which formed

another repository of data. I followed a similar stratagem for analysing the pamphlets. I also set out to analyse other primary documents, such as the inventory data which comprised graphs, numerical figures and other statistical calculations, company data such as its fortnightly change management bulletin to its employees, delineating its overall market position, competitive challenges, the glad tidings that adoption of lean manufacturing and kaizening would bring, progress made and course correction required. Secondary documents comprised generic material from the financial press pertaining to the firm and the industry in general.

Upon suggestion of my supervisors I began constructing vignettes under each of the above themes. I was also in occasional touch with middle managers and would seek clarifications over any factual inaccuracy that I felt needed to be addressed. From these vignettes emerged early chapters and I started dispatching the first of what has now become uncountable manuscripts to my supervisors for suggestions on how to improve, who would always come back with comments and suggestions. Thus in due course, a narrative began to tell itself and my early descriptive chapters began to burgeon.

I had another opportunity to clarify and revisit and build upon emergent themes by an intensive bout of fieldwork during my visit in January 2011 where I interacted with line managers, Mr.RGPN, the GM Mr. SDN and Mr. VDVN. My attempt at this juncture had always been to verify my data from multiple sources and repeat the same theme queries over multiple respondents. After my return to the university on 15 of February 2011 from my visit in January 2011 I built analytic constructs upon these drafts which were primarily descriptive. I compared them and extracted a set of analytic argument claims that revealed themselves as the analysis continued, and the writing began to take shape and a more rounded perspective emerged towards the end of the writing. I could then juxtapose this overall rounded perspective with the literature, changing trends in the automotive industry and try to pin down my research questions specifically and how they address, support or

challenge the literature on change management, managerial rhetoric and industrial relations. My friend who works as a financial economics analyst in the insurance industry would periodically send me graphs and status reports which helped complement my analysis at that stage of managerial strategy. I continued to take the help of consultants in the automotive industry such as a professor of industrial engineering at the WMG and labour process researchers, to understand the full implications of these emergent themes, whenever required.

Another strategy to supplement my data analysis - in addition to the tangible methods of analysing data - is to freeze moments of events, recollect them vividly and relive moments of fieldwork emotionally, interpret them carefully in order to ensure that those impressions, the richness of experience and data is not lost. This meditative process of closing one's eyes, reflecting deeply to go back in time was helpful. It comprised performing 'the epoche' like operation which consisted of bracketing myself phenomenologically, and being in profound contemplation in the state of a passive meditative witness. This was in order to resurrect and view, mentally, moving frames of interviews and conversations, and experientially live down every moment of my fieldwork to capture their vividness and full intensity and to discern new analytic insights. These insights and new impressions I would immediately put on record to supplement the insights offered by notebooks. Consequently, my impressions of the plant and its dramatis personae are always embedded in my thoughts and, as with all industrial relations ethnographic researchers, the prospect of continually having to live and reconstruct as accurately as possible that sociological space of 'action and agency' has inevitably left an emotional burden on me. My intention to deploy the phrase 'emotional burden' is to underline the depth of involvement of the data and its analysis with me.

This process of recording data yielded a definite set of findings which resulted in the construction of the final drafts of my empirical chapters. My analysis yielded a set

orelationships which I will list in the empirical chapter and the conclusions. Towards the final stages of writing up, a clear set of analytic constructs emerged through which I could generalise my findings by the emergence of a coherent narrative that links the chapters together. My methodology, as illustrated in the empirical chapters through the headings of the sub-sections, agrees with the qualitative technique of triangulation to allow the data to speak for itself, and allow for the emergence of an overall coherent narrative.

Once a coherent narrative emerges the ethnographer researcher must seek interpretative validity [Maxwell, 2002: 48]. Central to the aim of achieving interpretative validity is the recognition that the analyst of the data cannot explain or arrive at a working hypothesis without ensuring that she or he has excavated all the connections and relationships between all variables in her or his case study.

The attainment of interpretative validity to the best of my ability is an important aim of my study. Inherent in this attitude is the concentration on the explanatory power of data in an attempt to advance findings that corroborate or refute prevailing currents of hypothesis. Research questions emerge from the intersection between theory and the field and there is a continual, iterative conversation between research questions, which themselves are evolving and are continually informed by emergent themes from the data.

3.7 Ethical Concerns

Conducting social science research requires recurrent questions of judgment and discretion in the ethical realm. As Laine [2000: 29] observes,

"The overlapping of roles and relationships presents researchers and other professionals with a range of complex ethical and moral dilemmas for which there is no satisfactory solution. Multiple roles (friend / therapist /

researcher) and dual relationships (friend/researcher) have a propensity to create "conflicts of interests."

I see as the most important of the ethical guidelines put forward by the British Sociological Association [2004] the requirements to obtain informants' informed consent and to avoid causing harm. I attempt below to recollect honestly the ethical dilemmas and decisions that I as a relatively junior researcher faced, especially because I was always reminded that to continue in the field I required the continuing support of senior managers. As Van Mannen [in Emerson (ed.), 1983: 277] says, what could seem quite abstract decisions are in practice "immediate, personal and excruciating decisions". Embedded in fieldwork are reciprocal expectations of the researcher and the researched that operate within asymmetric relationships of power. The researcher has to negotiate power relations in terms of access with managers who possess economic resources and have an important say in creating and reproducing authority in the plant.

Even once I had received formal informed consent from management to conduct my study, I needed the informed consent of managers and workers. Informed consent is constantly negotiated at multiple levels to maintain trust and take the dialogue to a deeper level. As Coffey [1999: 26] says, this requires a continuous process of identity management. The maintenance of my carefully constructed identity (no less carefully constructed for being true) as a friendly research student was crucial to getting the consent of middle managers and workers. Coming from an overseas university also gave me a veneer of prestige, but I also had to reassure them that I would not reveal what they said. I also was careful to avoid empathising with workers when I spoke to managers like Mr. N, who I knew was hostile to them, which inevitably would have made him think I shared his views. I see this as an example of what Burgess [1995: 202] describes as the "white lies" fieldworkers must occasionally tell.

The researcher must also be careful that no harm comes to people as a result of participating in the study. Some commentators on "ethical situationalism" [Hammersley, 2007: 238) suggest that one should concentrate on protecting from harm those people who are vulnerable rather than everyone, such as Mr. N, for instance, since "the likelihood of offence to someone cannot be avoided".

I was therefore particularly careful not to betray the trust of middle managers and workers. Indeed, middle managers often asked what I was going to do with their opinions and perspectives, and could not think how the minutiae of events, conversations and impressions would be relevant. Consequently, I had to be careful that I did not share middle managers' points of view to their superiors, especially when asked directly by Mr. AB or the GM, Mr. SDN. Since they had given me a role in troubleshooting on GEMBA and finding out the hold-ups in its implementation, they did ask me questions about others' attitudes. But I would skirt their questions, or tell them nothing I thought consequential. Workers were even more nervous, and as noted above I tended to meet them off-site as a result, where our conversations could not be overheard.

In these circumstances the researcher is always nervous about performing his or her identity appropriately. As Laine [2000: 6] says in the immediate situation there may be little the researcher can do "to ameliorate the anxiety that could impede progress towards establishing rapport and trust". One of my most anxious moments was when Mr. AB tried to read my notebook, but luckily my handwriting and cryptic notes meant that he was unable to understand my notes. Even now, however, the emotional burden of carrying the plant and its individuals in my mind has been very difficult to me, although I follow Burawoy as seeing this as a key aspect of analysis.

As the thesis neared completion, I became more concerned about whether the written version of the thesis, especially if it were published, would reveal the identity of either the case study firm or individuals within it. Access to the firm was granted in the

first place under the proviso that I would take adequate precautions to protect the identity of corporate policies and individuals, although the firm was less worried about being named. However, disguising the identity of the firm may be difficult, since individuals in the industry and academic practitioners who know the sector might deduce it. The automotive industry is so capital-intensive that there are only a finite number of big players. Protecting the identity of individuals may also be a problem, although I have used pseudonyms for them as well as the firm. Clearly before anything from the thesis is published more care will have to be taken to disguise their identities. However, so much time has elapsed since the main body of the fieldwork that people may not be so identifiable as they might have been, even to insiders.

3.8 Conclusions

Hence, like other ethnographers, I have tried to spell out my decisions and experiences in detail. Providing this kind of account of the circumstances under which my data was produced and analysed is essential to the readers' valuation of it.

Although there are limitations to the generalisability of both case studies and ethnography, I think this case study does help to explain how automotive firms operating under similar contextual conditions in India and organisations elsewhere in the world with similar organisational structures might seek to implement lean manufacturing and organisational change. The findings of the case study help in furthering a sociological understanding of how these managerial innovations would be received by various categories of employees including senior management, middle management and workers. In doing so, the study explores the situational context in which management encountered significant challenges and adapted both its approach and its expectations. My case study also seeks generalising findings that can contribute to attempts in the literature to understand trade union leadership patterns, attempts to defend the

ideological, financial and structural integrity of trade unions, and their attempts to

mobilise their members, under conditions similar to those within CompCo.

Chapter 4 The Fieldwork Setting: the Changing Indian Political Economic Context, CompCo's Local Environment, and the Plant Layout

4.0 Introduction

This chapter provides an account of the fieldwork setting of the plant in my case study firm, CompCo's, in which I studied the evolution of its GEMBA change management programme. I begin by looking at its wider context, the changing political and economic environment within which automotive firms like CompCo, and their trades unions, now operate. I identify changes in the "deep structure" [Erickson and Kuruvilla, 1998] of macro political economic context that surround the economic liberalisation policies of 1990. I then look at the more immediate environment of 'Hubli' town, before concentrating on the plant itself.

In Section 4.1, my first objective, will be to begin with an account of the changing political economic context the changing dynamics of the economic and social structure especially after 1990s is important so as to understand the contextual conditions that influence Indian automotive firms managerial policy and worker's responses. I begin, by surveying the economics literature on the economic environment of the Indian economy before 1990 and then specifying far-reaching changes in economic policy which in turn altered the manner in which the Indian economy operates after economic liberalisation of the 1990's. I then register, the implications it has for new economic opportunities for the middle class, who are the main beneficiaries of liberalisation. This class in turn drives consumer demand as consumers and meeting. The aspirations of this class poses a challenge for Indian manufacturing firms in India whose recruitment of manages has to compete with the services sector in terms of

potential recruits' expectations of pay and rising economic status. Workers in turn share the upwards-leaning aspirations of the middle class, which they take as a reference point. The increase in compensation to employees, especially the variable component of performance pay, has been pointed out by studies by analysts [Chakrabarti et al. 2012] consultant firms and the business press [Economic Times, June, 2012].

I then turn to the fundamental shift in the character of the state and its regime of accumulation brought about by the economic reforms. Given this changed context, I examine the nature of the Indian automotive industry under these new circumstances and argue that automotive manufacturers have little choice other than to embrace newer modes of work organisation and managerial strategies. The changes favour management and mark a changed role of the state, but co-exist with continuities in the legislative framework governing employment security and trade union collective bargaining. The legislative framework governs the relationship between the firm, the state, the worker and the trade union. Companies get around its limitations by hiring contract labour who are caught in between different employers and have no trade union representation.

My second objective in this chapter is to provide the reader with an outline of the main company sites to which I will be referring in the thesis, and to provide a picture of its organisational structure. In Sections 4.2 and 4.3 I provide some background necessary to understand the implementation, consequence, and outcomes of change through GEMBA: CompCo's product profile and the geographic locations of the main CompCo manufacturing units and their roles in the company's overall product portfolio. In sections 4.4 and 4.5, I focus on my main fieldwork site, EWS, and its local environment. Section 4.4 provides a small amount of background to the plant's local context in the town of 'Hubli' and some characteristics of the workforce. The long Section 4.5 takes the reader through a walk around the main areas of EWS, including both administration and production. It begins, in Sections 4.5.1 and 4.5.2, with the

gateway to the plant, including the manner in which managers and workers enter the plant, and then moves on the main administrative building (Section 4.4.3). My initial observations of the gatehouse and administrative areas focused on the visibility and pervasiveness of forms of status hierarchy, so I emphasise these. The next sections introduce the main production functions and areas in the plant, first the areas of production control, including the GEMBA office (Section 4.4.4) and then the main production areas (Section 4.4.5), including especially the machining and assembly areas, and significant informants who went on to play an important part in my fieldwork. This description of the spatial layout of the plant and its components provides a first impression of the difficulties the firm faces in coordinating production in an ageing facility. The Appendices to the thesis include a series of diagrams and maps that show hierarchical structures of the company, the plant layout, including the administrative offices and the machine shops.

4.1 The Wider Political and Economic Environment

4.1.1 The Indian economic context before 1991

It is hard to understand the importance of the changes that economic liberalisation in the 1990s brought without first recognising the perceived problems that liberalisation was meant to deal with. The main feature of the protected economic system that characterised pre1991 India was that the state had an absolute monopoly in determining how the economy functioned. Immediately after independence in 1947, the state invested heavily in the public sector, particularly in heavy industry, such as iron, steel and infrastructural in power projects, dams. The state also protected domestic industry from overseas competition by placing stringent import controls. The deployment of fiscal and monetary policy instruments sought to mobilize private financial savings for public investment, aiming to get the private sector to conform to five year plan priorities through

quantitative restrictions on private investment, capital issues and foreign collaboration, as well as restricting imports of technology, capital goods and intermediate inputs (Srinivasan and Tendulkar (2003:12), " The drive for import-substitution industrialisation (ISI) was underlain by a socialistic model of accumulation which sought to build up the 'capital goods capabilities' of the newly independent post-colonial nation." [Corbridge, 2011].

However, as Srinivasan and Tendulkar [2003: 13] argue, the import substitution industrialisation distorted market price signals, politicised decisions and corruption. This was because the criteria for evaluating applications were broadly drawn, and the discretion on the part of licensing authorities opened up bureaucrats to 'constant pressure from politicians and license seekers'. Second, while successful in denying licenses the authorities had no way to induce potential licensees, and, thirdly the authorities did not keep track of the implementation of licenses.

For manufacturers, the unpalatable result of the licensing system [Srinivasan and Tendulkar, 2003: 12] was to create a labyrinthine bureaucratic maze of approvals and strictures which manufacturers, especially smaller manufacturers, had to wade through. They had to reach a 'tacit understanding' with various levels of the bureaucracy and resort to underhand dealing. This scuttled their production capacity through production limits and caps through plan targets, and stymied competition by preventing new firms from entering the market. All of these factors cumulatively created a web of protectionism and led to limited product portfolios for the consumer.

The economic crisis of the 1990s made things worse. It was caused by a balance of payments crisis, coupled with political instability on the domestic front, the collapse of the Soviet bloc, leading to an end in barter trade, and, after the Gulf War, both spiralling oil prices and the loss of remittances from migrant labour who had been working in war affected parts of the Middle East [Srinivasan and Tendulkar, 2003: 27]. The resulting

reduction of foreign exchange reserves forced the government of India to pledge its gold

reserves in return for financial assistance and to accept and implement International

Monetary Fund policy recommendations.

4.1.2 Economic liberalisation

The immediate consequence of the economic crisis was reforms [Mathew,

2006: 19] directly affecting the operations and market structure of Indian

manufacturing firms and the financial market under which they operated.

1) Removal of Tariff Barriers: Previously Indian firms had to take permission

from the government and bureaucracy before importing items leading, for instance, to

what Maira (2004: 42) calls crippling capacity constraints because firms like Tata were

unable to import efficient machine tools, having instead to depend on the indigenously

produced equipment by the state owned public sector firm HMT, which would not

measure up to Tata's specific requirements.. With the new industrial policy there were no

barriers to the entry and exit of firms and the government would now facilitate rather

than interfere in investment decisions. Also the limits on the assets of large business

firms were removed, as were the need for "prior approval from the government for

capacity expansion, capacity creation, amalgamation, and mergers or takeovers"

[Mathew, 2006: 18].

2) Trade policy reform: All restrictions and quotas on exports and imports and

subsidies for exporters were done away with, exchange rates were allowed to fall, and

up to nearly half of the government stake in public units was sold, in order to get money

into the government treasury and reduce the deficit and allow the private sector to grow

[Mathew, 2006: 18].

These and other economic reforms of the Indian economy in the 1990's,

including the deregulation of financial markets, were successful in achieving a relatively

high rate of growth of 6.5% annually [Basu and Maertens, 2007: 149], caused mainly by the pro-business policies of central and provincial governments. Import liberalisation sustained economic expansion. Moreover, according to Jha [2000: 21] a young population of working age would lead to further expansion of consumption and what economists call the 'demographic dividend'.

The costs of these changes in the "deep structure" [Erickson and Kuruvilla, 1998] of the Indian economic system subsequent to economic liberalisation has been greater dependence on capital markets and the global economy, a characteristic feature of industrial economies dependent upon general equilibrium premised on the Arrow-Debreau model [Rajan, 2009: 34] to a degree hitherto unseen in the years when the Indian economy was protected and regulated by the state. Evidence of this vulnerability can be seen in the declining profit margins of most of the commercial vehicle majors in the economic crisis of 2008.

However, this economic increase reflected the improvement of the performance of the individual sectors [Basu and Maertens, 2007: 150], without resulting in a large-scale transformation of a largely agrarian economy to a modern industrial economy [Pangariya, 2009: 3]. Despite high growth in the period 1991–2007, led by urban middle-class demand and helped by unsustainable expansionary fiscal policies, growth has been concentrated in the services sector; agricultural and industrial growth has been sluggish, The result is that the period of economic growth and expansion has been relatively jobless [Basu and Maertens,2007: 154]. Where employment increased, it mainly consisted of casual, informal jobs [Pangariya, 2009: 5] and a rapid expansion of the service sector and offered a wide array of job opportunities only for a still statistically small fraction of the total Indian population. Even so, people's chances of losing employment is further exacerbated by Indian firms' use of labour- saving technology and automation, [Richter and Banerjee (eds), 2003]. Hence, there are still large challenges to be overcome in terms of infrastructure

development, poverty alleviation, health and primary education. Taken together "the external and internal liberalization policies pursued during the 1990s have neither improved social opportunities nor expanded the area of choice for vast numbers of people who live a constrained existence, but have put India on a path of unequalising growth led by urban middle class consumption" [Storm and Nastepaad, 2007: 1184].

4.1.3 Implications of economic opportunities for political and social life

Economic liberalisation is associated with the greater purchasing power and political sway of the middle classes An entrepreneurial middle class has emerged with greater wealth as a result of the economic growth process and finds itself with greater purchasing power, partly through the increase in sophisticated credit facilities. The middle class benefits from the demographic dividend identified above and a section of it has gained employment in the new economic context, especially in growing sectors like the Indian Information Technology and Services Enabled industry CITES) [Singh 2003]. The middle classes were in a good position to take advantage of the new liberalized economic regime by having a ready pool of technically trained managerial and technical staff in its engineering, management and polytechnics [D'Costa 2010b: 12]. According to Fernandes [2006: xv], the 'newness' of this middle class lies in its ability to be an active participant in consumption and avail greater consumer choices the India of the 1980's did not enjoy: "... the rise of the new Indian middle class represents the political construction of a social group that operates as a proponent of economic liberalization." This middle class is not "new" in terms of its structural or social basis. Its "newness" "does not refer to upwardly mobile segments of the population entering the middle class" but rather "to a process of production of a distinctive social and political identity that represents and lays claim to the benefits of liberalization." [Fernandes, 2006: xv].

Part of this new identity, [according to Jaffrelot: 2008: 45], is "an integrated synthesis" of the values of caste and individualism which now shapes political life. For instance middle class individuals linked by caste help each other form new businesses ventures and negotiate with the state [Damodaran, 2008]. These social identities are also argued to provide "important source of symbolic resources that help to manage the uncertainties associated with policies of economic liberalization and the broader processes of globalization that such policies invoke" Fernandes [2006: 61].

4.1.4 Changing nature of accumulation of the Indian state

Economic liberalisation and shifts in the class structure mean shifts in the role of the state in accumulation in India, driven by the twin processes of reregulation and marketisation (Reed, 2001: 13). The primary role of the private sector as a driver of the economic growth has been accompanied by the development of independent regulators to monitor activities in each sector such as, the Securities and Exchange Board of India to monitor the stock market for instance. Partha Chatterjee [2011] links the changed functional role of the state to the new role of the middle class whereby the dismantling of the licence regime has actuated competition between provincial state governments to woo capitalist investment from domestic and foreign investors, He argues that these developments have led to a clash of state---level political parties and leaders with the interests of national and international capital in a prodigious manner. The state still continues to be an important intermediary in negotiating conflicting class interests, but the state has undergone a fundamental transformation. The "bureaucratic-managerial" middle class that had earlier played an active role in leading and executing ideological and autonomous activities of a state that had favoured developmentalism has been considerably weakened.

The new benchmark for the middle class is a professional ethos of managerial efficiency and deliverables while promoting what it labels as economic reforms by facilitating investment of MNC and Indian companies. In the new context it has become imperative for the state to create the right atmosphere for investment and facilitate corporate growth for firms which might otherwise move elsewhere.

The consequence of the above development of the state, both at the national and provincial level, is its pre-eminent role as a facilitator of capital investment. The provincial states within India, now try to outbid each other to allow firms, especially global MNC's, to set up production facilities of goods and services within their territorial boundaries. There exist modern managerial practices and world-class infrastructure required for the functioning of JIT supply chains and firms along with poverty and with teething infrastructural problems which Corbridge [2011] identifies as the less visible "trenches of the federal state". This implies that though new economic circumstances have come into being, the nature of accommodation and collusion between the state, domestic and now multinational corporations and its bureaucrats in the exchange, allocation and appropriation of contracts and resources continues. As Gulyani [2001: 167] observes, the Indian state is changing towards being an effective service provider to industry, "ceding their role as providers and investors to specialized private firms and taking on the role of regulators of infrastructure markets."

However, some argue that the continued existence of laws, some of which go before 1947, even in their new forms impede and defeat the overriding concern for market efficiency, facilitating corruption in interaction of firms with the state [Reed 2001: 134]. The state also continues as an actor in industrial relations disputes.

4.1.5 Changing Indian automotive industry automotive portfolio and managerial repertoires

The effects of these changes for the automotive industry are marked, but nonetheless have not brought about wholesale change to prevalent managerial practices in India. Indian managerial practices are challenged by market competition, operational constraints such as inadequate power and supply bottlenecks and changing technology, forcing companies to adopt meritocratic strategic management in conjunction with implementing the latest modes of work organisation such as lean manufacturing. There is enormous scope and room for expansion, but implementing new systems of work organisation within the Indian automotive industry not only entails questions of whether it is a brownfield plant or a new start up, a company's industrial relations history and the role of the provincial state as facilitator of investment, but also teething supply side constraints that inhibit the full play of JIT in India. These constraints may force management to be selective in their adoption of managerial innovations. Guyani provides a good example in terms of persistent supply chain constraints in India:

> For example, a shipment traveling 2500 km between Delhi and Chennai is in-transit for seven days, about 4.5 times longer than it takes for a similar distance between Valencia, Spain, and Ford's plant at Dagenham, outside London. Not only is the travel time long, it is also unpredictable, which forces firms all along the supply chain to hold higher levels of buffer inventories to prevent a stock-out. For example, although the average travel time between Delhi and Chennai is seven days, it can take anywhere between six to nine days; this forces Maruti (Maruti Suzuki) to hold buffer inventories of two to three days. Together, the in-transit and

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buffer inventories translate into significant financial costs. [Gulyani, 2001: 153]

Management repertories in India are in transition. Managerial practices have historically been characterised by hierarchical social relations. However, managerial practices have not been authoritarian but rather, have been framed by an underlying authoritative leadership style in superordinate-subordinate relationships, characterised by paternalistic care for subordinates, including showing affection, taking personal interest in the well-being of employees and commitment to their growth. Organisationally prevalent, is a tendency to centralise power, and is characterized by status consciousness. [Kakkar et al., 2006: 106] With regard to organisational mobility the literature points to an important feature, the importance of internal promotions and advertisements through emphasising loyalty and dependability rather than efficiency [Gopalan and Stahl, 2006]. There is also a strong reliance on social contacts and the accommodation of family members, relatives or friends in their HRM strategies [Pio, 2007: 326], because of the belief that the group is more important than the individual [Gopalan and Stahl, 2006]. According to Rai [2012: 26] these hierarchical characteristics continue to co-exist in Indian Human Resources practices, even in the present, with high power distance in working relationships; centralisation, resulting in minimal downward decision making in organisations; and paternalism, resulting in difficulties in adhering to stringent and objective performance systems within modern HR systems, and leading to ad hocism and subjective relationships.

However, according to Pio [2007: 325], Indian firms are now quite resolute in acquiring a strategic HRM thrust, with features of hard HRM and soft HRM co-existing. The adoption of latest managerial innovations is corroborated by Iyer [Iyer et al., 2012: 18] who demonstrate that the liberalization policies of 1991, which facilitated the entry of multinational enterprises, further encouraged the auto component firms to upgrade their

quality programs by adopting JIT, Total Quality Management and Total Productivity Management and Six Sigma etc. Evidence of successful adaptation of these programs is gleaned by these firms winning the automotive industry's quality benchmarking awards such as the Deming prize and quality certification and attainting the ISO standards. "By scaling up the end quality they delivered, these firms gained both in terms of cost and also a substantial increase in productivity."

Pio [2007: 325] describes the increasing priority Indian firms give to talent acquisition, effective resource allocation, talent improvement, cost reduction and a shift towards greater organizational efficiency and competitiveness. Most significantly there is also a trend to include the head of the HR function in top management teams and merit based recruitment and apply globally recognised standards in HRM practice. The movement towards globally recognised values of managerial practice are also attested by Kakkar et al (2006: 109]. Hence whatever the pervasiveness and dominance of 'core' Indian values is in the rest of society (or the older types of relationships summarise by Rai, above) a recent study of a large sample of senior level managers suggests that such traditional values as close interpersonal relations at work are increasingly receding in importance and that 'there is an emergence of global value paradigms".

There is also a continuing trend to modernization and increasing product portfolio complexity in the Indian automotive industry. The earliest pioneers in the auto industry of Japanese manufacturing practices was Suzuki's joint venture with Maruti. The firm, adopted a governance system that introduced production flexibility as practiced by the Japanese and adapted to Indian conditions, illustrating the flexible organizational capabilities and ability to ramp up production quickly. D'Costa [2010: 21] also notes that

'Suzuki introduced Japanese industry practices to secure quality components and ensure uninterrupted flow of production. This consisted

of both inter-firm and intra-firm relations (D'Costa 2005: 109). Joint-ventures between MUL and its suppliers were one such relationship. Several components producers created joint-ventures with Japanese suppliers, who were also supplier to Suzuki in Japan.'

These practices continue to manifest themselves through the strategies of automotive manufacturers, including in the commercial vehicle industry, to gain or sustain the competitive edge they have in the automotive market. The Indian commercial vehicle (CV) industry caters to a variety of customer transportation demands. It produces buses for the passenger transportation market comprising intermediate and long-range passenger transport ,and whose customers are individual fleet owners, provincial state transport corporations and private bus operating firms. It provides a choice for bus fleet owners whose businesses are increasingly becoming more demanding following greater expectations from customers for better amenities, such as for instance internet facilities, greater passenger amenities in buses, faster turn-around times with less maintenance and better fuel efficiency, all of which add to operating costs. The CV manufacturers offer to customise and build customers' own chassis (which has in recent times seen intensified competition with the arrival of firms such as Irizer). Or the commercial manufacturers build it for them at additional cost.

Customers for trucks span the following range: individual operators or firms seeking light commercial vehicles for carrying parcels and perishables; firms and fleets specialising in freight shipping who buy medium duty vehicles; and transporters of boilers and industrial turbines who seek heavy duty trucks with very high horse power, also known as tractor trailers in the industry's parlance, that cater to the demands of heavy industry. The industry also makes custom made vehicles. Most of the commercial vehicle manufacturers manufacture chassis which are converted into heavy commercial vehicles depending on the individual customer's requirement of public transport or

goods transportation. Pick-up trucks are more often than not manufactured in the

assembly plant of the vehicle manufacturer and are ready to use upon delivery.

The vehicle manufacturing segment, like the passenger vehicle segment, has been a

recipient of substantial FDI and increased competition which has changed management

practices and led to increased emphasis on operational efficiency on the part of

management. There has also been widespread diversification of the product portfolio of

commercial vehicle manufacturers who now build a greater number of ready to operate

products rather than leave the task of completion to the chassis builder. This is due to

changing requirements on the part of centre and provincial government-led infrastructure

projects and bus operations to meet various segments of public transport, coupled with

large scale institutional support backed by the world bank such as the Jawarharlal Nehru

National Urban Renewal Mission [JNNURM] programme [Vaidya, 2009: 7]. This all

means increasing complexity of industrial requirements, private owners who now want

better technology and mileage and increasing passenger demand, long haulage with

minimal turnaround and finally increasing complexity in the passenger segment.

The entry into the automotive industry in India of players such as MAN,

Navistar, Volvo and joint ventures has challenged firms to deliver end product quality

while at the same time maintaining cost efficiency and cutting production costs. For

instance, the German commercial vehicle giant Mercedes-Benz, the world's number 2

truck maker, has already made its foray into the Indian automotive industry which may

threaten my case study firm's product range and its long-term survival.. An automotive

industry analysis report [IIFL, 2012,p 5] claims that Mercedes has crystallised its plans

of making a foray into the Indian CV market through its 'Bharat Benz' range trucks,

customising production to suit the Indian market. It also reports that truck production has

already started in a green field site with two thirds of the initial capital investment of

Rs.44 billion and a capacity to produce 36000 trucks that could be scaled up to 70000

trucks if required. Additionally it plans to expand its distribution network and diversify its product range.

4.1.6 Continuity in industrial relations regulation in a changing political economic context

Workers and trades unions enjoy state protection in many respects. But the trends that have led to the emergence of new middle class patterns of consumption from the 1990's have also raised the expectations of skilled workers [Iyer et al., 2011] who want their families to be better off than they are. I will outline the legislative apparatus of the state under which industrial relations disputes resolution is governed, identify challenges they face individually and through organised representation after the 1990s.

The state is the pre-eminent regulator of industrial relations in India. Permanently employed workers in India are governed by the Industrial Disputes Act (IDA) 1947, which also makes provision for trades unions as workers' bargaining agents. The protective aspect of the IDA Act requires that the state's approval is mandatory in the event a firm employing more than 100 people decides to fire a regular worker. However, the government approval to fire workers required by this act has never been granted [D'Costa, 2011a: 124], and the state has not yet made up its mind whether to change the act. Over time provincial amendments have strengthened the act by expanding the jurisdiction of courts to hear certain types of cases, enhance governmental authority to enforce certain types of awards on tribunals and labour courts or enhance governmental power to compel attendance at conciliation proceedings [Teteilbaum, 2010: 277]. Hence the state enjoys enormous power [Sen Gupta and Sett, 2006: 206]. For instance, 'under the IDA act the government enjoys full discretionary power whether or not, when, and how to intervene in an industrial dispute-actual or threatened. It may or may not decide to conciliate, it may refuse to send a dispute for

adjudication or it may even decide not to implement the award of a Labour Court or Industrial Tribunal.' It may prohibit strikes or lock-outs, or it may refuse permission for a lay-off, retrenchment or closure. In total, in India, the government plays a vital role in shaping the industrial relations climate. Also, the adjudication system is so structured and manned that the state apparatus exercises substantial influence over its functioning."

Despite the strong protection and strictures against the dismissal of permanent directly recruited workers offered by the Industrial Disputes [IDA] Act [1947], which continues even in a context that is in favour of investment capital and management, Indian workers are now under threat from a panoply of policies designed to get round the legal protection permanent workers enjoy. These range from voluntary retirement schemes, threats to industrial relations/HR legislation [Kuruvilla, 2006: 193] and flexible management practices that might prioritise automation over labour intensive job-routines. Trade Unions are forced to accept these flexible practices in their restructuring agreements or face eventual retrenchment. According to Venkataratnam [1996, cited by Bhatacharjee, 1999: 24] "these restructuring agreements now include, among other things: ban on recruitment, job transfers to non-bargainable category, introduction of parallel production, automation and flexibility, transfer of production to subcontracted units, introduction of voluntary retirement schemes, transfer of permanent jobs to contract/temporary workers, merger of units, and a host of other shop floor restructuring provisions."

These developments pose significant challenges to Indian Trade Unions who are affiliated with political parties whose interests may contradict that of permanent workers [Kuruvilla, 2006: 194]. In the Indian theatre the principal left unions are the Centre of Indian Trade Unions (CITU), affiliated to the Communist Part of India (Marxist), and the All India Trade Union Congress (AITUC), affiliated to the Communist Party of India.

The other two unions affiliated to national political parties are the Indian National Trade Union Congress (INTUC), affiliated to the Congress Party of India, and the Bharatiya Mazdoor Sangh, affiliated to the Bharatiya Janata Party. There are also several other regional amalgams that work on members' caste, kinship or linguistic identities to win representational rights through union elections [Ramaswamy, 1973: 921] or expand their membership base.

The relationship between trade unions and political parties is symbiotic. This political affiliation of Indian trade unions is a result of the era predating 1947. There are overlapping leadership structuring in which enable union representatives to have a seat in legislatures and in parliament. The party-affiliated unions represent a number of firms and therefore possess an awareness of the local labour market and more extensive organisational skills than firm-level unions, which, according to Teitelbaum [2010: 59], encourages firm based unions to affiliate with the party based confederations.

Ramaswamy [1983] has long identified '*economism*' as a defining characteristic of the Indian worker- trade union relationship. An effect of this economism is the divided landscape of Indian trade unions and the shifting loyalties of workers. By 'economism' he means that workers are opportunist, only instrumentaly attached to their union (or their employment) and readily transfer their loyalty to whichever union promises higher wages. The role of the trade union is to help them get more money out of their present employment.

Conversely, this '*economism*' negates the advantages outlined by Teitalbaum brought through affiliation of the firm's union to a political party-based union, whose leaders are answerable to a specific political party and represent many firms in the area. Party-affiliated trade unions need workers' support base to further their political fortunes and to poach members from their rivals [Ramaswamy, 1983: 979] However, the weakness

of political affiliation, as D'Costa [2011: 124] notes, means that Indian Trade unions 'are heterogeneous and politically fragmented and thus unable to speak with one voice'.

Managements in India undermine workers' demands by exploiting intra-union rivalries: "Employers can play one union against another, if there are multiple unions, although in the automotive industry the general practice has been to foster a company union...A characteristic trait of Indian Trade Unions is to present multiple demands together in contrast to the reality where unions end up bargaining on very narrow resume of issues" [Teitalbaum, 2010: 54]. Management also exploit workers' economism by planting 'leaders' whom it thinks are 'safe' and can guarantee industrial peace [Ramaswamy, 1983, 1989].

Wage levels are largely dictated by the manufacturing industry wage pattern in a particular region or state. Teteilbaum [2010: 54] suggests that trades unions set demands that they know the firm many not have the resources to meet. The underlying motive of arbitrarily raising expectations is to impress their constituents, exaggerate their power and, reassure them that the union means well for them. They also try to stretch the employer's financial capability in the "hope that the employer will overshoot and meet all of provide a larger settlement' than if 'the leadership had presented a complete and perfect information about the Union's expectations. Unions present multiple demands to generate bargaining leverage so that they can secure their actual demands" [Teitelbaum, 2010: 54].

In an atmosphere favouring investment and management the state is hesitant to change existing laws without consulting management and labour, resulting in uncertainty and ambiguity in Indian labour law. This puts management in a quandary especially when a dispute arises with its permanent workers. To avoid the protracted litigation and circumvent the cumbersome litigation employment law imposes upon them, employers in both manufacturing and services opt for contract labour. Moreover, besides the wish to

evade state employment protection, there are also cost saving benefits for employers who hire contract labour because contract workers are paid less in comparison to directly employed workers, usually 25-50% less. Hence in some firms contract workers represent nearly fifty per cent of the total workers, with little chance of becoming permanent workers [Bhattacharjee, 2009: 15-18].

However, contract employees are governed by the Indian Contract Labour Act 1976, so they are promised some protection. A license from the state was mandatory for a contractor to start selling the services of labour. However, in actual practice there is an enormous lacuna with regard to implementing the provisions of the Contract Labour Act 1976, which is meant to guarantee decent employee working conditions and minimum wages. To get round it employers hired labour through the intermediary of contractors, who undertook to supply labour in the guise of 'job contracts' or 'contracts for services'. These were sham contracts, used merely to camouflage the real employment relationship within the firm and skirt coverage of the law. [Sen Gupta and Sett, 2006: 211]. Furthermore, the possibility of government inspectors being bought off by powerful managements cannot be ruled out thereupon, making contract labour who do not have representational rights very vulnerable.

Contract workers are caught between two employment systems, making them especially vulnerable to problems in the implementation of the law [Meenakshi, 2009: 9, 13]. Even if the act provides social security such as provident fund, the employee struggles to get the money once he leaves the contractor because of her or his current ambivalent status as neither an employee of the contractor or the employer who has to pay the provident fund. The anomalies in implementation therefore make it very convenient for management to take recourse to contract labour to cut down operating costs and wage bills.

I will now turn my attention to describing the immediate setting of my case study firm after having laid out the political economic superstructure of the state, the employees, consumers and trade unions and the manner in which its changes influence Indian automotive firms.

4.2 CompCo: its history and Product Profile

My case study site was an engine and medium duty vehicle assembly plant I call 'EWS', located in the industrial town of 'Hubli' (a pseudonym, but a not uncommon town name in India). EWS is important in the thesis because it was where I spent most of my time as a fieldworker and because at that point of time it served as the main centre for CompCo's GEMBA strategy, most of the main actors being based there. I commenced my fieldwork in CompCo's main vehicle assembly plant, to which I have given the pseudonym WAP4, also located in Hubli, but later moved my attention to EWS. In between the two plants there was a press shop, WDM3, which I visited with Mr. N, the DGM who headed the GEMBA programme, where body panels were produced, such as those for the front driving cabs of commercial vehicles. My fieldwork also included a number of visits to CompCo's management development centre in Hubli.

CompCo has been a leading manufacturer in different segments of the commercial vehicle industry in India in the era before and after economic liberalisation. Before economic liberalisation, the Indian commercial vehicle industry market was limited to a few major players but this monopoly has now been challenged because of market competition and the advent of new players, although this has not yet undermined the dominant positions of companies such as CompCo.

CompCo was founded in 1948 by Indian promoters and transformed into an Indian joint venture of a British vehicle manufacturer in 1950 with a significant presence near Preston Lancashire, which dominated the British market for long until its demise.

CompCo was taken over in the mid 1980's by a large Indian conglomerate operating both from London and from India, with diverse business interests in sectors such as manufacturing, heavy machinery, and banking. CompCo being one of the early entrants into the commercial vehicle industry had a preeminent position in the Indian automotive market and was successful in adapting to the regulatory mechanisms of Indian government policy during the license permit regime, which lasted up to the 1990s. CompCo has tried to adapt its operations to the new industry ecosystem and the policies prevalent at central and provincial state government levels and continued to prosper, albeit in a much tighter market.

CompCo's product portfolio comprises both fully assembled vehicles sold under its own brand, including trucks, buses, smaller size vehicles used in transporting articles such as parcels, as well as defence vehicles, such as infantry carriers, and lower volume or custom built products such as heavy-duty high horse-power vehicles including tractor trailers used for transporting gigantic machinery such as boilers and turbines, marine engines, and heavy duty industrial diesel-run generators. Some production of buses is carried out in partnership with CompCo's bus body building partner, the European firm Irizer, but in CompCo's own vehicle manufacturing plants. In addition, the firm produces engines and chassis for other, smaller vehicle manufacturers who carry out the necessary production and assembly work to make their own branded vehicles.

4.3 CompCo's Plants

EWS, in Hubli, my main fieldwork site, is part of a larger company apparatus employing about 8000 people across India. Production is spread across a number of plants, not all of which are located in Hubli, and I have assigned them the pseudonyms WDP4, WAM4, WDG3. There is also a foundry unit, which I have called WDP1,

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supplying EWS and WDP4, which is situated on the outskirts of Nellore, the pseudonym of a large city in this region.

EWS's main role is to assemble engines using the engine blocks from engine foundry unit WDP1, which supplies them to EWS as precast blocks. EWS came into being in the early 1980's, since when it has manufactured engines not just for its own use but for other CompCo plants in Nellore and Northern India too. Although the manufacture of vehicle engines is the main focus of EWS, a part of the plant, the Medium Duty Vehicle, produces the fully functional chassis for medium duty vehicles completed by other plants or by either small body building firms or external coach builders such as Irizer. The axle assembly shop produces axles for WAP4 and other plants of CompCo depending on their requirement, and shop 7 produces connecting rods for some models every now and then, while other ranges are supplied to it by Bharat Forge and other primary components for use in EWS.

EWS has a state-of-the-art Engine R&D Centre, a two-floor building, that tests new prototypes before they go into commercial production. This R&D Product prototype development centre serves as the Engine R&D for the whole of CompCo. The R&D head of this functional unit sits on the first floor and reports to the head of production. There is also a GM [R&D] [see Appendix 3] who comes in much earlier in the drawing board stage, co-ordinates with other plants and overseas technological exemplar firms, collaborates with them, in planning and bringing the engines from the drawing board stage to the next stage. The GM [R&D] also reports directly to the head of production at corporate headquarters, whereas the head of R&D centre only reports to the production head.

In the R&D the designs acquire concrete form by assembling them and subsequently they are tested extensively for many months which includes running them

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continuously. The R&D head reports to the production head conceives the engine and then works in tandem with the R&D prototype development centre.

Another section of CompCo plant WAP4, down the road, specialises in the manufacture of commercial vehicles and light defense application vehicles and also manufactures medium and heavy range manufacturing vehicles. I will have much more to say about EWS below.

CompCo has four other pivotal plants. Plant WDP4 is over four decades old and has been through a substantial cycle of renovation and technological upgrading in the last decade. WDP4 is located in the large metropolis Nellore, in the same state as EWS, known for the presence of companies such as Ford and Hyundai around its suburbs. This production unit plant specialises in special purpose engines of very high horsepower used for ships and other applications such as diesel generators. WDP4 contributes to the overall commercial vehicle product range of CompCo by manufacturing heavy and medium duty commercial vehicle chassis and fully built commercial vehicles with particular specialisation in very heavy multi-axle tractor trailers used in transporting boilers gas turbines and other very heavy industrial machinery. There is also a state-of-the-art Research and Development Centre in Nellore which designs, approves design, sets mandatory specifications for a wide range of components required for production, releases prototypes of several components processes, from the drawing board and finally periodically suggests manufacturing process improvements for CompCo's entire manufacturing setup.

Plants WAM4, located near Nagpur in Central India, and WDG3, near Jaipur in North India, assemble medium and heavy commercial vehicles and cater to the eastern and northern markets of the country. A new plant, to which I will assign the pseudonym YDM4, in the northern Indian province of Uttarakhand, is now complete. CompCo hopes it will transcend the limitations of the other plants by embodying the latest technology, in addition to expanding CompCo's reach over the northern markets, which was hitherto

limited by the truncated productive capacity of WDG3. The existence of new plants like this one affects management thinking about the future and specific role of an older plant like EWS, which commenced its manufacturing operations from January 1980.

Each of the CompCo's manufacturing plants has a distinctive role in CompCo's product portfolio and each makes a mutual contribution to each other's product portfolio. In the era prior to liberalisation of the Indian economy and the increased competitive pressures faced by CompCo, it was possible for each plant to specialise in a particular product range and offer distinctive contributions to the overall portfolio. However, in recent times the emergence of tightly integrated supplier chains and the requirement of being closer to product markets have considerably diluted the earlier prominence given to product specialisation of each plant.

The engine room of CompCo's overall corporate and business strategy-making apparatus, comprising of senior managers such as the Chief Operating Officer, the heads of finance and engineering and marketing and purchase, operate from corporate headquarters located at Nellore (my pseudonym for a large metropolis in the province of Tamil Nadu). All the GMs who head each of the above plants report to corporate headquarters at Nellore.

The organisational chains of command for CompCo as a whole, EWS and the managerial and production strata at EWS are depicted in the Organisational Charts in Appendices 1-4. Also included in the Appendices are maps of EWS as a whole, its' manufacturing area and its constituent parts. There is a list of the names and titles of individuals mentioned in the thesis in the Glossary.

4.4 EWS: an overview of the environs and workforce

Hubli, the site of CompCo's EWS plant, is a thriving location for companies such as CompCo (see Appendix 5). The town has grown in strength with regard to the size of

its resident and mobile population, the latter running in several thousands in conjunction with the growth of the vehicle industry and more recently the ancillary industry that is dependent upon it. Hubli's proximity to Bangalore is advantageous in providing a labour force and customer market for CompCo vehicles. Historically Bangalore was a manufacturing hub, and continues to be home to large transnational supplier firms such as the German spark plug and automotive component manufacturer Robert Bosch. Bangalore has also emerged as a centre of the IT and IT enabled services. The large pool of potential human resources at the managerial and operator levels in Bangalore and its vicinity have contributed symbiotically in substantial measure to Hubli's industrial growth in recent times. Not only is Hubli home to a large ancillary industry that supports companies such as CompCo, it is reasonably well connected to other critical accessory and component makers in southern India.

The employment prospects offered by Hubli's industries make it a melting pot of people belonging to different class, caste, and religious identities. The majority linguistic group is Tamil speakers, including native Tamil speakers originating from Hubli and its neighbouring districts as well as long-time residents from distant parts of Tamil Nadu who have made Hubli their home. Hubli residents also include Telugu speakers who incorporate the influence of Kannada and Tamil in their dialect. They originate from Hubli and its neighbouring districts or migrated from nearby border areas more than twenty years ago because of job opportunities in the automotive and engineering industry in Hubli. The Hubli manufacturing work force also includes Telugu and Kannada speakers who commute from nearby areas surrounding Hubli.

CompCo's EWS plant in Hubli employs about 2000 people, comprising permanent cadres of operators, both manufacturing and in administration, senior managers, middle managers who comprise the executive cadre, management trainees on probation, contractual operative staff, cleaners and other categories of casual workers. It

is one of the biggest contributors to the economy in Hubli, especially if employees who work for its suppliers as well as for the firm were incorporated into the net composition of the labour force. It employs direct and indirect labour and contractual labour across a spectrum of vocational trades and skills and helps in sustaining consumption patterns of a wide array of products and services in the town. Additionally, competitive pro-investment polices of successive administrations of state governments by way of tax concessions have also had a bearing in the expansion of ancillary industries that support the vehicle manufacturers ranging from two wheelers to commercial vehicles in the town.

The linguistic profile of EWS is not much different from Hubli as a whole, but in the plant the main languages spoken include English as well as Tamil. People hail from different castes and religious backgrounds, but I am unable to give any further details about the social background of the workforce. In my interactions with a wide array of managers and operators caste or religion was almost never mentioned, nor used as an overt tool of discrimination in day to day employment relations, at least as far as I could observe, and I was reluctant to risk alienating my informants by asking explicitly about caste or religious identities or attitudes. However, quite a few senior managers of the plant EWS appeared to harbour pre-set notions about people of other castes or religions even though they would mostly keep it to themselves. For example, the senior managerial head of team tasked with implementing change management within CompCo could not on some occasions camouflage his beliefs about those of other religious persuasions or those who had used affirmative reservation to access places in educational institutions and secure jobs. These beliefs were interspaced with their class prejudices regarding workers, as will be noted in many places in the thesis, and an example of manifestation of this attitude towards workers is provided below in the description of the immediate setting of my primary fieldwork site EWS.

English is the written and oral language of communication amongst most managers in EWS, including production executives. However, English in EWS tends to get mixed with Tamil when line managers interact with operators, a significant majority of whom also understand and converse English. The recourse to Tamil swear words gets amplified either when line managers are anxious about the line targets or when they express their displeasure with operators with whom they enjoy a love-hate relationship. Middle managers become colloquial with a mixture of English and Tamil when they find themselves away from formal environments, such as meetings. I will sociologically turn my attention to their profile and career trajectories in Chapter 6.

While many middle managers reside in Hubli, a substantial section of managers commute by the company bus from Bangalore on a daily basis. Senior managers such as the GM, the head of the change management programme were chauffeured from their residence to CompCo in coupe class cars. I observed that while it was true that while quite a few middle managers owned four wheelers, many of them preferred to commute two wheelers. These middle managers would often pool cars together if they lived close-by in the evening when they returned home from work. This was practical considering that since many junior and senior middle managers in terms of organisational position, lived near each other in residential colonies in EWS.

4.4 A Walkthrough of the EWS plant

The best way to present the 'feel' of the CompCo social environment and its productive capacity is to take the reader on a 'walkthrough' of the EWS plant (Apppendix 6). I begin with a description of the entrance to the plant, where we are immediately introduced to visibility of the status hierarchies that prevail in the plant. I then move on to describing the offices of managerial cadre, where status distinctions are also made very evident, before looking at the production units.

4.4.1 Entering EWS

Entering EWS requires managers, workers, suppliers and visitors to pass through two sets of security procedures, and the ways they and their vehicles are handled, including where they are able to park, tells us much about the status of these categories. The entry into the EWS plant requires passing through a security gatehouse, divided between two gates on either side of a security office, which operates as a preliminary check post and identity verification point (see the sketch of the EWS entrance area, Appendix 7). This building comprises a waiting hall and is staffed by security personnel who were outsourced employees from another agency. Security both here and later is tight and discriminatory.

The threshold to making one's way through the plant provides an interesting introduction to the social divisions within the EWS plant. Suppliers' vehicles enter through the gate to the left of the gatehouse, and need to prove their identity to obtain clearance and undergo a process of inspection of particulars by material planning and detailed verification of the supplier vehicle and entry by the security. Security personnel ring the concerned purchase manager and ask him whether he is available. The manager would then authorise the supplier in. The left-hand gate provides access to a wide road that is meant for the suppliers' vehicles and one can see trucks parked awaiting further, more detailed inventory inspection and recording before entering into the plant. Along this road is a second, larger building, where security is managed by the security officer, an ex-serviceman who was in charge of the whole security set up and had the right to deny entrance to anyone. Suppliers could be harassed by security guards on a wide array of grounds for instance ostensibly not carrying proper emission control papers.

The suppliers' gate (Appendix 7) is also used by senior managers' chauffeured vehicles. After saluting the manager (but not checking his identity), the guards allow managers' cars to drive past the parking area for executives and operators and park in a

special area much closer to the administrative block where senior managers work. Other managers and operators who enter by vehicles used the same gate, but had to leave their two wheelers (and, for those managers who possessed one, their car) at the parking space provided near the gatehouse. To the right of the first security office is the field where the buses that transport middle management level executives are parked, quite unlike many operators who have to make their own arrangements for transport.

Operators, both permanent and contract, and other workers enter through the gate to the right of the gatehouse, and then must prove their identities at a second post that lies ahead of the main entrance. ID cards for either one day or longer time visitors or suppliers are given here. All operators and workers were subject to stringent security checks by the staff of the security officer both when entering the plant at starting time, and when they finished, to foreclose the possibility of theft of components such as spark plugs. However, daily wagers, who were contractual labour, at the bottommost rung of the CompCo hierarchy, were subjected to even more scrutiny and tended to be frisked thoroughly. They were engaged in cleaning and loading machinery, earning about Rs.100 which when converted to UK currency is only just under a pound day. From what I saw during my stay in EWS they were often talked to in a very harsh manner by the security who in turn would be monitored by their security head. These security guards risked losing their job if they did not appear to be firm in their demeanour against factory workers and non-technical workers who included janitors and daily waged labourers.

Managers, however, were not subject to any such checking by the security staff. With the exception of the most senior managers they enter through the right hand gate and their ID cards are/ are not checked. They all expected to clock in and out at the machines either in the administrative block or in their shop floors at the beginning and end of their shift. As mentioned in the methodology chapter in order to make sure that nothing bad was said about me to senior management I always felt the need to be in

impeccable corporate attire at least in the initial stages of fieldwork to be allowed in with or without too much small talk.

The plant would morph into frenetic tension upon the occasional prospect of the CompCo owners from either London or Bombay or other senior luminaries visiting the plant. When they arrived security guards showed their veneration by means of a salute at the gatehouse, at the second entrance and at the forefront of the main administrative building of EWS. Their cars would be parked to a space that lay diagonally to the entrance to the Works Office, discussed below, near a plaque engraved with the CompCo motto 'Together We Can' that lay adjacent to the parapet wall separating the administrative buildings from the production areas. The drivers would open the door for his boss to leave the vehicle. This parking area is also used by visiting management consultants, Mr. N, who was in charge of the change management programme, and other senior managers, such as the GM and visitors from corporate headquarters in Nellore such as the COO. These managers were chauffeured daily, over 80km up and down from Bangalore in, coupe class large sized cars.

In addition to managing security at the gates, security guards maintain a presence outside the administrative block, known as the Works Office (see Appendix 8), and at the machine and assembly shops, mainly to monitor contracted and sub-contracted labour. The outsourced security guards in the plant did not appear to show any extraordinary commitment to their jobs in CompCo. The guards were young men from villages and small towns in the north-eastern parts of India, such as Assam and Manipur, who told me they had been forced to stop education owing to pressing commitments at home or due to financial difficulty. The local workmen of EWS, drawing from my periodic observations at the gatehouse, did not particularly relish the company of the guards, who more often than not falter or struggled to speak the local language and were overbearing to the workmen. However, my observations cannot tell me whether the use of non-local security

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staff is a coincidence or, as I suspect, a deliberate ploy on the part of management to limit their communication or potential friendship with the local workers and guards had to be firm with workers or face the consequences from their security head who in-turn was likely to be rebuked by senior management for not keeping the factory's organisational routine running securely.

4.4.2 Daily routines in EWS

At the gatehouse one could observe prior to the commencement of each shift, several workers arriving in their two wheelers and managers entering the plant in cars as another batch left at the end of their shift. The first shift at EWS, according to Mr. MRL, the affable Human Resources Development (HRD) manager, begins at 8.00 AM sharp and ends at 1600, with lunch between 1300 and 1330. The evening shift begins at 16.00hours and ends at 0100 in the morning. The midnight shift begins at 0100 and ends at 0800. At the beginning of the morning shift the security guard control the road traffic on the main road, where there is a massive influx of operators crossing the road, entering the plant and riding into the plant using their two wheelers and some scampering in just to be in time for the siren. Both managers and operators have to clock in. Late arrival on the part of operators is usually not tolerated by line managers and after two warnings incurs a direct pay cut at the end of the month. Managers were not subject to pay cuts for lateness, but their timekeeping is covered in their appraisals by their superiors and actions such as turning up late for work affected them in the long run. Line managers and junior managers were petrified of arriving late and the rebuke for delay in senior management ranks is more subtle and for both late arrival carries deleterious consequences for their promotion because of letting other production managers down and cementing a reputation of not being punctual.

The workers' canteen is separate from the managers' canteen and is far more modest and managers and workmen seldom enter in the other's canteen. Like the differences in security regimes, this contradicts the claim that, after the introduction of the change management programme, operators are "associates" and equal stakeholders in the future of the company.

Designated spaces for workers' union meetings or social relaxation within the plant EWS are limited. About two yards from the gatehouse there is a flag of the CompCo Employees Union, one of the three groupings of operators. This was a persistent eyesore for Mr.N, the head of the change management programme. To the right of the flag is a small courtyard, near the cycle stand, where many a fiery speech was given and union pamphlets distributed. These Tamil-language pamphlets (a sample is reproduced in Appendix 13) are one of the main modes of communication between the unions and the operators.

In order to gain interaction with trade union activists I therefore had to go outside the plant. The main conduit for me to gain access to familiarise myself and interact with a cross section of workers was the communist trade union leader and organiser, Mr.VDVN, and his associates. The communist trade union, representing not only CompCo but also workers in other manufacturing firms, have an office not very far from Hubli's railway station.

One operator cadre engaged in administration work confirmed to me that while there are plant based Union leaders in EWS the union leadership is external to the plant. An illustration of this was my hearing the phrase mischievously inverted by some older operators whilst they would have a smoke after their lunch; their cryptic spoof on management, *"Together Can We?"* means the exactly the contrary of the official company slogan "Together We Can". Operators like Mr.VDVN informed me that there was absolutely no love lost between the unions that dominated trade union discourse in

CompCo, namely the communists, and the other two unions, a Dravidian party aligned union and an external leader led union who guided his union matters from Bangalore. I will turn my attention to the role of trade unions in Chapter 7.

Across the road from the main plant is a line of small shops selling tea and fried edible items. These shops from my observation provided valuable avenues for workmen to unwind and give vent to their day-to-day experiences. As I would buy a cola or water, I would overhear and watch some operators sit in these shops outside the company, smoke locally made rolled tobacco [known in India as bidi], go through the Tamil newspapers, complain of being treated unfairly by their managers.

4.4.3 The Works Office

The main administrative centre of EWS, the Works Office [see Appendix 8], the HRD centre and the GEMBA office illustrate the hierarchical demarcation of roles and status in CompCo. The hierarchy was evident in the layout of offices, and I could observe it in the ways people addressed and talked to each other. The administrative offices were sometimes full of tension and rapid movement for some people but others seemed to pass the day tediously without doing very much.

The Works Office is the main administrative nodal centre of the entire plant EWS. The ground floor houses the more senior managers, along with a large meeting room. Most of the senior managers, such as the heads of purchase, material planning and supplier billing, work in cubicles which lack privacy, the size of which tended to be directly proportional to the occupational rank of the manager. When off-the-cuff meetings and reviews were required these managers would have to go to other areas of the plant or meet with others from WDM3. The ground floor also houses the larger, air-conditioned cubicles of the plant head and other significant luminaries in the EWS hierarchy, such as the head of the ongoing ultra-modern engine development project. His

administrative staff were at pains to describe him to me as a six sigma black belt, though this individual was rarely seen by me at his cubicle.

To the extreme left of the ground floor was the GM's comfortable, private air-conditioned office with his secretary arranging appointments and routing phone calls. Mr. SDN is the plant director and was positioned right at the top of the plant hierarchy. I came across Mr. Sdn as a courteous and unassuming person to interact with, based on my conversations with him towards the later part of my fieldwork and during my visit in January 2011. When heavyweights in the company, such as the COO, visit the plant his office is their first port of call.

Lower-level managers and clerks in the Works Office do not have separate cubicles, and are separated from each other only by a worn wooden scaffold above their desk and computer. They address senior managers, such as the head of purchase or materials, in a reverential manner, as 'Sir'. Office clerical workers and their managers, the latter including former senior operators who had moved into administrative work in purchase and material planning, were busy with their computers or appearing to be busy to escape the tedium of the 9.00-17.00 hours administrative routine. Their work hours could prolong by about two hours in the evening if work got frenetic during peak production times, to meet demand for turnaround of work assigned by superiors or because they were forced to emulate some superiors who wanted to prove a point at how hard they worked through the keeping of long work hours and keeping long hours was a subtle means of impressing their superiors. Managers such as the GM would interact with these staff only if necessary and leave day-to-day management of administrative and clerical staff to the heads of such departments as materials and purchase.

The ground floor of the Works Office also had a corner dedicated to an external company that handled the transport logistics of the company. This logistics staff was responsible for liaising with the transport company entrusted with bringing in the finished

components for EWS from other plants, components needed for manufacturing from the supplier's warehouse and carrying finished engines and other items such as gear boxes to other plants.

The direct span of control and command exerted over CompCo middle managers and operators could not be exercised over these employees, who were sub-contracted employees belonging to the logistics company. Nothing much could be done with these employees other than constantly being reminded by staff in the purchase and material-planning department of their responsibilities. CompCo middle managers as I will illuminate in Chapter 6 have observed that lean logistics or JIT delivery did not seem to fervently appeal to these logistics staff.

The cash office was located on the second floor of the Works Office. Mr. VDVN and other operators sometimes evoked byzantine images of corruption and implied misappropriation of funds, as was alleged by Mr. VDVN, a trade union leader, in our conversation in late March 2009. The cash office has two functions, to dispense wages and salaries into the bank accounts of operators and managers and to pay suppliers. Suppliers are seen hovering around and have to go upstairs to the cash office to get their drafts. (Bigger suppliers get theirs online.) Sometimes managers would come down and meet the supplier and they would talk as if they knew each other, akin to close friends. When I waited in the guest sofa that lay next to the main entrance in the Works Office, I would sit with suppliers (especially the smaller suppliers whose livelihood depended on Compo) who were hopeful that it was their lucky day to get payment, and I would overhear workers cursing a manager. Towards the right of the Works Office is the building housing the HRD centre. It comprises a dust-filled older office with computers and old HRM manuals and industrial engineering books. Adjacent to it, within the same building, is a modern air conditioned training centre for training associates and middle managers, an executive strategy room with up-to-date media for presentation and

discussion amongst senior managers. A space behind the training room is used for serving lunches to managers while they are attending training programs. The friendly HRD manager, Mr. MRL, reports to the HRM head, who also has an office by the right side of the training centre. Across a lawn from Works Office are the first aid centre and ambulance shed and some small production units, including the heat treatment plant.

4.4.4 Production control

Production control at EWS is separated, spatially from the administrative functions, which are the responsibility of the GM and the other staff in the Works Office. The main centre responsible for control of production is the Production Control Office, which is attached to the Medium Duty Vehicle (MDV) assembly shop, the only unit that actually assembles vehicle chassis in EWS (see map of EWS, Appendix 6). The Production Planning and Control office (Appendix 9) is responsible for setting out targets of production plan, given to them by the production head and breaking the target into daily and weekly levels and managing the supply of materials to the production line. The production control department is under the overall control of the Section Head I nicknamed 'Mercury'. Besides him, the line managers who work in the Production Control Office include Mr. AK and Mr. SMU, who also have additional responsibilities in managing CompCo's only assembly line Medium Duty Vehicle shop. Other production managers with the same status have offices within the shop units or, along with more junior production executives, work in glassed-in cabins within production units.

Mr. N, who is the DGM of EWS, leads the flagship GEMBA change programme, which became my focus. His office is located in the old Quality Control Office, perpendicularly opposite the Production Control Office and adjacent to the IT department (see map). This end-product quality control department, with its own head, Mr.RGN, who

operates from his work area in the ground floor of the administrative building, continues to be in existence, to ensure product quality, even after the establishment of GEMBA, and continues to play some of the same functions. Below him with regard to the organizational hierarchy are the senior level middle managers of engine machining, tooling quality and subassembly and MDV quality, who also report to the Deputy Head of Machining and the Deputy Head of Assembly respectively (refer to Appendix 3). Managers such as Mr. TJN, who monitored production manufacturing process quality norms (refer to Appendix 9) worked in the industrial engineering department and worked in tandem with Mr. RGN's department.

Behind Mr. N's chamber is the office of the head of engine sub-assemblies and MDV quality verification, a senior level middle manager who I will call Mr.Ar who reported to Mr.RGN.

I sometimes saw Mr. Ar end up irritating Mr. N (who always took pains to never express his anger) when lecturing to some junior employee with his loud voice or talking with some other colleague or trying to get his point across the phone animatedly as he reprimanded smaller supplier firms whose existence was critically dependent upon CompCo's continued patronage. During these phone calls, he would attempt to trace the source of the defect to the components supplied by a supplier in either Hubli or Bangalore and work with them to rectify to prevent future recurrence of the identified defect during production. He would also have a number of visitors such as quality inspecting middle managers who checked quality after each stage in the line and suppliers from smaller and mid-sized firms who would come to meet him regarding quality issues both potential and identified and their redressing. It may be worth noting that larger transnational and Indian critical component suppliers would liaise directly with the Corporate R&D centre at Nellore which was the start to end-product conception and realisation, and the much smaller engine design and testing centre EWS or work with the production head for

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correcting fundamental design changes and identifying performance errors. Moreover since, they were careful in monitoring quality they would not find the need to see nor did they find favour in being summoned at short notice unless it was an unavoidable contingency. Their punctuated presence in EWS, contrasted with Mr. Ar, who exercised his managerial authority by frequently summoning smaller and mid-range ancillary suppliers to his chamber, as and whenever he deemed fit. I overheard them being berated by Mr. Ar as I waited in Mr. N's office, for their carelessness, in the quality defects in the components that they had delivered.

Within the GEMBA and Mr. Ar's office space are also various administrative clerical subordinates, who move like revolving doors around both Mr. Ar and Mr. N, and answer to their summons, but pay particular respect to Mr. N, trying to show that they hang on every word. Mr. N hectored them with instructions. They include Mr. N's trusted private secretary who co-ordinated his travel plans across CompCo's plants and kept track of his next 'to do' aspect of his lean agenda.

The rest of the GEMBA team, led by Mr. AB (refer to Appendix 4), who became a key informant, work in the first floor office in Shop 6, adjacent to the Engine and Fly wheel Machining Area (refer to Appendix 10) and close to the office of the DGM in charge of assembly and quality control. When Mr. AB (whom I came to call by his first name) wants to meet with Mr. N or other senior administrators, he has to go to Mr. N's office or on occasions when there were GEMBA meetings Mr. N would come over to see him. Mr. AB and Mr. N were in frequent telephone contact.

Security personnel endeavour to watch this assembly and testing area and Mr. N's and the GEMBA office carefully. There are an array of computers and desks with people appearing to be very busy. The office has an impressive array of lean manufacturing books and GEMBA posters, including Womack and Woos' *Lean Thinking* [2003] a particular favourite of Mr. N's, and Gladwell's (2000) The *Tipping Point*, with both

being strongly recommended to me by Mr. N. Covering the office were drawing boards with present and future-state process flow plans and fishbone diagrams, aimed at cutting waste and cost, eliminating extra stages and speeding the supply chain and production processes, densely scribbled notes of figures, statistical parameters and engineering efficiency calculations and marker board illustrations similar to those used in the software industry. (A sample of a GIRAP record of targets and shortcomings is presented in Appendix 12.) Whenever Mr. N visited Mr. AB's office one heard a lot of talk about dynamism, work ethic, Japanese manufacturing, kaizening deliverables, transparency in manufacturing processes, and mind-set change.

Because Mr. N assigned me a role in inventory change, the team office also became my base as a fieldworker. I was therefore able to observe Mr. AB completing pie charts and assessing graphs and targeted dates of completion amidst phone calls to WAM4 in Nagpur and WDG3 in Jaipur (October 2008-November 2009). Mr. AB's office is also inhabited by graduate engineering trainees, hired from premier engineering institutes, who analyse an enormous quantum of statistical data and are subject to deadlines (called 'deliverables' by Mr. AB, a word routinized in accordance with Mr. N's wish. These trainees had to complete their GEMBA projects under Mr. AB's supervision. They were also subject to questioning by Mr. N and their training supervisor, who was also brought in from the engineering institutes.

4.4.5 Production areas

The production units of EWS are spread across an area the size of three Lords cricket grounds, and it took me a long time to understand their different roles and relation to the production process. This is indicative of the complexity of the operations, and the number of different products and processes involved. What makes it more complex is that as an old site, the layout of EWS and accretions of new processes and machinery make

coordination under the tightly synchronised production processes mandated by lean manufacturing difficult. Understanding how the work force is organised is made even more complex by the existence of contract workers who do not work for CompCo but for their suppliers or other companies, sometimes in the same units as CompCo's permanent or temporary workers and sometimes in their own units. Moreover, some units of EWS are dependent on supplies from, or send components to, another CompCo plant down the road. Finally, components sent by outside suppliers, half-completed units and units awaiting delivery also have to be stored and fit in wherever they can be on the site.

There are eight shops or assembly, machining and production units, including the Medium Duty Vehicle assembly area and the Axle Assembly Area, the most important of which are numbered 3, 2, 6 and 5, 7 (Appendices 9 and 10). The remaining machining shops labelled shop 1 in EWS and another shop that lies behind the production control office is under locked up are, are in a moth-balled state and are rarely used. Keeping the machinery running in these plants, as well as designing the manning arrangements related to each machine, is the responsibility of the industrial engineering department in the plant. It has to take into consideration the striking combination of old and new machinery, which presents short-term difficulties in managing the production of a variety of products as well as long-term questions regarding how CompCo investment will proceed in future.

Shop 4 is one of two engine machining areas where engine block tooling, boring, ginning operations, dressing and assembly are done. The engine machining areas in Shop 4 3's op mainly entail a single group of permanent experienced CompCo operators, standing in a line. Each working alone and operating machines that perform operations such as rough milling, drilling, washing boring, brushing of holes of the engine etc. It is feared it will become redundant because of new emission norms, thereby questioning the very legitimacy of plant EWS's existence.

Shop 4 also contains a cylinder engine block calibration area, staffed by workers who are contract employees loaned out from WDP1 in Nellore. They carry out an array of parameter tests on the engine block before it goes to the assembly areas and certify that the engine block cylinder is ready for the next stage of assembly. According to Mr. Svm (August 2009) this used to be done by tooling experts from the operator cadre, who are now becoming (an extinct tribe in CompCo). In addition, most of the engine machining process has been contracted out to a foundry company, thereby rendering a number of operators dysfunctional in a plant whose main role is to manufacture and assemble engines. Once an engine block is out from shop 4, in accordance with varying model requirements, it is ready for assembly processes (called 'dressing' and 'housing' in EWS) in Shop 3 and Shop 6 respectively. Shop 3 was an old assembly shop which assembled CompCo's staple product, the Hino engine, which, owing to changes in emission norms from Euro 2 to Euro 4, was nearing obsolescence. The Shop relied on the tacit knowledge of its experienced and highly skilled operators. As part of the implicit contract between management and these operators, they were given some leeway to manipulate their job cycle to their and the company's mutual advantage. However, by the time of my visit in January 2011 part of Shop 3 was being remodeled to enable the construction of a new Nissan conveyor line which, as part of a joint venture with Nissan, would use Nissan's implementation of lean manufacturing to build the replacement for the CompCo's ageing Hino line. Implicit in the use of the Nissan production system would be the use of more detailed and tightly timed multi-tasked operations.

Shop 5 comprises a big industrial shed. It stores manufactured Hino engines prior to dispatch and another part of it stores manual tools such as wrenches, pliers, various categories of nuts and bolts and all the small components that are required for manufacturing engines. But its main purpose is to house machines that carry out a variety

of lathe stamping and multiple operations that prepare the critical components which eventually go to the dressing of raw engine blocks such as the camshaft and rocker bolt. These are rugged machines, of old design and advanced in age, but were capable of doing similar sequential processes that were performed together. The layout of these machines as a cell or a line fixed a definite manufacturing route for operations to be done in turn, such as machining the rocker arm or gear component of the engine. There is a piling up of inventory at the end if there is excess capacity owing to fall in demand and fewer components being made. The inability to change machine design and therefore make use of excess capacity for machining more urgently required components when required was perceived as big obstacle in CompCo, according to Mr. SVM, a member of the GEMBA team who showed me around the plant. These older arrangements include both the machines performing stage production in this shop and in fragments in other machining areas. These older machines co-existed with and competed in their functional utility with newer, multi-spindle, multi-task CNC machines procured from international firms such as Gildemeister which were placed both in Shop 5 and other machining areas such as Shop 4. CompCo therefore contained areas which were already automated, and capable of further automation, in contrast to its older machines which not only were labour intensive but also had limited multi-tasking and multiple process integration capacities. According to Mr. SVM [22 October 2008] the older machines were expensive to maintain, could not accommodate stringent lean manufacturing standards and in his opinion had limited scope for improvement.

Shop 6 (refer to Appendix 10) comprises an assembly line that assembles engine models required by other plants of EWS, including special application marine engines and engines of enormous horsepower. Shop 6 has incorporated many of the latest principles of lean manufacturing such as continuous flow. The operators on this assembly line were permanent employees of CompCo, highly skilled and dexterous and, in the

view of Mr. AB [February 2009], capable of matching any plant in India embodying the best principles of lean manufacturing. Shop 6 also functions as an office, as the first floor houses the head of production, Mr. TRN, responsible for overall engine production, including manufacture, assembly and quality, along with the GEMBA team. In addition he also monitors axle assembly (refer to Appendix 3), Mr. TRN the vastly experienced production head thus has a big say in almost all the assembly and machining operations of EWS apart from the decisions of the quality control sections responsible for end product, engine manufacturing process and end sub-assemblies product quality, headed by Mr. T and Mr. Ar respectively (see Appendix 3). After the GM and the GEMBA head he is the manager who has most functional power within the organisation.

In contrast to the mix of ageing and newer-design machinery typical of EWS, the newer WAP4 further down the road handled a diverse portfolio, manufacturing light commercial vehicles and medium duty vehicles, and was perceived as more contemporary than EWS. It was critical to CompCo's manufacturing strategy. This plant was spread out over a large area. I visited this plant at the start of fieldwork and sporadically when granted access during the course of my fieldwork. It concentrated on assembly, but also had machining shops needed for machining components such as the front cabs and treated metal to be turned around catering to the entire life cycle of manufacturing the vehicle chassis and ready to drive vehicle. It also had modern convention/conferencing centres, better amenities for employees and operators and a building dedicated to change management and also housed the CompCo change management team member responsible for ensuring that Japanese principles were applied to overall product procurement. Crucial meetings considered important to the overall change management strategy were held here.

Shop 7, which made critical components such as certain specifications of connecting rod and engine fly wheel, was a focal point of senior management's project of

automating a substantial part of its machining process. Besides, these production shops there are other areas that liaison with production areas and play animportant role in getting the chassis out of the plant.

EWS also has to allocate space for its output to be stored, prior to delivery to the customer, and it usually undergoes various quality control inspections during this period. Inspection and pre-delivery posed particular problems for managers such as Mr. AK who had to do last minute quality checks to cover up for the lapses in production during the assembly state in the MDV area.

The main pre-delivery inspection area (Appendix 10) is isolated from the main production site and does not have a GEMBA group. Mr. SGM, who oversaw this area of the plant, has worked in EWS for twenty---five years and was an important repository of information about changes in CompCo over time.

Many truck chassis lie waiting on the vacant field outside near its main building, a shed with a metaled roof. The building contains a pit, and a way of lowering and raising the trucks to enable repairs to the paint finish, and washing and examination of the undersides to take place. Operators also weld and fix external parts and fitting, such as headlights and brake-lights, on to the chassis. Other operators were seen moving about with frame side members, and clamps to attach to some vehicle. The vehicle engine is also revved up for testing, creating exhaust fumes that fill the shed with smoke for a few minutes. Mr. SGM was a popular superior, the men working there enjoyed themselves, but he was always cursing and pushing the contract employees who comprised the majority of his workers.

One of the middle managers frequently to be found in this unit was Mr. AK from production control was additionally, responsible for checking whether all the fitments were appropriate in the chassis before it went for the road test stage. He worked in production control department rather than under Mr. SGM. I managed to develop a very

good rapport with Mr. AK and had many extended conversations whenever I would visit on GEMBA business. Mr. AK was always welcomed in the area, which he visited often, bringing with him a lamp or frame side member from the stores of the MDV assembly area and then tracking down the truck missing that fitting from amongst those lying around in this area.

Vehicles in EWS often seemed to hang around waiting for delivery even once their fittings and inspections were complete. There is a vacant area beside the heat treatment plant, for instance, and when I started my fieldwork there were a couple of medium duty vehicles there ready to dispatch. The number of trucks swelled so much in the course of the recession, from late August 2008 through May 2009, that there was no room to park them. There was thus a highly visible sign of a decline in market demand for all to see.

Disposal of wastes, including scrap disposal area, is another function the plant must allow for (see Appendix 9). There is a massive storage area of various items of inventory including unwanted items. It is manned by the lowest rung of the contract workers, some earning as little as Rs. 100 per day, who move away the unwanted items into the industrial waste disposal bins there by seeing them in the evening at the bus stop. With their drooping shoulders they looked as if they did not have the agency or the representation to voice out their protest as vociferously as do the permanent or contract operators involved in production. These industrial labourers are longtime residents of Hubli, ready to work in any of its industrial outlets for a daily wage, but are forgotten by unions whose constituency is EWS employees. These casual workers were subject to their own line managers, who reported changes in labour requirements to their shop heads. Their employment was seasonal and they tried very hard to cling on with EWS and WAP4 in the hope of eventually accessing the internal labour market. These workers were not considered as industrial workers but menial workers, those who do physically

taxing and manual work, such as carrying rejected scrap around in trolleys and waste metal by hand, seemingly with little heed to their personal safety. These areas were full of industrial grime, grease, sheet metal, iron fillings and did not exactly represent Japanese principles of lean manufacturing embedded in CompCo's change management programme.

4.5 Conclusion

This chapter has outlined the political and economic context that conditions CompCo's decision making, especially after the economic reforms of the 1990's, the changing regime of accumulation of the Indian state over time and its interaction with the market and workers. Next I registered the emergence of the middle class after the 1990's. It forms the main consumer base for the automobile industry, and the base from which companies draw their managers, and is also a reference point for workers' aspirations (Heuer, 2006: 36]. This middle class may well continue to harbour old deeply institutionalised prejudices such as caste that might for instance come into play in their relationships in less than obvious manner while at work. For instance Heuer [2006: 36] cites the example of recruitment based on subjective criteria based on caste, which is premised on the idea of mutual support amongst one's caste compatriots. Therefore, within changed middle class values there exists a tendency of continuity and resilience of old prejudices as well.

Section 4.1 then examined the changing contours of the Indian automotive industry and argued that Indian automotive firms have no other choice but to adopt new manufacturing and managerial innovations but at the same time being aware of constraints such as that of infrastructure. Considering the aforementioned changed scenario, it becomes very difficult for trade unions in India to function against the onslaught of managerial attempts to cut costs while at the same time face a state that sides

with investors. However, management's workers and trade unions interact with one another in a regulatory framework that largely predates liberalisation.

I then detailed the social milieu and local context which comprise the background against which the well-established but old firm CompCo operates. CompCo has been a major player in the vehicle industry in India, catering to a wide spectrum of requirements and the changing context and structure of market demand in India, and this has had a bearing of the policy of its corporate management at headquarters in Nellore.

The chapter has also introduced themes to which I will return, such as the prevalence of status hierarchy, overlapping managerial responsibilities, the spread out nature of the plant, the varied age of plant machinery, and the pyramidal nature of the organisation (but one cut by cross-cutting lines of command, especially for contract staff). Other issues, such as CompCo's relation to suppliers, concern relations with firms located mainly outside the EWS complex, so will be introduced later.

I have given most attention to the production areas, since I will be referring to these in explaining the GEMBA change programme and opposition to it. I have introduced the important senior and middle managers who I encountered in my fieldwork especially those who became key informants.

I have also sought to identify the connections between EWS and CompCo's other plants and their dependence upon each other. This chapter suggests that CompCo's corporate management has positioned each of its plants differently with regard to its corporate management strategy, employee composition and product profile. Some plants have been identified as critical for its future growth, while others, like the ageing EWS, are a source of concern for corporate headquarters. Hence CompCo's change management project, called GEMBA, was seen by corporate management as more critical to plants like EWS than its others.

Chapter 5 Senior Managers and Change Management Policies in CompCo (with particular reference to EWS)

5.0 Introduction

This chapter examines the character, interpretation and outcome of the change management programme conceived by CompCo's corporate management operating out of Nellore. Nellore was CompCo's corporate headquarters, and included the perspectives of the senior plant management of EWS, my primary fieldwork site. The change management programme in CompCo was called GEMBA, which is a Japanese word that implies being at the heart of the workplace. It has been defined by one of its practitioners in the following way:

> GEMBA: A Japanese word meaning "real place" – now adopted in management terminology to mean the "work place" or that place where value is added. In manufacturing, it usually refers to the shop floor. Going to the GEMBA, a principle of what is called GEMBA Kaizen, is a reminder that whenever an abnormality occurs, or whenever a manager wishes to know the current state of operations, he or she must go to the GEMBA right away since GEMBA is the source of information. [Imai, 1997: xxiv]

However, at CompCo, GEMBA was defined by advocates of the change management project, such as the Executive Director for manufacturing, Mr. N, who was the Head of Change Management, and the GM of EWS, Mr. SDN, in the following way:

> GEMBA is the shop floor; in a service business, the place where the customer and the service come together. It is also the quality of human interactions in the workplace between co-workers, with customers and business partners. [CompCo employees' fortnightly magazine, 2006]

This chapter will begin by trying to understand the underlying motives of corporate strategy in implementing GEMBA. The next section will identify the dominant actors spear-heading the GEMBA initiative and how GEMBA intervened to recast organisational roles within EWS. It will also explore how particular managers interpret change management and how subordinates have no other option but to follow that linguistic vocabulary to justify their activity of management. I will build on the foundation of the preceding sections and turn my attention to how GEMBA intervened to review and monitor employee performance. Finally, in the penultimate section I will consider other concurrent managerial policies that ran in parallel and even contradicted the premises of GEMBA, and delve into senior and corporate management's rationale for implementing these policies. I will then conclude by broadly analysing the outcomes and repercussions of GEMBA.

5.1 Corporate Management of CompCo's Commitment to Change and Adoption of the GEMBA Framework

In the new highly competitive Indian automotive market in which the firm's position was beginning to be challenged by new entrants such as Volvo and, in recent times, Navistar, CompCo corporate management were clear that they needed to introduce a climactic shift in the way the company worked, so as to drive up its competitiveness by improving quality and reducing costs; they decided to use the lean manufacturing model as the focal point of their work.

CompCo's direct Indian competitors, as well as other businesses supplying the automotive industry and other appendages of the automotive industry such as the two-wheeler industry had been more sensitive to changing customer demands and were accelerating their implementation of practices that senior managers of EWS had identified as embodying the integral precepts of lean manufacturing. Lean manufacturing continued to gain eminence as the dominant paradigm in the automotive sector, and senior management in CompCo did not want

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to find itself falling behind the rest of the industry. However, the company had no previous history of a coordinated move towards lean manufacturing or any other change on a transformative scale. Other automotive companies in India and in the immediate vicinity of EWS had pioneered lean manufacturing on a scale much greater than CompCo's modest attempts at introducing quality circles in 2006. Corporate management recognised the scale of the undertaking they were about to embark upon and saw that the successful introduction of lean would depend upon the choice of a vehicle that would both gain employee acceptance and provide an efficient means of managing very large-scale change.

CompCo decided to focus its implementation of organisational change around the concept of GEMBA and called its initiative 'Mission GEMBA'. The emphasis on the necessity for 'change management' also stemmed from corporate management's view of the inadequacies of their existing labour force and machinery, and the difficulties that it believed its efforts to 'optimise' its use of resources would meet. Change would need to be carefully structured and driven through decisively if it was to succeed and the friction that would inevitably surround the introduction of lean had to be minimised as far as possible. The friction and damage CompCo feared it was likely to encounter could be likened to the cavitation around a ship's propeller, which would damage it unless protective measures were put in place, and the measures CompCo decided upon were encapsulated in change management manifested in the GEMBA programme.

For the Head of Mission GEMBA, Mr. N, adopting lean manufacturing practices was essential to becoming more efficient. For the GM it meant weeding out obsolete and inefficient manufacturing and human resource practices whilst also catering for the changing aspirations of executives and younger operators. For the Chief Operating Officer [COO] of CompCo, Mr. VDS, it meant bringing the company up-to-speed with the working practices of the best in the industry, whilst for other Production Heads the

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introduction of lean manufacturing was and would always be less important than the attaining of production targets.

But whatever their individual perspectives, senior management was unanimous and emphatic in its intention to secure large-scale change. In November 2008 in a meeting at his home, the retired GM in charge of exports at CompCo Nellore(Mr. RC) told me that:

"The old days of having only two pre-eminent players are long gone and the elephant has to learn to adapt. Senior management is not naive and realises the need to become efficient and tell the workers to shape up or else the company will not survive the competition. The lumbering elephant has marched on, even as it has managed to wade through many a crisis in the past. CompCo might have been slow, but would eventually catch up because it had no other choice. The market today is changing rapidly and in the very near future would have changed considerably beyond recognition."

At the time GEMBA was initiated, in the middle of 2008, senior management believed that CompCo's existing production platforms would prevent it rising to meet the competition in several different segments of the commercial vehicle industry. The ages of plant and equipment in CompCo's manufacturing locations varied greatly within and across manufacturing facilities, which would make the introduction of change more difficult (a point that I amplified in Chapter 2), and there were numerous productive inefficiencies.

Faced with this challenge, important members of corporate management, including Mr. VDS, the COO, and Mr. D, the Executive Director [ED], at manufacturing corporate headquarters in Nellore identified two key operational needs (see Appendix 1 for the CompCo organizational hierarchy) . The first measure was to replace outdated items of plant with new, automated machinery capable of performing more tasks per production cycle.

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This in turn would facilitate large reductions in employee numbers and would allow CompCo to reduce its operating costs. Japanese texts such as Ohno's *Toyota Production System* [1988] and the consultants hired by CompCo counselled 'total preventive maintenance' in order to get the best performance from ageing machinery, and that became a cornerstone of GEMBA.

However, in addition to changes in machinery, there was a critical need for a second measure, to 'leverage efficiencies to the maximum extent possible' in the company's working systems and use of labour. It sought to do this by adopting the measures advocated by books such as *The Toyota Way* [Liker, 2004], and self-help manuals, such as *Lean Thinking* [Womack and Jones, 2003. I noticed that these books, and particularly Womack's, had a profound impact on some senior managers such as Mr. N, who were spear-heading the GEMBA project; they became evangelists for lean manufacturing, quoting frequently and liberally from the books they had read. A 'groupthink' culture developed in which an enthusiasm for the literature on lean was mandatory and one in which managers began to compete with each other in reading the latest utterances from management theorists in order to make a good impression on Mr. N.

However, the implementation of change was soon recognised as being anything other than a black-and-white exercise. For example, some older machines could not be replaced for reasons of cost, as I explain later, and management was forced repeatedly to manage change on a contingency basis. Change was further complicated by other preoccupations on the part of middle managers who bore no direct connection with GEMBA, who would also compete with each other to arrive earliest and thereby demonstrate their commitment to GEMBA. Such managerial attitudes and preoccupations considerably influenced the direction of the GEMBA project and hence will constitute a recurrent theme throughout the ensuing chapters.

At the same time as wanting to modernise CompCo's plants, equipment and working systems, corporate management wanted to align their production more closely with market

trends for particular product lines and clarify the role that individual plants should play in meeting the overall production targets of the company. Viewed from this perspective, the EWS plant at Hubli was a source of worry for CompCo's corporate management, and consequently much of the effort to introduce GEMBA was concentrated there. This urgency to modernise found CompCo's management trying to overcome production and design deficiencies in such older plants, including WDP4 as well as EWS. It also decided to set up a modern production facility from scratch in Uttarakhand, where it could introduce GEMBA de novo instead of having to change attitudes and confront people who had become heavily entrenched in their occupational roles, work identities and relationships with their colleagues.

Thus there was an attitudinal aspect to the implantation of change management in CompCo, as senior level management at corporate headquarters had set views on operators, middle managers and human resources in general. Their judgment was that there was a need for far-reaching changes in the working practices of operators, whom they perceived as lethargic, unionised and having a mind-set that was opposed to "progressive management initiatives". Middle managers and operators needed to be led to the new world of lean, irrespective of whether they were enthusiastic.

These changes were seen as essential to ensure CompCo's survival and preserve its market lead, mainly in Southern India, in the years to come. What undergirded this belief was the history of difficult industrial relations at plant level and the perception that workers were interested only in their pay packets, irrespective of the financial health of the company. This was the dominant attitude of senior managers throughout my stay in EWS, being expressed to me by many managers past and present, including Mr. RC, Mr. SDN and Mr. N, all of whom stated that CompCo operators needed to adopt 'a different mind-set' and 'team working approaches'.

For conceptualising and implementing change management, the company relied on managers who had a proven track record of turning things around and brought with them experience from working in the leading manufacturing firms around the world. The Board had identified the need for change, but the elements of a lean manufacturing programme, founded upon a 'hands on' approach such as GEMBA, were first identified as potentially useful to CompCo by the COO, Mr. VDS. Prior to assuming his role as COO of CompCo, Mr. VDS had occupied a senior managerial position in the Central Indian engine manufacturing subsidiary of the leading American aircraft engine manufacturer, Pratt and Whitney, after which he was head-hunted to run the Pune (an industrial city situated in Western India) operation of an American automotive engine manufacturer. This engine manufacturing firm, Cummins PLC, was a leading player in engine manufacturing and is also a dominant player in the UK engineering industry, and was considered a competitive threat to CompCo. Under Mr. VDS's suzerainty, a project similar to GEMBA was implemented between 2005-2007. Mr. VDS's stint at Pune had been widely viewed as a success, and his arrival as COO at CompCo signalled the intention of the proprietors to pursue a more dynamic and robust style of management.

Mr. VDS had a proven track record of delivering corporate objectives in whatever posts he occupied, and he had demonstrated his ability to do this in the Indian context by drawing upon a wide range of lean manufacturing and quality control models. These included techniques such as Six-Sigma, which in the airliner and jet engine industry from which he had come, had to meet far more exacting standards than in the automotive industry. The then head of the Cummins engine manufacturing Pune plant, Mr.SRV, which Mr.VDS had managed, eventually went on to become one of the leading exponents of lean manufacturing practices in India [Mr.SRV, Pune, India, 23 February 2009]. The CompCo board wanted CompCo to adopt the best practices and absorb the inner know-how of the workings of the Pune-based firm which senior managers like him possessed.

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Upon his arrival at CompCo in early 2008, he was instrumental in persuading other directors at corporate headquarters to hire McKinsey, the international management consulting company. After their extensive study and recommendation, Mission GEMBA was launched in the middle of 2008 under Mr. VDS's aegis, but with the support of the corporate heads of Manufacturing, Finance, Purchasing and Marketing. The COO also took care to secure the backing of the next tier plant heads and the heads of key specialisms such as production, purchase and marketing in each plant. CompCo also drew inspiration in part from the motorcycle company TVS in Hubli, a winner of a Deming Award, which had adopted lean manufacturing production principles very successfully in conjunction with Suzuki. In the opinion of senior managers, such as the head of the GEMBA team, these companies had evolved as exemplars of the effective utilisation of lean manufacturing and were worthy examples for CompCo to follow. Thus the scene was set for the design and implementation of GEMBA and in the next section I will show how corporate management set about changing the organisational structure to facilitate GEMBA's introduction.

5.2 GEMBA and the reorganisation of management.

In my discussion of the GEMBA initiatives I wish to highlight the way in which senior plant managers tried to embed GEMBA as both a vocabulary in everyday activities and as a technical innovation to optimise manufacturing within the EWS plant. They sought to superimpose the structure required by GEMBA over the existing organisational matrix of senior plant managers, Section Heads, middle managers and operators. In this regard GEMBA can be seen as having four distinctly identifiable aspects: two associated primarily with changes in organisational structure, and two intended to reorient the motivation and conduct of both managers and operators. The first structural feature involved alterations to the company's organisational and management structure, and the second involved the creation of a new organisational management unit to push GEMBA through. Alongside and

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interacting with these initiatives there were measures to increase the motivation of managers and operators, especially to reward initiatives and rapid problem solving, and finally there were measures to increase the scope for monitoring production and workers. Unless otherwise mentioned, my study of GEMBA and its implementation will focus upon EWS, my case study plant.

5.2.1 GEMBA and the recasting of organisational structures

This section will lay out how senior management envisaged the GEMBA project structure as sitting on top of the existing organisational hierarchy at middle management and operator levels. They believed that the existing structure would be at odds with the principles of GEMBA, but instead of seeking fundamental change in what was there already, they sought to overlay the old hierarchy with the new. The section will explain the architecture of GEMBA in CompCo and describe the new management unit that was set up specifically to push through the changes senior management required.

I will now elaborate on how senior management used GEMBA as a classificatory mechanism to impose a GEMBA organisational structure that was quite different from what was implied in the textual definition of GEMBA dominant in the literature. EWS as a whole was divided into GEMBA units comprising of operators and middle managers, based on the functions they performed, so that each GEMBA shop unit, comprising of about twenty to fifty operators and two or more middle managers, was an internal customer to the other GEMBA units in the same assembly or manufacturing process. The term 'internal customer' followed the principles of lean manufacturing, especially as illustrated in the book *Lean Thinking* by Womack and Jones [2003].

Within each GEMBA work area, with its constituent group of operators and middle managers, workers were both individually and collectively responsible for adhering to quality targets and agreed cycle times – the latter based on 'takt' times. The attainment of

both quality and 'takt' time parameters by the preceding operator affected the outcome of the next operator's job-cycle, and he was hence the 'internal customer' of the preceding operator. Thus the efficiency of each operator depended on the efficient performance of his predecessor in the line. Within GEMBA each shop became a profit centre and competed with other shops to achieve the greatest improvements in efficiency. Another objective of reordering the organisational structure was to divide the workplace into groups of operators, in a way that (in the vocabulary of senior management) would promote teamwork and facilitate troubleshooting by the operators themselves without management intervention.

A multi-disciplinary team of senior middle managers from across all departments was established in December 2006 and identified nearly sixty-five functional units initially 8 September 2008. Each functional assembly or machining unit would represent a GEMBA and each GEMBA would be an internal customer to the next GEMBA in the production sequence. The elimination of waiting time and wasteful activity through the use of standardising job routines was the underlying basis for the tight linkage between different stages of production and of individual job cycles which were now very much dependent upon each other. The internal customer concept was used to help enforce compliance with these standards by making each operator in a line, and hence the whole shop, dependent upon the previous operator's job cycle. Management recognised that one benefit of this way of working was that it had the potential to lead operators to 'manage' one another and thus enforce internal discipline and the resolution of problems without the intervention of managers.

Also, because these individual business units had to deliver value in terms of cost saving, management hoped that operators, motivated by the Empower reward scheme, would themselves seek improvements in efficiency through the efficient utilisation of machinery, through innovation in working practices, such as embracing multi-tasking, and through continuous improvement of the production process. All of these mechanisms were intended to create a state of tension, such that operators would no longer need to be managed

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to optimise performance, with all the attendant industrial relations considerations that might entail; instead, under the pressures created through GEMBA and Empower, they would manage and discipline themselves and each other.

The performance of the individual shops was to be analysed through various matrices, covering factors such as the cost of materials, the cost of processing and efficiency ratios, through which each unit would be moved to compete to better its performance, both in its own terms and in terms of other shops. GEMBA inspired 'new seven initiatives' Đ known in company parlance as the 'N7i' with broad functional aims that were concerned primarily, but not exclusively, with GEMBA. These seven areas of activity, which formed the framework through which GEMBA was communicated to Section Heads, middle managers and operators, aimed to:

1. Increase the number of GEMBAS;

2. Achieve Effort & Ergonomics improvements (EEI);

3. Pursue Waste Reduction and 5S improvements;

4. Promote The Cost Management Initiative (CMI);

5. Seek improvements in operational efficiency through Identification of Critical Machines [ICM] and Total Employee Involvement (TEI);

6. Produce product quality interventions at critical points and on time as advised;

7. Reduce Inventory [CompCo website, 2006].

Later on, 'Safety' was also incorporated into the N7i list as an additional initiative. This development was designed in part to help portray the GEMBA gospel in a positive light, since it could be represented as benefitting operators primarily, but it was also intended to reduce the cost of promoting a safe working environment by embedding safety into GEMBA. Implicit in the design of GEMBA was that workers would then assume more

of the responsibility for their own and their colleagues' safety, reducing the burden on management.

Having broadly delineated how the GEMBA project intended to reorder the manufacturing areas, I will now turn my attention to Corporate management's reconfiguration of managerial authority within CompCo.

5.2.2 The GEMBA project Team and the GEMBA management hierarchy

As I have mentioned above, each production line was divided into individual GEMBA groups comprising of twenty to fifty operators depending upon the job cycle and the number of stages of production involved. Within each GEMBA unit, one middle manager was entrusted with managing and monitoring the performance of operators and ensuring that the targets of each production/assembly unit were met. These middle managers were designated as GEMBA Unit Leaders or GULs and, as there was a GUL for each unit, they were drawn from each line in each of the manufacturing, assembly, and operational areas of the plant. In turn, these GULs reported to the Section Heads or senior managers responsible for the overall supervision of the programmes of individual production lines. The Section Heads were given the title of GEMBA Initiative Leaders, or GILs. The GILs were senior managers with considerable experience in the production areas. They also occupied positions higher up the company hierarchy than the GULs, who were largely middle managers overseeing workers directly. Subject to approval by the finance department and more senior management, the GILs recommended the size of the rewards to be given for improvement suggestions, which depended upon the perceived value of the suggestion or Kaizen improvement.

The managers designated as GULs and GILs therefore represented a direct line of management responsibility for GEMBA activities within the GEMBA work units. Above the GILs, however, was a nodal agency led by a GEMBA Head at DGM level. The GEMBA Head

oversaw the overall 'Mission GEMBA' project, assisted by four 'Core Team Verticals' responsible for inventory, critical machines, ergonomics, and quality. In company parlance, these GEMBA Core Team Verticals became known as CTVs. These four CTVs not only sought to ensure the realisation of one of the N7i initiatives each, but together they also covered the three initiatives not assigned to anyone specifically. Indeed, some of the seven initiatives overlapped and, in retrospect, I think that it was for administrative convenience that there were four CTVs to overlook these seven initiatives.

The GILs who would supervise and monitor the N7i on a day-to-day basis in each of the plants would have to report to the CTVs in addition to monitoring the GULs in their assembly and manufacturing shops. It should be noted that the strict textual definition of GEMBA is quite narrow as it captures the idea of a focus on the actual work place. However, at CompCo the term GEMBA came to encompass and be used in conjunction with a broad group of themes to address the many N7i undertaken by plant management. Indeed, it was sometimes used interchangeably as an alternative term to lean manufacturing. The main vehicles for translating the aims of N7i and GEMBA initiatives were the middle managers, especially those who were line managers and who now became the focus of greater managerial scrutiny from senior management.

5.2.3 Change in promotion prospects of middle managers

The promotion of managers, hitherto based on seniority plus the recommendation of the Section Head, had now come to hinge upon successful management of the GEMBA targets. In the recent past, consideration for promotion had depended primarily on whether someone was due for promotion almost as a matter of rote, although a favourable outcome was very much dependent on a positive recommendation from a Section Head. Now, however, in the case of line managers, appraisal for promotion focused on several criteria: their management of production tasks; their achievement of targets decided in conjunction with GEMBA parameters; their diligence and

commitment in supervising GEMBA improvement projects; and their interaction with operators to implement GEMBA. Furthermore, such appraisal took account of their achievements against specific targets that had been entrusted within each of the N7i areas.

As we have seen, production-related changes were central to the realisation of GEMBA objectives. Corporate management never ceased to emphasise the important role that middle managers would play in implementing these and other measures to achieve a lean manufacturing environment. Now the phrase Key Result Area (KRA) became a crucial part of GEMBA parlance and attempts were made to appraise managers on the basis of their achievements in relation to an array of KRA parameters. These targets were set periodically in GEMBA review meetings attended by Mr. N, managers from other relevant departments, and the appropriate CTVs. In designing these KRAs, Mr. N drew upon reports from the CTVs, sought the active participation of Production Heads, and also addressed problems identified by middle managers in related departments. These targets were then revised and reviewed when corporate management in Nellore called in the GM, and Mr. N and his deputy Mr. AB. As a result Mr. N and other senior managers not only emphasised the responsibility of middle managers to meet these KRA targets, but also claimed that these managers had been consulted during the 'process' of their preparation. In January 2009 a key participant in these processes told me that, from then on, the participation and performance parameters of the middle manager GULs would be revisited and from that time period assessed against their attainment of GEMBA targets and that this would drive their Key Result Areas appraisal process by their Section Heads. This stance clearly contrasted sharply with the previous practice of promotion depending upon length of service and periodic Section Head's confidential performance appraisal reports.

5.2.4 Changes in job rotation and introduction of lateral functional mobility among middle managers

In addition to changing the terms of appraisal to focus on their adherence to GEMBA, senior management thought that moving middle managers around on a regular basis would motivate them by presenting fresh troubleshooting challenges. More importantly, this would render tenuous any loyalties they might tend to form with particular groups of workers with whom they shared the daily grind of engine production. In this way, undue sympathy towards their colleagues would first be neutralised and then, later, would be replaced by an overriding commitment to the company's aims and interests.

For instance, the GM, Mr. SDN [26 January 2011] told me that one of the outcomes for him from my study would be to highlight the "old man of the sea" syndrome. Here, the metaphor from Ernest Hemingway's caricature of the old fisherman in his novel described middle managers who had become set in the ways of their departments, doing what was expected by their Section Heads and meeting productivity targets but not thinking more laterally. As an illustration of his ideas being implemented, subsequent to my exit from the field, I learned that the GM had directed the HR Department to adopt a pro-active attitude towards job rotation. They were instructed to move around operators in EWS and well-entrenched veteran middle managers from one shop to another within EWS and from EWS to WAP4, or quite plausibly to other plants. This policy of job rotation was implemented and was primarily intended to unsettle any sense of accomplished familiarity that managers or workers could develop over time with their colleagues or machines in the same area and instead develop cross-functionality among them. This was despite the likelihood that such moves would disturb continuity and teamwork between middle managers and the operators they oversaw.

The N7i and the related GEMBA measures, which sought to improve employee communication, motivation and reward, were all intended to unsettle that state of habitual adjustment between Section Heads and the middle managers. It did so by attempting to make middle managers liaise with other, different, operators with the intention of not simply extracting production from them, but instead working with them as team members through kaizening. In this way, the company hoped to push operators and middle managers voluntarily to arrive at 'outside the box' solutions.

5.2.5 Regular feedback mechanisms from middle managers and close scrutiny of their activities

The management hierarchies established by the GEMBA project team played an important role in monitoring the N7i goals and employee performance, but in so doing they also provided scope for senior managers to monitor the performance of middle managers. Each CTV liaised with other GILs and interacted with the GULs of other plants as well as the mother plant in which they were stationed. The CTVs convened meetings to review and assess the progress made on each of the N7i and heard reasons why the required progress had not been made. Minutes were produced and detailed reports, comprising PowerPoint presentations, spreadsheets and other documents that encapsulated a wide array of performance parameters, were prepared by the CTV using data drawn from the middle managers. These were shown to the Head of Mission GEMBA, Mr. N, who would, from time to time, make suggestions for the actions he thought necessary.

The preparation of PowerPoint slides and parameter trackers, which might be compared with an array of aspects being tracked on an oscilloscope, eventually occupied much of the time and commitment of middle managers, though they also had their Section Heads to satisfy. Reports of daily meetings discussing these trackers would be taken back to review meetings convened by Mr. N, which also involved the GM in charge of the whole plant and, if necessary,

the relevant CTV, and this meeting then sent a report to corporate headquarters; this explains the chain of command in decision-making on these reports. The soft copies of the trackers were translated into data sheets, and middle managers had to tally the data properly to ensure clarity and factual accuracy, since errors would incur the displeasure of both Mr. N and Mr. AB.

In the above section I have discussed the structural organisational changes associated with GEMBA without any detailed discussion of the themes of motivation and monitoring operators' work that I also noted were key components of this process of change management. The people spearheading the programme, like Mr. N, believed that GEMBA would succeed if (with the cooperation of their middle managers and using these tools) management could sufficiently influence a 'critical mass' of workers to create momentum or reach a 'tipping point' (a phrase Mr. N borrowed from his favourite book *The Tipping Point* [Gladwell, 2007]). The leading change managers were convinced that the younger operators formed a distinct constituency and could, and should, be made to take an active interest in their work and be kept actively engaged and rewarded for participation. It was felt that this would help to provide momentum within the workforce as a whole and bring closer the tipping point.

Thus, GEMBA operated in two domains: the human, and the technical. At the human level, it endeavoured to modify employee behaviour. The message from above indeed, one of Mr. N's favourite slogans was that the future of CompCo could not be secured without the active participation of the operators who were portrayed as stakeholders who had to be brought 'into the loop' in order to give substance to the company's corporate slogan, "engineering your tomorrows". However, since senior managers did not expect the language of GEMBA to be embraced by workers without considerable management input, they sought to monitor and reward participation by, for example, using employee appraisal systems. In this way, GEMBA was directed at both middle managers and operators, with the former influencing the latter. Senior management in CompCo was hopeful that the younger operators would embrace

GEMBA wholeheartedly. The degree to which GEMBA was accepted or rejected by workers will be discussed at length in Chapter Seven.

5.3 GEMBA and Employee Performance

I will now discuss the range of key GEMBA initiatives and, in each case, review their implications for operator motivation, monitoring and performance. I will begin with the broadest initiative to involve workers in problem solving, termed GEMBA Empower, which was also linked to competitions and rewards for successful suggestions. I will then consider some of the specific communication devices that were used to manage and record performance and, hence, mobilise management and worker effort. I shall then look at several of the specific ways in which working procedures were reorganised under the GEMBA banner before finally looking at the 8a.m. meetings which were crucial for monitoring and controlling GEMBA activities within each GEMBA unit.

5.3.1 The GEMBA empower project

GEMBA Empower was the earliest component of GEMBA communicated to me by Mr. N during my initial meeting with him in the first week of September 2008 as I commenced my fieldwork. It emphasised a puzzle-solving approach and ran in parallel with other day-to-day working-system improvements discussed below. As such, it was an important device intended to communicate the necessity for change, and link change to financial reward in the minds of managers and operators alike. Mr. N was unremitting in urging the GULs and GILs to spread the message of active participation in the GEMBA Empower competitions amongst operators in something of an evangelical campaign.

Thus, GEMBA Empower was designed to allow employees to participate actively in improving company performance and, at the same time, accrue financial gains. They could do this, first, if their suggestions helped to achieve substantial cost reductions and, second, by

pitting their suggestions against those of other GEMBAs across CompCo's plants in 'empowerment competitions'. Periodic continuous improvement activities (kaizening), known in CompCo parlance as 'GEMBA Empower Festivals', were held at both inter-plant and company levels, with the best suggestions winning prizes ranging from outright cash payments to overseas trips. This helped management present production issues as puzzles needing to be solved, which, in turn, helped to generate employee interest.

Occasionally, the company would also venture to collaborate with managers and industrial engineers of competing firms in benchmarking exercises designed to identify hidden inefficiences in production operations,and to identify how to reduce throughput times and make machining and assembly operations more efficient. This aimed to intensify the puzzle-solving ecosystem by holding a grand finale for operators. Operators from other firms were invited to compete with CompCo operators who were winners of the internal company Empower contests. CompCo employees who emerged as winners of these grand contests would be hailed and feted as joyous victors and Mr. N and senior managers would go to great lengths to be pleasant and friendly towards them. Photographs of cheerful employees and managers in pursuit of the corporate slogan "Together we can" would appear in the company's weekly bulletin and on the communication board discussed below. Such winners, depending upon managerial discretion, could be granted occasional overseas trips to nearby eastern countries such as Thailand and Singapore.

As an example, one of the suggestions involved in these 'GEMBA Empower Festivals' was the standardisation of tools and consumables and production operations. Such standardisation involved using a common set of components in the operation of machinery and manufacturing of sub-assemblies and vehicles that could enable the company to cut costs in the procurement of different components for different product lines. Operators were encouraged to communicate suggestions about such standardisation to middle management. They were also encouraged to pay attention to tool-changing and cutting out inefficiencies in

varied machining processes as means of raising throughput or reducing processing time and delays. Hence, the goals of engineers collaborating with one another, and operators competing with one another in these festivals, both involved developing efficient production routines, cutting costs and getting more out of existing machinery. By observing other operators from other shops and other firms, new procedures and standards could be imposed and the manufacturing cycle could be continually refined.

5.3.2 The GEMBA passport scheme

As I have noted, EWS management, in conjunction with CompCo's corporate management, sought to anchor the involvement of operators in GEMBA operations by this system of financial rewards. One important mechanism intended to motivate operators and reward participation was the 'GEMBA Passport' scheme, which worked like an airline loyalty programme. This meant that 'associates' could earn a pre-determined number of points for various activities/outcomes. In turn, these points could then be exchanged for non-monetary prizes.

Successful participants would be rewarded by being given passport points, with prizes awarded at functions organised specifically for this purpose. My fieldwork observations in November 2009 suggest that these were attended by visiting luminaries from headquarters, by the Plant Head and GM in overall charge of EWS, Mr.SDN, and by Mr. N. the GEMBA Head. Photographs of the reward winners along with Section Heads and Mr. N would then be displayed prominently on the GEMBA Communication Boards.

These schemes for rewarding 'associates' financially were interlinked with incentives for rewarding middle managers, thus making the two groups mutually dependent in gaining rewards by achieving and surpassing GEMBA targets. GULs supporting regular GEMBA and periodic Empower projects were rewarded financially, while GILs could improve their promotion prospects by sponsoring effective suggestions. Both the 'everyday' continuous improvement

suggestions produced by GEMBA and the ideas developed specifically for forthcoming GEMBA Empower events were supported financially by the GILs, who had the power to release funds if they found there to be sufficient merit. Depending upon the number of such winning projects, a GIL might even gain a promotion themselves within the senior management category.

Senior managers believed that the operators would communicate more easily with the GULs, who were often from the middle managerial level, and that they, in turn, could take up work-related problems with the GILs and other relevant managers. In this way, it was believed that operators could help troubleshoot their own problems. In the GM's vocabulary, this was considered as 'empowering the operators'. Thus, through a wide array of communications, literature, 'GEMBA Empower' contests, and prize distribution ceremonies, senior management sought to achieve its primary objectives of gaining worker acceptance, or at least acquiescence, in change management. This was one of the contexts in which Mr. N invoked his argument about reaching a tipping point, from which change was seen as being inevitable and irrevocable. This would be more likely if there was a climate in which operators perceived a shared interest with management in implementing change because they believed that there was no other alternative for the company to survive in a difficult market.

5.3.3 The communication boards

An important measure to ensure the constant visibility and influence of GEMBA and reinforce its importance was the setting up of GEMBA Communication Centres [GCCs], a system of white or black notice boards on which managers and employees could write with a marker pen. The main objective of this aspect of the GEMBA project was to communicate information faster, and the GEMBA Head, Mr. N, often referred to the importance of disseminating management's change story. In his view, the GEMBA communication boards would ensure that communication was consistent with lean manufacturing principles. The

most important objective of the GCCs was to highlight problem-solving targets by highlighting and explaining problems in the production process, together with target dates for achieving change, a record of what had been achieved, and, where deadlines had not been met, the reasons for failure.

The GCCs were aimed also at reiterating the GEMBA message to associates and middle managers by articulating the need for better company performance and providing information that would win their support. Operators could also write down any suggestions that they felt were important and line managers could use the boards to point out problems and summarise the inputs made at the 8a.m. meetings. A variety of information of a graphical, numerical and descriptive nature was put on the right side of the board to keep staff informed on the tough market conditions facing the company and the necessity for change. Another section on the left side of the communication board sought to convey images of the company as a family by using pictures of apparently happy employees receiving prizes while being photographed with senior plant management, as noted above, thus reinforcing the role of the rewards for involvement in projects and for staff suggestions.

In addition to the GCCs, the GEMBA initiative also involved other visual displays. Adjacent to every critical machine was a display that detailed the main characteristics and parameters of the machine. The 'best standard operating procedure' diagrams and "don'ts" were also displayed for the whole machining area. Additionally, each machine carried a prominent taxonomical label with the GEMBA N7i board displayed adjacent to it.

The automated 'Surveillance of Production Targets' system was another of the innovations suggested by N7i to help boost operational efficiency. 'Tennis-court score boards' were placed, adjacent to the engine assembly areas of the plant to display the gap between targets and actual performance, and, thus, constantly remind operators and middle managers of the distance they had to travel.

5.3.4 Value stream mapping and fish-bone diagrams

Along with the GCCs, it was intended that every machine shop and assembly area should have a 'value stream map chart' that broke down, pictorially and in detail, every single process in the assembly and machine shops and also the inventory flows through and out of departments and manufacturing areas. This was in order to promote an adherence to best practices. Specifying precise standards for individual items of work and activities encouraged both managers and operators to adhere to standard operating procedures, and gave management tighter control over working processes and the behaviour of operators. This value stream map owed its origins to well-known Japanese manufacturing innovations such as fish-bone diagrams, which allowed the visualisation of manufacturing and supply chain processes to identify weaknesses so that targets for process improvement and wastage elimination could be decided and set. As such, it could be used both to encourage focused problem solving, and to facilitate closer employee monitoring as a way of ensuring conformity with the standard procedures.

Such attempts to use mapping to rationalise and speed up production processes, at least on paper, faced difficulties at the time of my fieldwork, because to be implemented in all production areas, it required changes in standing agreements between the industrial engineering departments and unions, especially on the job cycles that had been arrived at in the negotiated settlements. Senior management wanted more flexible arrangements to allow continuing changes to value stream mapping and other innovations such as 'takt' time. They believed that these measures could be facilitated if most operators could be attracted by the extra incentives paid through the reward systems, but they also hoped that they could draw upon feelings of company or plant loyalty, which they tried to evoke through the vocabulary of participation and empowerment.

5.3.5 Lights and standard operating procedures

Another step towards lean manufacturing techniques for regulating employee performance was the progressive installation of a 'traffic light' system of yellow, green and red lights in all the machining areas of EWS. The green light depicts the state of normalcy; if a red light comes on, a loud beep follows thereby bringing that operation and operator to everyone's attention. Traditionally, operators could not stop their machines of their own free will whenever they wanted to and had first to consult the relevant line manager who, in turn, would consult the Section Head and possibly others further up the chain of command. GEMBA sought to change this by encouraging the practice of 'line stop' when problems arose. This was not carte blanche to stop machines whenever operators chose to do so, because every stoppage had to be justified to line managers retrospectively.

In a near contradiction of the dictum of 'don't accept errors, don't pass errors on', the disruption of the line and the day's targets was frowned on by Section Heads and middle managers; where there were failures, the spotlight was turned on to those middle managers responsible for that line. Thus operators would both pass on and accept errors. For the managers likely to fall victim to interrogation following line stops, it was therefore preferable to continue working if the flaw was minor, or defer action if it were possible to have a problem remedied later in the shift when production pressures had eased. This could depend on how critical the machine was to the production process: if it was a bottleneck machine, the problem was difficult to ignore and the warning indicated by the red light had to be given respect. Notwithstanding the claims of GEMBA to a 'democratic' legitimacy and the scope for operators to stop the line without fear of being victimised, finding the person or mechanical cause responsible for the problem would come into play eventually and was something middle managers and operators tried to avoid.

5.3.6 'Deep-dives' as a basis for initiating change

I will now turn to more specific efforts to reorganise manufacturing and working practices under the auspices of GEMBA. The first of these were termed 'deep-dives', and these were undertaken when there was an urgent impediment to production or when management perceived that there was a need to alter radically the design and efficiency of a manufacturing line using radical new ideas to cut down operating costs. These 'deep-dives' entailed the participation of diverse cross-sections of departmental heads and senior managers to achieve urgent and far-reaching, if not paradigm-altering, solutions to pressing engineering problems.

Corporate management at Nellore also gave the go ahead to implement measures such as 'deep-dives' whenever it wanted to launch a major efficiency transformation in manufacturing operations linked to its Cost Minimisation Initiative (CMI). CMIs were a key area of N7i and usually sought to introduce 'cross functionality' through a reorientation of senior plant and middle management and, if mandated, the 'empowerment' of those operators involved in a particular line or congregation of machines.

5.3.7 The 5S initiative

5S was another important lean manufacturing initiative introduced in conjunction with other GEMBA innovations, and comprised five measures which were characterised, in English and Japanese, as: sort (*seiri*), set in order (*seiton*), shine (*season*), standardise (*seiketsu*) and sustain (*shitsuke*). The main intent behind introducing this initiative under the ambit of GEMBA was to alter and streamline the interaction between the operator, his tools and the machinery or assembly line; this would eliminate what the Japanese call *muda*, translated as 'waste'. This idea of waste covered wasted effort, wasted time, wasted body movements as a result of doing anything other than the job cycle, wasted tools and components, and wasted production capacity. This notion could be deployed to pare down

existing job routines and to attack the practice of rest periods and slowdowns that were seen by management as time wasting or, as it is sometimes called, 'swinging the lead'. Clawing back the lost time involved was an important management objective.

5S played an important role in ensuring that employees kept their assembly and manufacturing areas clean and tidy, used components in the correct order, used the same standardised procedures for tool use and adopted standardised working procedures. CompCo managers also sold this approach as an effective way of organising individual lives, so that operators were even encouraged to implement the 5S initiatives in their homes. Indeed, Mr. N and other Section Heads inspected the homes of operators in visits, and prizes were awarded to employees who volunteered to enter the competition and whose houses best reflected the 5S organising principles. The entry into workers' homes and the contact with their families can be seen as a deliberate charm offensive on the part of the company, but one aimed at exerting a set of subtle influences on the operators who would then regard lean as a fundamental part of normal life. Mr. N told me in one of the car rides that I took with him that if "you could persuade the wife the battle was half won". Mr. N was convinced that once the wives were won over to the belief that the company was run by well-intentioned people who had the interests of the workers at heart, and that lean would be an essential ingredient of their and their husbands' happiness and future prosperity as manifested in the Empower reward scheme, their husbands' hearts and minds would follow.

Some managers in CompCo often conjoined 5S with the Five Whys procedure, almost equating both as equal in importance to lean manufacturing. Thus during my stay I observed that 5S housekeeping and 5 Whys practices had acquired a predominant space in the vision of some managers who were just below the Section Head in rank. However, this conflation of these techniques was mistaken, for 5S was at best an organising and housekeeping protocol, while the 5 Whys was a set of problem-solving aids, which facilitated troubleshooting by performing root cause analysis. Bringing the two together tended to mean that each lost the focus it needed.

Along with this, confusion as to their roles was engendered in the minds of middle managers and operators. This is a valuable reminder that even within one company and workplace, different managers had different understandings of some of the key building blocks of lean manufacturing, and this was likely to influence how they implemented senior management policies.

5.3.8 The critical machine initiative

Another important step towards tightening the monitoring machinery was the implementation of the 'Critical Machine Initiative' in machining areas, comprised of a mixture of older and newer machines. Again this was an N7i that I was able to observe at EWS, and it was closely aligned to other measures discussed in this section because both the active promotion of 5S and many deep-dives were directed at the upkeep of these machines. It must be remembered that the primary function of the EWS plant was to manufacture and assemble engines. Machinery in the plant needed to be run at an optimal state and the aim of the Critical Machine N7i was to identify crucial older bottleneck machines, the failure of which could seriously impede production, and which were therefore designated 'Critical Machines'. Critical process machines, which were very expensive, were also designated in the same way.

Having identified these machines, it was hoped that active, continuous improvement and preventive maintenance by conscientious employees would lead to improved production results and other lean manufacturing deliverables, identified from time to time by the GEMBA Head and senior managers like the heads of individual production and critical functional departments. These heads of production departments in EWS parlance were known as GMs [Refer to Appendix 2 and 3] such as the material planning head . A more detailed discussion of the organizational hierarchy will be pursued in chapter 6 because it

has a direct bearing on the scope and span of managerial control and career trajectories of senior and middle level management, both of which affect GEMBA's implementation.

Traditionally, however, the plant maintenance department did machine maintenance and this meant that, if a machine stalled, the machining process might need to be performed elsewhere, or, if that were not possible, production would have to wait until the repairs were done. Now, having identified critical machines, some of the responsibility for maintenance could be transferred to shop managers and, more specifically, to their operators. Indeed, corporate management wanted them to contribute kaizening suggestions proactively to troubleshoot the upkeep of machinery before problems could arise, a policy that has similarities with the idea of 'total preventative maintenance'. Furthermore, they reminded operators of the potential efficiency levels that such old machines were reputed to have reached elsewhere, according to such literature as *The Toyota Way* [Liker, 2004] and *Lean Transformation* [Henderson and Larco, 1999].

5.3.9 The 8 a.m. meetings

One important innovation, which served to oversee many of these processes, was the 8a.m. meeting in each production area, which was designed both to monitor and to enforce disciplined problem solving. Every morning precisely at 8a.m., prior to the commencement of the shift, the senior production manager in each area, other line managers, and, occasionally, experienced operators, would meet to assess the day's targets, consider the problems occurring on the line, and decide how best these could be approached. These meetings were limited in duration and usually lasted no longer than twenty minutes. Discussions were limited strictly to immediate production-related issues arising out of the preceding shifts. The input of these meetings and the notes made in them enabled Section and Production Heads to get a quick grasp of the production scenario, identify any constraints they faced, and determine whether production targets had not been met either by operators or by other managers.

These meetings were also a chance for operators to be noticed and 'identified' by managers, and both positive and negative features could influence the points accrued in the passports of operators. They could also influence the appraisal of middle managers in charge of particular lines. I was able to observe a few of the 8a.m. meetings and see the frank discussion of production-related problems that was involved. On completion of the meeting, the convenor, usually the middle manager in charge of the line, would write down the problems on the white board of the GCC with accompanying 'target dates of completion'. He later tidied the relevant section of the board if the problem in the production line had been resolved. A lot of ground had to be covered at the meeting and the discussion tended to be brief and centred on the key issue, the target for the day, and any particular production matters needing urgent consideration. However, I observed that on a few occasions, the presence of Mr. N and other senior plant managers seemed to affect the free exchange of ideas, as middle managers would be reverential towards them: dialogue would be constrained and people like Mr. N would apparently end up imposing their ideas on the group.

The above section reviewed how a combination of policies and initiatives involved efforts to increase the flexibility and productivity of the production process, both by institutionalising problem-solving practices, generating clear but revisable standard operating procedures, and tightening work routines. However, a continued thread in the above section and the ensuing sections will be how different managers nevertheless displayed different understandings of what these policies involved and sought to reconcile their implementation with various other priorities. Nevertheless, these policies could mean tighter surveillance and increased work rates for workers as well as efforts to involve workers in problem solving. For these reasons, senior managers themselves were unsure about worker responses and thus sought to mobilise worker effort and initiative through both positive incentives and tighter monitoring. Therefore, these efforts to motivate and monitor involvement in these policies necessarily sought to regulate the commitment of middle managers as well as that of workers.

Section 5.3 has highlighted the range of initiatives subsumed under the heading of GEMBA and the extent to which this change programme was driven through a reorganisation of management hierarchies and forms of accountability. Section 4.2 also suggested that the GEMBA programme was characterised by internal tensions, especially between a language of involvement and empowerment and the tighter specification and monitoring of work tasks and performance. However, the implications of GEMBA cannot be fully addressed in isolation from other senior management policies and priorities that form an important context within which GEMBA was pursued by managers and was experienced by both managers and employees.

5.4 The Wider Agenda of Senior Management Policy and its Implications for GEMBA

This section will consider three other major areas of senior management policy initiatives which ran in parallel to GEMBA. It will provide a better understanding of the overall pattern and process of change management at EWS, within which GEMBA policies and their reception can be understood. These three areas are, first, a broad imperative to cut labour costs, which had implications for work reorganisation, redundancies and sub-contracting; second, the implementation of JIT and Kanban policies as additional features of a pursuit of lean manufacturing, with particular implications for sub-contracting work to external suppliers; and, third, the relationship between purchasing new equipment with higher levels of automation and refurbishing and reorganising the use of older machines. Each of these areas of policy will be addressed in turn.

5.4.1 Corporate management policies of cutting down labour costs

Corporate management of CompCo, concomitant with its continuing concern t reduce labour costs, wanted a reduction in headcount of operators in each of its manufacturing installations. By doing so, it hoped to cut down the variable cash outflow incurred by the company. In the opinion of the leading evangelists of GEMBA such as Mr. N, it was necessary to 'cut the flab and become a lean and mean company'. This was both a long-term strategy and a short-term plan to meet immediate situational exigencies, and, in the opinion of CompCo's senior management, it would provide greater flexibility both to step up and to reduce labour when warranted. Management's moves to save money by reducing headcount did not constitute an officially stated policy, but they were no less deliberate for that.

At the same time, however, directly employed EWS operators also felt insecure about buying into the GEMBA project's imagery and vocabulary of participation and team spirit. As chapter 7 will show, these moves dampened operators' enthusiasm for GEMBA by creating doubts about job security amongst permanent employees, and they evoked scepticism over calls for participation and troubleshooting even as they managed to split operators into two camps: regular EWS employees and contractual employees. Thus, the reality was that GEMBA was far from the minds of either of these sets of workers, highlighting still further the dichotomy between top management's idealised vision of GEMBA and the difficulties in its translation in the lower levels of the hierarchy. Meanwhile, middle managers themselves were caught between the demands of GEMBA Heads, and demanding senior managers like their Section Heads, to whom they had to deliver productivity targets. The repercussions and outcomes of this policy for middle managers will be discussed in my next chapter.

Corporate management went about reducing headcount in three ways. One way was to persuade those operators and middle managers identified by senior management as old or

non-performing to accept a one-off lump sum as severance pay, together with other benefits such as those accrued from the employee provident fund, which could be regarded as a form of severance pay. The other cost-cutting measures were to resort to hiring contract labour and the outsourcing of production facilities, both of which are registered briefly here. The consequences and repercussions for workers of the outsourcing policy will be dealt with at greater length in the chapter 7. The longer-term aspect of these strategies, which, tied in with the development of JIT supplies to the production line was to give a greater role to suppliers to manufacture sub-assemblies and critical components, which involved certifying the quality of supplies without CompCo having to attest and approve this.

It should be noted that within EWS there were different groups of contract employees, some skilled, some unskilled and others on probation and uncertain of their future in CompCo, and they were viewed through different lenses by Section Heads and middle managers with regards to their commitment to the company and, hence, the nature of the jobs they could perform. Middle managers felt that they could expect different degrees of commitment towards GEMBA goals from these different classes of workers. Some contract employee operators, who technically were yet to be confirmed as permanent employees of CompCo, could take up sensitive job routines done by experienced operators. There were other short-term contract employees, hired via the labour contractor employed in specific stages of engine assembly, where no special skills were required, and where operators did not have access to knowledge that CompCo wanted to keep confidential to the trained operators of EWS. Meanwhile, skilled temporary contract employees who were hired from external labour contractors filled in for absentee operators. The view espoused by the GM Mr.SDN [28 May 2009] was that it made sense for the company to outsource labour to industrial labour contractors in EWS because it provided the company with the requisite flexibility to roll back and step up contract labour whenever warranted. It is important to register here that the wages paid to them by the contractor were far less than those of directly employed operators, and it was the

contractor's responsibility to look after their wellbeing. The flexibility of scaling employment of labour up and down also provided the company with a future mechanism to circumvent Indian labour laws pertaining to dismissal and the redress of grievances, because dismissal of directly employed operators was a cumbersome procedure.

However, while it may have made economic sense to outsource and sub-contract labour, the disadvantage of having outsourced workers exempt from GEMBA undercut the aspirations of GEMBA. The inability of contract workers to contribute anything substantive to the GEMBA project morphed into a self-fulfilling prophecy that established itself in the plant through the continued scepticism about them among line managers. They believed that these outsourced workers could not possibly share the long-term enlightened self-interest of directly employed workers in having a concern about the long-term wellbeing of the company. They reasoned that these workers were itinerant in their employment, as they worked for a contractor who could move them to the production site of another firm. Furthermore, they would not have time to imbibe these new innovations, and nor did they have the training or experience to understand the changes brought about through lean manufacturing. Accordingly, line managers believed that operators' commitment to GEMBA was ephemeral, and efforts to get them to imbibe its constructs were guaranteed to fail.

Corporate management's constant pressure upon senior plant management of EWS to cut down costs led the latter to implement measures that meant that, within the production and assembly areas, there were swathes of employees who were outside the pale of GEMBA. Herein, I will draw upon two instances from primary data to highlight the deliberation of corporate management with regard to the outsourcing plans. The first example was of pervasive but unconfirmed rumours in the recessionary months of 2008 while I was doing my fieldwork that production within functional process lines, such as the connecting rod line and engine fly wheel lines in Shop 7, would be drastically scaled down to almost nothing until normal economic conditions returned. It was also rumoured that

permanent CompCo employees might be asked to stay at home and that there would be an increasing reliance on contract or temporary employees. If, for example, EWS senior management found that the cost of procurement of outsourced crankshafts was proving to be more expensive than producing them in-house, it would take them only a few days to revive a machining shop they had kept in cold storage. The second example was to reduce headcount by outsourcing manufacturing processes of sub-assemblies to external firms. For instance, within EWS, engine block production was outsourced to another subsidiary of CompCo, WDP1, which was located on the periphery of Nellore. These employees could not be brought under the ambit of GEMBA because they were not directly on the EWS payroll, being on loan from WDP1. However, as I noted in my field notes [8 October 2008], as long as they measured up to the testing and quality assurance routines required by management, their participation as a GEMBA group or their inclusion in GEMBA suggestion schemes was immaterial, partly because of the nature of their job but also because they were peripheral employees. Certainly, at that juncture of my fieldwork, the Section Head or the line managers did not regard these employees as important participants in the GEMBA process.

In summary, this recourse to contract labour and outsourcing of production facilities reflected an ongoing deliberation within senior corporate management and plant management about how to respond to cost reduction pressures, but also implied that managers faced dilemmas as a result. In particular, these policies created an environment of uncertainty amongst workers and undermined the vision of management, built around the self-initiative and participative vocabularies of kaizening by workers. Second, regular EWS operators felt that these measures increased their workload and eroded their tacit skills. Finally, lean manufacturing measures were perceived by operators such as Mr. VDVN as being driven mainly by short-term exigencies, which he saw as myopic and even incomprehensible to workers, even though he also saw much inefficiency around him [Mr. VDVN, 3 January 2009].

The above observations suggest that senior management sought to apply lean manufacturing measures in a somewhat selective and piecemeal manner, partly because they were sometimes deliberately selective about what they wished to adopt, but also partly because of circumstances that lay beyond the control of senior management. It is worth noting at this point that, for several reasons, the regular workers at EWS remained rather critical of these lean initiatives. Most significantly, to the extent that the lean initiatives gave greater credence to the supplier's role in manufacturing through tighter supplier integration into the production cycle, they were perceived as evidence that corporate management wanted to make it clear that production could go on with or without the operators' whole-hearted involvement.

5.4.2 Implementing JIT and kanban and giving greater autonomy to suppliers

JIT and Kanban were other lean manufacturing measures that were implemented in EWS and which ran in parallel with the GEMBA measures, rather than being integrated directly into GEMBA. These measures involved tightening both the supply chain and job cycles in the internal production process through the introduction of JIT and a Kanban cycle wherein greater discretion was given to the suppliers. Together with the identification and management of critical machines in pursuit of N7i objectives, these policies represented key features of corporate management's overall attempt to streamline production. As such, the JIT and Kanban initiatives also need to be considered as important parts of management's change programme. I had an opportunity to observe these and query senior managers about how they operated during my research.

Corporate management primarily envisaged that, through Kanban and JIT, added responsibilities would be given to suppliers who could set up their own line-side supply chains. This would enable CompCo to concentrate instead on its strengths – which senior managers, inspired by the managerial literature of Prahlad and Hammel [1990], term 'core

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competencies' – and safeguard its technologies, which were largely developed in-house. Suppliers were encouraged to set up vendor supermarkets that fed into pull-based trigger systems that could dictate the pace of production. Let us examine this point further by examining the role of the suppliers in the engine assembly process. Throughout the engine assembly, small four-wheeled vehicles with a pick-up option and an elongated fork were used to pick up empty component bins and replenish them continually. In this way, they did a 'milk run' for a Kanban system, wherein a supplier replenished stocks that were found depleted. Thus, these vehicles, driven by contract employees, ferried replenishments from relevant supplier-organised supply dumps to the line, rather than going through the process of entry, quality check, and supply from the stores. Self-certification of quality was actively encouraged here, and the supplier was accountable for delivering components of requisite specification.

The Kanban system involved putting the components utilised for production into the bins in order of priority and urgency of usage. The most valuable "A value" items, such as crankshafts, were generally excluded from the day-to-day Kanban replenishment. Medium value or "B value" and low value or "C value" items, such as nuts and bolts, were included. A Kanban re-supply could be triggered when the operator or line manager noticed that the need for replenishment would soon arise and the empty bin would then be placed outside the immediate assembly area where one of the re-supply vehicles would move it to a supply dump and return with a replenishment. However, the vehicles would also arrive in assembly areas at pre-set times, so that the suppliers rather than operators apparently drove the pace of the replenishment process in substantial measure. In this sense, it was not a pure Kanban 'pull' system. With replenishment at set intervals, the Kanban process would largely drive the speed at which operators worked, as operators would feel the pressure if they could see that a re-supply visit was about to take place before they had completed a bin, indicating that they were behind schedule. Note, however, that this system could not be deployed in all areas

because it depended upon both the technical ability of suppliers to work within a JIT System and the extent of supplier power; not all suppliers could or would cooperate with the company in the ways desired by CompCo.

The JIT system was theoretically a crucial attendant aspect of delegating more power to the suppliers, but the GM, for example, was quite sceptical of its effectiveness in EWS for a number of reasons. First, he argued that the same company that supplied him would also supply other firms and therefore would not guarantee to meet the company's needs at any particular point in time because it would want to sequence its deliveries to achieve the greatest economies of scale in its own operations. There were also large-scale players who had considerable market power and could afford to dictate terms to customers. In these cases, CompCo could not impose its terms and conditions in the manner in which it could do over ancillary component manufacturers. In addition, JIT was made difficult because of the poor transport conditions and the distances involved in India. Finally, the suppliers' employees who worked in EWS were reluctant to increase output when necessary to meet increased demand. When the responsibility for JIT was bestowed upon suppliers, this inevitably entailed some loss of direct control and this did not always mesh with EWS management's intention to eliminate opacity in production and gain greater and tighter control over manufacturing.

In addition, many middle managers were ambivalent about the role of JIT in the supply chain, because they were yet to share corporate management's belief based on their reading of extensive lean manufacturing and corporate case-study literature [Henderson and Larco, 1999; Liker, 2004] that supply chains played an integral role in the organisation of the production process. It was undeniable that key change managers, such as Mr. N, did make an effort to read up on material about lean manufacturing. However, middle managers operating the assembly line told me that their attention was concentrated on the immediate production process; they simply did not have time to concern themselves with what the

supplier did because what mattered to them was that the material arrived for them to use. Despite the difficulties in implementing JIT and their individual reservations about its efficacy, corporate management wanted suppliers to play a greater role in the production process by setting up vendor supermarkets, intensifying the reach of Kanban and being more answerable in replenishing the line with components.

5.4.3 Varying policies on the replacement or refurbishment of machinery

As we have seen, senior plant management in EWS wanted to implement total preventive maintenance measures drawn from lean manufacturing 'to do' manuals, such as those of the IMVP project [Womack et al., 2007; Liker, 2004]. This intent to adopt pro-active maintenance were reflected in several of the N7i measures discussed earlier, such as the critical machines initiative, the GEMBA measures such as 'Andon lights' (designed to rest responsibility upon the operators) and the more generic 5S and 5 Whys techniques. In this context, it was notable that senior corporate managers adopted a policy of selective automation Ð while in some areas new machines were replacing earlier vintages, in other areas older machines were being retained, though sometimes they were also reorganised or refurbished. The reason management was apprehensive about going all the way with automation was explained to me during an extended period of interactions with several members of senior management, including Mr. SVM, one of the middle managers who was the Core Team Vertical (CTV) of GEMBA, the DGM of engine manufacturing, and the GM. Their argument was that substantial capital investment had to be justified by calculations about production costs, manning levels and likely production volumes.

However, corporate management in Nellore was pro-active in pushing senior managers in EWS to close shops as a contribution to eliminating all forms of *muda* or waste, an important principle in lean manufacturing. Indeed CompCo was exhorted to do so by the

American MNC consultancy firm it had hired, and this was reinforced by Mr. N's unflinching belief in books such as *Lean Thinking* [Womack and Jones, 2003].

One of the wastes identified was obsolescence, and modern machinery such as CNC machines was procured, whilst assembly shops and machining areas in older plants such as EWS were redesigned. At the same time, senior plant management in EWS was constrained by cost considerations. It had to decide whether it should use older machines with existing manpower if that could be done cost-effectively, or, instead, choose the easier option of using sophisticated multi-axle, multi-job, labour-saving CNC machines such as those of the German precision engineering firm Deckel Maho Gildemeister [GmbH], which would require corporate management to invest considerable amount of money to procure and maintain. For instance, within EWS certain areas such as the engine fly wheel and connecting rod machining line in shop 7 were very amenable to greater automation because of the great degree of precision these machining operations demanded. Hence, plant management did not think twice in operationalising this multi-functional machinery that could do several operations in one go and thereby reduce the headcount of required by job machines that could do sequential single operations. While such machines could deliver variety and a substantial reduction in human capital, they might not have been able to deliver sufficient economies of scale or sufficient output when demand was high. Second senior management did not want to upset the existing production arrangements such as those in Shop Four and Shop Five, fearing a loss in continuity of production arrangements and in existing worker expertise, both of which came in handy whenever management needed to make urgent specification changes.

Experienced operators who had come to develop symbiotic relationships with their respective machines could factor in changes in requirements easily or rework parts if there were quality problems that needed remedying. An example pointed out to me by Mr. SVM [15 October 2008] was the co-operation from operators in standardising older machines such as simple cutting and grinding machines and lathes used for machining components such as

the flywheel, so that they could perform a greater range of tasks. To achieve this using these older, complex but large machines, which could do only one operation at a time, meant combining processes in a way that required an enormous reservoir of tacit knowledge.

Against this background, GEMBA was necessary as a way of educating operators to adopt the 5S and Total Preventive Maintenance practices advocated by lean manufacturing. Senior plant management also wanted to draw upon this reservoir of tacit skills in maintaining and operating machines, but at the same time put an end to conventional avenues of the application of operator knowledge that could provide advantages for workers. For operators, such conventional practices might mean working faster to gain time for rest, holding back on effort, or blaming the old machine for delays while feigning working hard to repair it. For managers, such practices were seen as instances of 'restrictive practices' or forms of 'swinging the lead'.

However, despite management efforts, there was little evidence to suggest that workers in some manufacturing areas of the plant had relinquished their earlier objectives and committed themselves to continuing increases in output through GEMBA practices. For example, there was little sign of the existence of 'internal customer'- driven pull mechanisms, because operators went about their work adroitly, with all the skills acquired over the years, so that they dictated the pace of the machine through their mastery over it rather than, as mandated by lean production, the other way round. Thus, though machining operators were apprehensive that their tacit skill might be appropriated from them, I observed that they still managed to reach production targets without the aid of standardised lean manufacturing job-cycles. The above point contrasts with the implications of external JIT for worker skills, discussed above. It also underlines the implications of the different skill repertoires operators had, as well as how differences in the labour process affected the implementation of GEMBA on the one hand and automation on the other hand.

These aforementioned older machines used finite pre-set tools that needed to be carefully looked after, but their job specifications could not be changed once they were set up. While these older machines could sometimes be used in series to manufacture urgently required components, Mr. SVM told me 19 February 2009] that they were expensive to maintain, and using them within a regime of stringent lean manufacturing standards was difficult. In his opinion, they offered limited scope for improvement and what he called 'incremental GEMBA process value generation', even though managers had identified those that were critical and subjected them to lean manufacturing principles of robust pro-active kaizening and maintenance. During my fieldwork I observed, that senior plant management of EWS were actively considering scaling down the operations of these old machining shops such as for instance Shop 2, which performed, most of the preparatory engine machining operations for EWS. These operations encompassed a multitude of tasks that began with transforming the basic raw components after their arrival from the EWS foundry in Nellore and through the heat treatment shop stage if warranted, into cylinder valves, pistons, crank-cases and so on for further machining and assembly in other shops of EWS. These proposals met with stiff resistance from the union as, though there was talk of redeployment of operators, many of the older workers would be forcibly retired or be subject to layoffs depending upon the terms of their employment contracts. My fieldwork encompassed a period around December 2008 as the recession was approaching its zenith. Many of these ageing single operation machines had been 'mothballed' because of poor market demand, but it also seemed likely that management arguments for closure were likely to intensify once the recession abated.

On the one hand, then senior management in EWS had apprehensions, expressed by Mr. AB, Mr. N's deputy, and the DGM [Engine Assembly], about getting workers to work on their machines with the new insights and perspectives provided by lean manufacturing. On the other hand, however, corporate management in Nellore and the GM, Mr. SDN, were

proactive in pushing senior managers in EWS to close shops as a way of eliminating *muda* or waste, which was partly regarded as the result of obsolescence.

Meanwhile, multi-spindle, multi-axle CNC machines and other multi-tasking modern machinery were in the process of being procured, even as assembly shops and machining areas in an old plant such as EWS were in the process of being redesigned in response to pressures exerted by senior management to implement the machining 'best practices' prevalent in the global automotive industry.

In India, labour costs could be lower but management was, after all, dealing with human beings with emotions in contrast to a machine that worked on command. Consequently, the older machines, which were dependent on operator acquaintance and tacit skill, competed in their functional utility and cohabited with the newer, multi-spindle, multi-task CNC machines manufactured by transnational machining firms. The extent to which corporate management replaced older machinery with sophisticated automated machinery reflected a dilemma on the potential cost savings it could gain over hiring workers on the one hand, and the expense of maintaining these machines and keeping them running at full capacity in an unpredictable market on the other hand.

In spite of such difficult decisions that senior management had to take, there was no doubt that machinery supply firms such as the German world-leader in specialised machinery, Gildemeister GmbH, had considerable sway over senior corporate management's future plans for machining shops such as Shop 7 and other machining areas. These suppliers attempted to manage the perceptions of senior management in EWS and other CompCo plants by communicating pictorial impressions of how, in the future, superior technological practices in accordance with the best practices of the industry would allow the company to match its rhetoric of "engineering the customer's tomorrows' through innovation. This raised the possibility that automation as a basis for efficiency could run alongside and augment aspects of lean manufacturing involving *kaizen* and total preventive

maintenance, as these newer machines were likely to respond better to lean techniques than aging machines that have limited multitasking capacities. In the case of some of the newer multi-operational machines, participation was sought from operators working in groups with line managers to make machine use more efficient, improve quality, reduce costs, and, if possible, avoid further capital investment on more new machines.

However, these newer machines needed standardised operational procedures and specific training, quite unlike the tacit on-the-job training characteristic of the older arrangements. They required operators who had specific skills to attend to these computerised machines, to enter the operation into the computer and then wait for the machine to complete a wide range of machining operations. Thus, though plant management had the same objective of improving operational efficiency through both GEMBA and automation, each had distinctive features; while automation was intended to eliminate the vagaries of human agency, GEMBA initiatives sought to motivate and concentrate human agency to deliver optimal output and reach operational targets.

Against this background, lean manufacturing benefits were seen to be limited in the older, linear machining areas of Shop Two, where the labour process was very intensive and centred on the set pace of the process. The individual worker had little leeway for group work and there was usually very little leisure time for the operator as his attention had to be centred on the job. However, there were assembly areas in EWS that were very suitable for GEMBA, and management required operators of these labour processes to imbibe robustly teamwork and kaizening. In particular, the assembly areas required greater participation and synchronous working than the machining area. It was here that EWS's management wanted to demarcate showpiece areas that it could show to its proprietors from London, and even some of its competitors, as examples of the best of lean manufacturing.

Thus, in some areas, such as those involved in engine assembly in Shop Six, clear-cut and logical cases for senior plant management to pursue GEMBA were evident from the

character of the labour processes involved in production. Senior plant management concentrated its efforts in these assembly areas because there the group working and process management aspects of GEMBA had the greatest potential for boosting productivity. In such areas, inter-group cooperation between 'cells' was evidently critical, and people worked in self-contained cells as team members, although they were monitored by management. Tighter coupling of production processes and continuous flow of sub-assembly operation within and across cells in these assembly areas was critically dependent upon coordinated and synchronised working amongst workers. Concomitantly the innovations being tried and tested in shop six were a test bed for management's ongoing implementation of lean manufacturing innovations in EWS.

The assembly process involved a sequence of stages, both on the main line and in the side sub-assemblies. Yellow lines demarcated different zones and routes across this assembly area in an attempt to embody order and recreate Japanese safety and housekeeping measures. The operators worked individually on some repeated operations, such as applying torque to the crankcase, or in groups of three or four in other assembling processes. The scope for error tolerance in the engine assembly process is limited: for example, in Shops Three and Four, engine's performance was tested in a sterile, dust-free, clean area. Here, there were a few computers and an array of other instruments. The permanent operators, who sat and monitored parameters, checked quality, and filled in process sheets, took pride in knowing the engine very well.

As this description implies, this work area housed the best and most experienced operators in EWS permanent employees including both the last batch of operators accepted into permanent posts, and veterans who have worked on assembly for many years. I observed that these operators were treated with care and showered with empowerment messages from EWS's GEMBA team, who were at pains to emphasise the successful synergy and team-work evident in this GEMBA compared to that in other areas.

Furthermore, in such areas, principles such as 5S were followed more robustly than elsewhere in the plant. In this context, stopping the line was proactively encouraged by Mr. AB, and this was emphasised to the Section Heads and line managers because this was, until recently, unthinkable and many managers would have been taken to task for that eventuality. However, despite such an emphasis on worker initiative and expertise, senior management was still looking at aggressively reducing the numbers of operators in Shop Six as well.

5.5 The Varying Extent of Managerial Implementation of GEMBA Across Work Areas

As my analysis in the previous section has underlined, the implementation of GEMBA varied significantly across different work areas within the EWS plant. In my discussions with Mr. AB in early December 2009, he emphasised that quality control managers were paying special attention to the engine assembly area and, in particular, Shop Six , which was their flagship test case where GEMBA had been applied. Thus, the engine assembly area was one of the most active areas of the GEMBA experiment, and Mr. AB, whose office was just above the assembly area block, constantly stressed the vigour with which GEMBA was to be implemented and targets delivered. Dedicated line managers were always available to monitor engine performance and parameter testing, and a line manager with a process sheet was usually to be seen moving around the assembly area checking up. As mentioned earlier, adjacent to the engine assembly areas are tennis court scoreboards, which constantly remind operators and middle managers of their achieved volumes and required targets.

Thus, the N7i ergonomics measures were actively encouraged in this and other similar areas in the factory, partly because managers like Mr. N believed that good ergonomics avoided industrial accidents and operator strain. At the same time, the overall objective of senior management at EWS was to ensure a gradual reduction in the relevance

of the industrial engineering department in arriving at collective agreements with the trade union over cycle time. This displacement of industrial engineering was to be accomplished by the substitution of continually revised job standards. This involved the continual monitoring of employees' job routines and job cycles in the machine shop and the transparent specification of operations and inventory flows in assembly and sub-assembly areas. In this way, N7i measures combined process standardisation and continuing improvements arising from *kaizen* activities in a way that was intended to increase productivity and control costs in addition to reducing strain and promoting safety. What this underlines is that Mr. N and Mr. SDN thought the agreements on job times and routines, which had been arrived at by collective bargaining, gave operators far too much slack time.. A departure from the erstwhile practice of waiting for the industrial engineering department and the trade union having representational rights, to arrive at an agreement over the content and timings each job routine in the labour settlement could, instead facilitate flexibility. Section Heads and Production Heads could meet periodically to modify and continually revise the content of job routines depending on the requirements of the production requirement of that shift. The outcome of this change in management policy would be, to enlarge or alter the number of tasks performed within a job routine, and thereby reduce or vary at short notice an operator's cycle-time. These measures could inevitably result in greater work intensification for the operator, but for management it presented an opportunity to reduce opacity in the job sequence and secure tighter monitoring of job routines.

In contrast, however, there were also areas where GEMBA had yet to make an appearance and this failure of GEMBA to percolate to every area of the workplace challenged the aspirations of the GEMBA team led by Mr. N. There were several related reasons for this uneven pattern of innovation. First, it was quite possible that senior managers in EWS did not want to innovate across all areas in one go, especially in those areas that were perhaps less urgent with regard to improving the labour process and where the outcomes of

change management were less likely to make a substantial difference. Second, however, such considerations were difficult to disentangle from the varied priorities of senior managers. On the one hand, Mr. N did not want to encroach on the rather different agendas of some senior managers. On the other hand, what was central for most managers in core manufacturing operations was meeting the day's production targets, and several of these managers abhorred GEMBA. In practice, if there were well-established production routines and production targets were met, the manager in charge of the area was perceived as 'efficient and experienced' by his superiors and senior managers, and GEMBA was seen as, at best, a side activity. If these areas were led by charismatic managers who represented authority, and who were equal to Mr. N in experience and age, little could be done to convince them of the urgency of implementing GEMBA above their established priorities. After all, senior managers with substantial experience knew the local conditions of their areas within EWS and disliked interference in their work domain.

For example, in Axle Assembly, which was actually adjacent to the GEMBA Head's office, there had been some marginal 5S initiatives and measures designed to enable a better flow of materials but, apart from these, no special commitment to lean manufacturing on a physical level was evident to me. There were constant quality improvement projects and suggestion schemes but, to the best of my knowledge, their impact was not far reaching because workers were very comfortable with existing pacing arrangements and would have resisted change. Their working practices were characterised by small groups of two to three workers swapping alternating spells of intensive work and rest breaks on a moving conveyor line, which allowed them to 'take a breather'. Thus, work was distributed amongst the group with the aim of achieving the targeted overall volume of output, which was perceived by operators and managers as being more important than the enforcement of strict discipline. In this more relaxed environment, the maintenance of individual workloads was less important than, for example, in engine assembly where the efficient working of an operator and his

achievement of his cycle times were dependent on the preceding operator in the production line. In all my stay in EWS, not once did I see Mr. N visit the Axle Assembly shop. This was because another senior manager was in charge of it and what was important was that it was meeting its production targets. This further emphasises the divide between the theoretical intentions of management and the practicality of life and contingencies on the shop floor; within the same plant there existed different experiences, stages of implementation and understandings of GEMBA and lean manufacturing.

5.6 Conclusions

The priority of top corporate management at CompCo was to modernise in a way that allowed them to compete and survive. On the one hand, they faced increasing competitive pressures from rivals, and, on the other hand, consultants and newly recruited managers offered "industry best practice" recipes for efficiency and profitability. This was the context in which senior managers at CompCo adopted lean production – and particularly GEMBA – as key features of modernisation.

However, this chapter has also shown that the adoption of these policies was not straightforward. Lean manufacturing was actually implemented in an uneven and piecemeal manner within continuing institutional constraints and with limited success. In its original context, GEMBA meant something very different from what became GEMBA in CompCo and EWS. Furthermore, some of the other major areas of senior management policy contradicted the official GEMBA agenda of participation and empowerment, especially when change management ran in parallel with reactive short-term measures such as outsourcing of labour and production. Thus, there was a complex interaction between JIT, Kanban, workforce reduction, investment in automation, and the specific GEMBA initiatives. Furthermore, external pressures such as the cyclical nature of the commercial vehicle manufacturing

business across the passenger and transportation segments, meant that senior managers had to respond in the short-term with what they thought was the best policy for the company.

Against this scenario, there was considerable diligence in applying the principles of GEMBA and lean manufacturing by enthusiastic proponents among senior level management such as Mr. N, who seemed to have the ear of the COO. Both were evangelists for lean and would not hear one word said against their beloved book, Womack and Jones's *Lean Thinking* [2003]. However, the implementation of GEMBA remained primarily dependent upon a few key managers, such as Mr. N, the CompCo board knew that lean manufacturing was not a silver bullet that could guarantee efficiency and profitability.

Senior plant managers like the GM had to ensure that their plant remained relevant to the future priorities of CompCo's corporate management, but this involved other priorities that sometimes contradicted those of the GEMBA programme. EWS was an old plant, and implementing GEMBA within a long-established organisational culture was always going to be challenging. Thus, the GM of EWS had a distinctive view of how to implement lean manufacturing and, in particular, was more pragmatic in view of EWS's existing organisational culture 17 though he decided to keep these views to himself.

More generally, GEMBA initiatives were not easily reconciled with the more immediate priorities of many management groups within the plant, especially as the upward mobility of middle managers depended directly upon the positive approval of their superiors. Their first loyalty was towards the expectations of their superiors and, only then, to GEMBA. Thus, this chapter has touched upon the existence of sources of resistance to senior management's change programme that involve middle management's commitment to established working arrangements and production priorities; this is a theme that will be examined in more detail in the following chapter.

As we have seen, the configuration of GEMBA policies at EWS failed in some respects to meet the rhetorical aspiration to empower workers. Furthermore, there was also

a persistent tension between senior management aspirations to generate worker commitment and involvement in GEMBA initiatives, and other aspects of their policies, especially when these involved increased work pressures or diminished job security. Thus, senior managers were aware that workers and trade unions were apprehensive about the potential loss of jobs. Furthermore, the worker and union defense of established collective agreements on pay rates and working pace also appeared a likely source of opposition to senior management's plans and objectives. This theme will be investigated further in Chapter 7.

Another theme that has emerged from this chapter is that there were important variations in the implementation of management programmes across the factory. First, they had a differential impact on different categories of workers, especially between permanent employees, temporary and sub-contract workers. Second, there were also differences in the implementation of these programmes across departments and work areas. These were partly influenced by patterns of management and worker resistance, but they were also influenced by pragmatic senior management decisions about where to focus particular types of change. These were sometimes influenced by calculations about the appropriateness of different policy mixes for different types of production processes. Finally, specific efforts at implementation could also involve a preoccupation with particular 'show-case' areas because, for example, senior plant managers wanted to convey to visiting dignitaries that they were making progress, or they wanted to manage the impressions of superiors whose assessments could in turn have a bearing on their career prospects. Additionally these showcase areas continued to attest to the corporate image that CompCo was at the forefront of "engineering the customer's tomorrows" by being sensitive to changes in manufacturing innovations. Such variations in patterns of management policy implementation will also be borne in mind in the following chapters, especially as they could also have implications for

the perceived overall outcomes of the change management agenda pursued by corporate management.

The next chapter will proceed to evaluate how the repercussions of the implementation of GEMBA were played out in the ranks of management, especially through a case study of innovations in inventory policy and the implications for middle managers.

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and Managers' and Workers' Responses: a Case Study of
a Commercial Vehicle Manufacturing Plant in Southern
India

Two volumes. Vol. 2

by

Anuratha Venkataraman

A thesis submitted in partial fulfilment of the requirements for
the degree of

Doctor of Philosophy in Sociology

University of Warwick, Department of Sociology

March 2013

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Chapter 6 Middle Management and Organisational Change in CompCo: A Case Study of Inventory Reorganisation in EWS

6.0 Introduction

This chapter considers the position of middle managers in CompCo and what it tells us about the competing discourses in an Indian firm like CompCo trying to adapt to lean manufacturing. It points out the challenges of implementing lean manufacturing and attests that its implementation is piecemeal and pragmatic. It uses the example of effecting organisational change through lean measures pertinent to inventory management (an integral constituent of lean manufacturing) as a foundation upon which to demonstrate the conflicts that take place between middle and lower level manager, as well as among such managers, including between departments. It will show the various coping mechanisms they deploy to orient their beliefs and their perceptions of their work in the plant and also to account for their actions. This chapter is divided into eight sections.

Section 6.1 provides a preliminary insight into the organisational hierarchy of EWS and the career pathways of middle managers. I will unpack the themes addressed here later. The next four sections, the ethnographic core of the chapter, constitute a specific case-study of the role of middle managers in change management, focused on problems and attempted reforms of inventory control. Section 6.2 discusses the importance of understanding inventory in connection with the overall aims of this chapter. It then demonstrates how complications in reconciling inventory data posed problems for both senior and middle managers. Section 6.3 then considers how these

inventory problems prompted a range of change management initiatives but also led to difficulties in implementing change management policies in EWS, and made the life of line managers very difficult. Section 6.4 examines the inventory meetings as a focal point, where interaction between managers illuminated the strategies of change managers seeking to push through the corporate agenda and the competing organisational priorities in play. Finally section 6.5 completes the inventory case study by assessing the scope and limitations of the GEMBA initiatives in relation to competing manager vocabularies and strategies.

Section 6.6 then addresses how external developments affect organisational responses and as a consequence managers' responses, and thus helps to illuminate the contradictions of change management. Section 6.7 uses the foundation provided by the study of inventory and the earlier introduction provided by Section 6.2 to broaden the discussion on patterns of experience, outlook and career pathways of middle managers, to understand their goals and the rationales behind their actions. Finally section 6.8 provides a conclusion.

Overall, middle managers have a contradictory position because they are caught between senior managers who give them instructions and lower managers and workers who may not listen to what they say. Middle managers have different amounts of responsibility and power depending upon their rank and hierarchy. Higher-level middle managers in EWS report to senior plant management and occasionally accompany senior management to corporate headquarters for review meetings. Lower-level managers are responsible for carrying out the instructions of middle managers and work face-to-face, day-to-day with workers. Together both higher- and lower-level middle management are responsible for implementing corporate management programmes.

A good explanation of this contradictory position is found in Nichols and Beynon [1977] in their study of ChemCo. Nichols and Beynon identify three points which typify middle managers - their lack of upward career mobility, their need to be vigilant against competitors and workers in order to keep the system running, and their own job insecurity. They also address distinctive pathways of management careers and hence the different ways in which managers experience the contradictions of the labour process. Watson's [1994] interest in the position of middle managers takes a different direction. He is more interested in the discourses which comprise any particular management culture. He argues that middle managers imbibe these cultures and discourses as part of their recruitment training and are also aware that they shape their management careers through promotion and non-promotion. There are problematical relationships between different management cultures and resources. Watson also argues, however, that middle managers come to acquire distinctive perspectives on how their work ought to be done and where they see themselves fitting in their organisation over time. He also points out the tendency towards segmentalism, wherein managers tend to see tasks in relation to their department and its priorities and lose sight of the organic whole. Thus Watson [1994] provides an interesting insight into how managers interpret meaning and justify their actions; his work is complemented by Beynon and Nichols [1977: 30-68] who point to the contradictions of the impersonal capitalistic labour process and the location of managers therein.

The above works are important for grounding my understanding of CompCo's middle managers and the way in which they seek to situate themselves and their role with regard to their career pathways, their sense of intentional being in the plant over the years, and the mechanisms they deploy to institute and cope with competing organisational discourses and priorities. The main objective of this chapter is to understand how different management cultures and discourses have a bearing on

middle managers and to highlight the tensions between discourses that emphasise an existing shared management culture, those that emphasise the importance of particular functions and activities, and those that project a new, transformed corporate culture as the basis for the mobilisation of middle managers to serve corporate goals. In particular it considers how these features relate to the realisation of a corporate strategy that is contingent and responsive to emergent situations.

In order to develop the above argument I will first outline the organisational structure and management career pathways in the next section of this chapter. I will then draw upon a case study of inventory in EWS in sections 6.3 and 6.4, to get an insight into the practice of management and managers and the contradictions of the lean manufacturing framework they operate under. I will then return to a more general discussion of these themes in sections 6.5 and 6.6 before offering an overall conclusion.

6.1 Mapping the Organisational Structure and Management Career Pathways of EWS

This section of the chapter will first map out the organisational structure as illustrated in the organisational hierarchy pictured in Appendices 1-4.

Appendix 3 identifies the divisions between different levels of lower and middle management involved and the span of managerial control of within the production hierarchy of EWS, from the departmental heads to the Section Heads. Doing so is important because it underlines that middle managers are managed and directed by senior managers, but they also manage and direct subordinates themselves. Middle managers have different amounts of responsibility and power and, as a corollary, lower line managers are bestowed with less power. It is important to

discuss the organisational structure of EWS in order to outline how different managers, located in different positions and engaged in their specialisations, brought to the fore departmental tensions and therefore impeded GEMBA. I will proceed in a chronological order and in order to understand where middle managers were located I will first illustrate the corporate hierarchy of CompCo and then outline the hierarchy of EWS as shown in Diagram 1. The organisational tree attached illustrates the positions of managers and their roles in CompCo and in EWS. Thus this section provides an introductory map of managerial roles and indicates how different managers influenced the functioning of inventory and GEMBA.

One other important feature of EWS's management structure was its use of matrix based reporting relationships. So, although the company had a conventional management structure, there existed very important dotted lines between managers on a number of levels. This becomes very apparent when we look at the links between the corporate management structure of the company and the structure within EWS itself. [Refer Appendix 2 and 3] .

Although the GM Mr.SDN who was also known as the plant head, was primus inter pares and at the very apex of the organizational hierarchy of EWS heads of frontline production and functional departments such as Finance, Material Planning and Production Control whose cumulative efforts made EWS function as a plant, were colloquially known as GM's. Their deputies who headed of production overseeing numerous shops were known as DGMs. Other Managers who reported to them and to their superiors were not given the title DGM [refer to Appendix 3].

A twist in the hierarchy was that whilst the Head of GEMBA based in EWS might have been expected to report to the EWS GM, in fact he reported directly to the COO of the company. Although the GM Mr. SDN was at the summit of the EWS organisational hierarchy and Mr. N in theory was lower to him, they had equal

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organisational powers with Mr. SDN's span of control extending to the whole plant in contrast to Mr. N that was limited to GEMBA. However, this limitation in practice was not applicable because Mr. N was armed with the mandate of the COO Mr. VDS, of the power to interfere in every operational aspect of EWS and CompCo's plants and see through the implementation and integration of lean manufacturing in every aspect of their operations. He was the second most powerful individual in EWS.

The third most powerful individual in EWS, after Mr.SDN and Mr.N was the production head Mr.TRN [Refer Appendix 3] who was just called by that phrase 'production head' as opposed to the organisational appellation GM and the Production Heads of assembly and manufacturing who reported to him were known as GMs and their deputy DGMs. For example, although the machining tooling and sub-assembly quality managers reported to their respective Production Head they were also required to consult and keep informed the specific deputy heads at their own level and report to their other departmental superior the manager product quality assurance. This matrix structure, multiple overlapping centres of organisational authority and power and finally the role of departmental priorities both came into opposition to inventory management, as the next section will demonstrate.

Looking at CompCo's central corporate structure suggests that, although there may have been delayering, the company retained apparent duplication in functions even in its corporate headquarters. The most senior jobs in the hierarchy tended to be filled by company men who had been with the company for considerable periods of time. But the newer jobs – such as those in the change management programme in GEMBA, those below them in the management structure, as well as senior management within EWS – were filled by 'company men' who had climbed through the ranks over the years. Middle management in EWS began immediately below departmental heads, as outlined in the chart. Another rank of senior middle

management position was occupied by lateral entrants into the managerial hierarchy such as Mr. AB. This position and that of Mr.N's deputy tended to be filled by business school graduates of high-quality, typically from IIT or the Indian Technology Institutes in India. As the GM told me [Mr. SDN, 26 January 2011] senior plant management in the company knew that these high-flyers were unlikely to stay with the company long-term because they saw their future in moving from company to company in order to seek rapid progression in their careers. Others, like Mr. N, were interested in finishing their long careers well, aspired for a seat in the board, and tried to appear energetic and in tune with the latest management idioms and practices.

Managers such as the GM (Mr. SDN) knew that people like Mr. AB had limited long-term interest in the future of the company since they would unlikely be around to pick up the pieces of any of their failures. On the other hand, managers such as Mr. AB, though ambitious, were more likely to be very diplomatic with regard to their disagreement and unlikely to go against the grain of company policies which, although very dear to those in the highest echelons of management, might prove to be generally unpopular and exceedingly difficult to implement, as my discussion on inventory will demonstrate. The jobs of Section Heads could be modified to the extent necessary to meet changing production conditions and functional manufacturing areas over many months.

The line managers who had supervisory functions over workers reported to the Section Heads as illustrated in Appendix 3. In conjunction with the Section Heads, they were responsible for the orderly day-to-day functioning of the plant and ensuring that the operators did their work diligently. The upward and outward mobility of managers such as Mr. AB contrasted with the experience of the Section Heads who managed individual shops and the lower-middle managers who were tied by various family obligations in Hubli and were very good at the jobs they performed. It was they

who kept the plant functioning and were responsible for preventing any disruption in production. The careers and lives of Section Heads and lower-level middle managers were tied to EWS. Below them the line managers who they supervised, and who were directly responsible for managing the workers, were under constant threat of being retrenched.

Two decades previously, entry-level managers who entered CompCo would face a written test and an interview and they learnt their skills on the job in contrast with the elongated training that fresh engineering graduate managers underwent in CompCo's training school. They would rise up to Section Heads and some would progress further to GMs and finally head the plant and eventually, if presented with an opportunity, make it to the board.

Fresh engineer recruits, called graduate engineering trainees (GETS), were under probation and would be assigned a number of tasks before some of them were sent to the line and others towards design and administration. The GM Mr.SDN told me that it was very difficult to motivate younger GETS to get their hands dirty on the line. The young engineer recruits had passed through rigorous entry tests and were given theoretical as well as practical training about automotive manufacturing. Corporate management in the company hoped that some of them would represent the energetic new face of the company, embrace lean manufacturing and help it to 'engineer the tomorrows' of the customer. The middle managers who had arrived about ten years previously, fresh from the Industrial Polytechnics, were skilled in their job and managed the workers, but resented the superior pay of these GETS because, if the plant had to run, it was only they who were on call round the clock, and they felt that the GETS did not do the same amount of hard work they did in running EWS.

Looking at the local structure there was more fluidity than the organisation chart suggests. In line with contemporary management thinking, the top management

of CompCo had sought to introduce what it believed was a flattened management structure through team-work, participation and GEMBA. Its motives for doing so were not just financial: the company wanted also to shorten lines of communication between managers, speed up decision-making and create strong accountabilities. It hoped that delayering of the management cadre would produce these effects. However, as the discussion of inventory will demonstrate, immediate departmental priorities came in conflict with the transformational goals of GEMBA.

Why then, was the reorganisation of the organisational structure of management within CompCo of importance to GEMBA? First of all the existing organisational structure of management contributed to rivalry and distrust amongst managers. Dotted line relationships without a strict hierarchy meant that, with managers in effect reporting to each other at the same levels, authority was diffused and the scene was set for people to criticise each other to gain advantage in the promotion stakes or secure their own positions. Middle managers were forced therefore to keep their eyes not just on doing their own jobs and achieving optimum efficiency but also on rival contenders overtaking them within the hierarchy. As we will see, this bedevilled the GEMBA project. Second, the insecurity naturally engendered by GEMBA amongst both workers and managers was exacerbated by the fact that the GEMBA Head reported to the COO and not to the GM of EWS. Mr. N and the GM Mr. SDN had different perspectives on management and it seemed apparent to me that the GM was not consulted on many occasions. Third, there were problematical relationships between different management discourses and cultures in EWS: middle managers had grown accustomed to their established functions and activities but this conflicted with efforts to impose a new transformed corporate culture as a basis of mobilisation of middle managers to serve corporate goals.

6.2 The Case Study of Inventory and Organisational Change 1: The Existing Inventory System and its Problems

This section explains why a case study of inventory management is important in understanding how managers cope with their work routines in EWS and also highlights their competing aspirations. Most importantly the section tries to understand the functioning of inventory in EWS, and the underlying problems in reconciling inventory which made the work of line managers difficult and undermined the GEMBA discourse.

6.2.1 The importance of studying inventory

There are two reasons why examining Inventory management in EWS is valuable to illuminate the position of middle managers and their responses to senior management's plants of organisational change. First, an attempted reform of inventory was an important constituent in CompCo corporate management's plans to implement lean manufacturing. Second, studying inventory allowed me particular access to middle managers associated with the process of inventory management. As a result it provided me with a valuable and detailed insight into the lives, outlooks and activities of middle and lower managers at CompCo.

First, then, the importance of eliminating waste, reducing inventory and organising an effective supply-chain management system is one of the mandatory steps stressed in the managerial lean manufacturing literature, by such authors as Womack and Jones [1996] and Liker [2004]. The corporate management of CompCo at Nellore saw inventory reduction as a fit case for troubleshooting because it would require spring-cleaning of the plant, its equipment and the supply process, thereby eliminating human lethargy and predefined mind-sets that were not attuned to lean

manufacturing's Kanban and 5S modes of thinking. For corporate management, inventory reduction seemed an easily attainable target to work upon, to yield immediate reduction in material holding costs and reduce unproductive cash outflow from the company. CompCo's senior corporate management at headquarters believed that its GEMBA change management programme, that included inventory reduction as one of its main initiatives, could ensure a proactive spirit of participation and diligence from middle managers. This was integral to GEMBA measures to reduce inventory, streamline inventory management and therefore mitigate inventory tallying errors. Corporate management hoped that active and careful monitoring of the inventory system could also help to resolve the IT errors that caused a mismatch between the amount of inventory indicated by the company's IT inventory management system and the inventory at hand, termed 'work in process'. However Mr.RC, the retired GM for exports at CompCo, told me that EWS was a source of concern for CompCo's corporate management at Nellore because it was an ageing installation, they were not satisfied with its current performance and they were apprehensive about its future role [Mr.RC, 15 October 2008, Residence]. He also pointed out that many operators and managers in CompCo's plants did not seem to share the same commitment as Corporate management to future plans to become lean and adopt measures such as cutting down inventory to save the company expenditure.

Second, the study of inventory provided me with a good measure of access to study and observe those who were at the forefront of implementing GEMBA and inventory in CompCo, and presented the opportunity and time for me as a fieldworker to build friendships and interact with other managers in various organisational departments in the plant. Studying inventory gave me the time and space to understand how individuals and processes functioned in EWS and gain access to departments that otherwise were beyond my remit as an outsider who was not an employee of CompCo.

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It provided an opportunity to have extended conversations and build friendships with a wide array of senior middle managers and other line managers with supervisory responsibilities, whom I will introduce later in the chapter. Furthermore, it allowed me access to understand the opinions of junior and middle managers as they performed their tasks and illuminated their responses (including resistance) to the change management project.

Overall, then, my study of inventory provided an interesting, first hand insight into the implementation of the GEMBA directives and the patterns of middle management response. The objective of the following sub-sections will be to understand how the entry of material and its transformation into sub-assemblies works and the record keeping associated with this process in EWS. This allows identification of difficulties and faults that created Work In Process (WIP) mismatches, which were impediments to introducing tighter inventory control. These difficulties emanated from lack of proper co-ordination between departments, the inability of CompCo's inventory management system to cope with sudden model changes, and the resultant consequences of software glitches and computing errors. Such problems affected the work of those middle managers who were the change agents charged with pushing through GEMBA and changing working practices. Thus understanding these WIP problems, that made it difficult for middle managers who then tended to blame each other, will lay the basis for analysing the limitations of CompCo's management's GEMBA interventions with regard to inventory.

6.2.2 The functioning of inventory in EWS

Before proceeding to illustrate how Corporate management wanted to streamline inventory through GEMBA it is important to understand the flow of

components and sub-assemblies as they make their way from the gate through to individual stores of each production area and onwards to the manufacturing process and eventually end up as finished products, such as engines or manufactured vehicles. I will then comment on the meaning of terms such as WIP and Bill of Materials (BOM).

The entire manufacturing process has to contend with the inflow and exit of components, sub-assemblies and finished products, all of which imply that for its functional continuity the whole plant has to manage inventory. However, there are certain nodal departments in the EWS plant which are primarily responsible for inventory management, and whose description is necessary to understand the flow of materials (covering such varied items as sub-assembled fitments and pre-cast engine blocks) through the plant to exit as finished goods. Managing the flow of materials, calibrating them in their physical form and entering their particulars into the CompCo inventory management database system represent day-to-day activities of managers concerned with inventory in EWS. The nodal departments concerned with inventory management are the Material Planning Department, the Purchase Department, the Production Department (especially production planning and control), the Systems Department, and finally the more dispersed Research and Development centres.

The Material Planning department in EWS plays an important role in orchestrating the transition of raw data forecast from material planning to a purchase order, after identifying suppliers by working with the purchase department. Material Planning acts on its prepared forecast, decides the future procurement of material and then liaises with suppliers. Material Planning then works with the Purchase Department, and gives formal consent to the latter to procure the material. The Purchase Department co-ordinates supply with established suppliers, with whom the

plant has long-term arrangements, and also negotiates with newer suppliers. It then implements the purchase order prepared by material planning which is a formal order that sanctions cash outflow from the plant in return for the receipt of material. Finally, Material Planning oversees the entry of material into the plant before it moves to the quality inspection stage.

Meanwhile the Production Planning and Control Department in EWS projects the outlay of material – including semi-finished components – required for the coming months. This is translated into a day-to-day forecast requirement depending on the manufacturing plan given to them by specific shops. Senior and officer level production planning and control managers co-ordinate with other production line managers in charge of ensuring the functioning of the line and the supervision of operators. Another important responsibility of the production planning and control department is to ensure the timely issue of material to the assembly and machining shop areas of the plant.

I will now outline the flow of material from the gate to the stores, how this is tracked by inventory, and the implications for assessments of WIP and BOM. The movement of material from gate to stores (known as gate entry receipt and dispatch, or GR&D) happens in a series of stages. Components which comprise raw inventory arrive by truck from the supplier and enter the main gate. After receipt of goods a part number is prepared and a preliminary goods received note is made by the gate entry staff. Material planning inspects the goods and it then goes to quality control for inspection and review of quality. After quality inspection the items go to the appropriate stores (either the engine machining store or the assembly stores). After the GR&D process material is issued by the stores as required by the production control department, and delivered to the different lines in CompCo. In September 2008 the

production control executive told me that the whole process of GR&D took five days. Following their lean manufacturing aspirations, corporate management wanted this to be reduced to fewer than twenty-four hours by eliminating bureaucratic procedures and speeding up material entry and usage on a just in time basis.

After movement through entry and stores, materials then continue to move through the production process, and continue to be tracked by inventory. In this context there are two technical terms generally used in the engineering and automotive industry, and specifically in EWS, that are crucial to understanding materials flow and inventory control. These are BOM, which indicates Bill of Materials, and WIP, which constitutes work in process. WIP is important because it tracks the process of production and it also represents a cost. One of the main objectives of lean manufacturing is to reduce costs by minimising the materials that constitute the work in process [WIP] together with the storage space they take up. This may involve re-engineering the product and process to eliminate the need for a specific component (perhaps by using an available alternative) but it may also mean reducing the size of store holdings and buffer stocks.

Thus accurate measurement of WIP is important for the management of inventory in EWS and the scope for errors that ramify through the software inventory system makes the work of middle managers difficult. In this context there can be both positive and negative WIP, and I will now explain these terms so that I can analyse how they operate, as the circumstances that trigger a mismatch between them is a central theme that runs throughout this chapter. Positive WIP measures the real tangible component or sub-assembly waiting for the next stage in the production process, once it starts its journey towards becoming a product but when it is not actually in the process of being transformed in the production process. In this regard

every production assembly area periodically makes a live count of inventory comprising of subassemblies and components lying in the shop, called lay-down entry. Negative WIP, on the other hand, is a system error or gap in CompCo's online inventory database management system, between the number of components and their details as they are present in the system and the number of components absent or present in actual physical stock. It is not simply a reverse of positive WIP which is the inventory that is going to be used up at some point of time. Negative WIP represents the divergence between virtual and paper records, on the one hand, and the actual physical stock on the other; however, negative WIP and positive WIP are closely linked to each other. The drive to accrue savings by inventory management through a reduction in positive WIP inventory can only be successful if it is guided by accurate measurement. Hence the drive to reduce positive WIP would make divergence in negative WIP more critical and potentially more costly. This would especially be the case when the divergence suggests more stock of inventory than really exists, as production may be disrupted as a result, but it would also be the case if it showed a lower stock of inventory, as the apparent savings from stock reduction would be spurious.

Keeping track of the flow of material and tallying it against the computerised information system covering suppliers, material requirements and detailed specifications across a database of many product families was particularly important in CompCo. Material Planning handles this task of overseeing the correct labelling and entry of components into the CompCo inventory management system as they enter the plant. This system helps with preparing the forecast and with material planning to execute that forecast on the basis of informed decisions. However, without the aid of IT, the task of identifying and corroborating the location of diverse components based on requirements given by different departments would be difficult.

The next important acronym to consider is the <u>BOM.</u> This allows the company to define exactly what and how many parts, components or materials are required to complete a production run. It is a manufacturing recipe and instructions about what to use, how long it will take, and how much it will cost in order to produce the product, and is thus a critical component in the manufacturing process. It is interdependent with the materials requirements and forecasting module. The present component issue system consists of breaking down the long-term production plan extrapolations to a weekly and then a daily production plan to specify component requirements for the next day. This is executed by 'production procurement and control', who produce an 'issue list' a day in advance based on which and how many components are required on the line according to the next day's plan; then these components are issued to the line by stores.

Once the material is issued, its BOM provides all the details of cost, quantity and part number. Inventory items are classified in order of priority, related to both cost and functional importance. 'A' value items are very specific to a particular manufacturing process, are critical in terms of technological competence and are often needed at short notice. They are typically key components of inventory and were the cause of much tension and many problems in CompCo's inventory management system (discussed below in this chapter). 'B' value items are important but are not so urgently required. They may be similar to other components but in reality significantly different, though belonging to similar product families such as the rings that go into the engine dressing. Finally there are 'C' value items which are used by many shops, such as nuts, jigs and other fixtures. These 'C' value items are lower in priority and are not required at immediate notice because there is always an ample stock of these items and procurement is done at periodic intervals to take advantage of economies of scale.

The final stage of the progression of materials and sub-assemblies through the plant culminates in the final assembly of the vehicle. The final fitting stage involves attaching parts such as headlights and break lamps, identifying any faults and taking any necessary corrective action, such as welding repairs. The vehicle then goes to the lay down stage where it awaits the road test stage and is still counted as positive WIP. After the road test the process sheet for the whole vehicle is now complete and it goes for pre-delivery inspection (PDI) after which it goes to the dealer for sale to his warehouse. This final process of exhausting vehicle WIP inventory by moving it to sales is called 'Passed to Sales' (PTS). These stages and terms are important for the ensuing discussion.

There are three complications of the efforts to reduce WIP that should be noted here. The first flows from the discussion on A, B and C value items, as A value items are much more expensive than others so cost per unit of inventory is crucial, whilst some B value items are more bulky than others, encouraging efforts to save on space costs. However, such pressures fall less on the cheaper C value items, especially for smaller components, a point I will touch on later. The second complication that arises is that reductions in WIP have to be balanced against competing priorities, such as having a secure and assured supply of A value items that may often be scarce. This point will be taken up when I discuss the role played by suppliers in CompCo, but I am registering the point here to link the technical account of WIP into a wider social context. The final complication is that the reduction of WIP between stages of production (buffer stocks) may also be attractive for management for another reason, because it leaves less room for operators to deviate from defined production times, though this may also make the overall production process more vulnerable to disruption. As the workers' chapter will show, CompCo management wanted to change the agreed job times to a more flexible 'takt' time

based rule, so I will also elaborate upon this vulnerability and how aggressive

reduction of WIP was envisaged to reduce the time taken to complete a job routine.

6.2.3 The sources of mismatches between negative and positive WIP in record keeping and software errors

Mismatches between negative and positive WIP were the cause of many of the

inventory management problems that CompCo faced. Such mismatches arose for

several related reasons, involving such things as a lack of co-ordination and failures in

data entry. An important consequence of these WIP mismatches was the pressure it

exerted on CompCo's inventory management software system. I will now comment

on the more specific reasons for mismatches, though these are not in any order of

priority and they often reinforced one another.

First, model changes that required new parts lists often involved the redundancy

of old parts with distinctive specifications, but these remained and coexisted in the

stores and on the system. For example Mr. RGPN [13 January 2009] cited the example

of marketing telling production that a model change had altered the required quantities

of specific parts, with some needing to be either partially or wholly discontinued. Thus

items could become obsolete after engineering design changes, meaning that the store

stock was no longer current for the manufacture and had been replaced by newer

designs. However some managers argued that components procured with specifications

pertaining to an earlier vehicle model could not be allowed to go to waste. Furthermore,

managers in the material planning department sometimes confused similar components,

though they were very different in actual practice (for example, when being used in

different models of sub-assemblies or engines). Such confusion arose because at the

beginning of the material entry process the material planning department had not

deleted the component whose design was obsolete, resulting in both kinds of component making their way into the stores. Reconciling components that were not required for the newer model and avoiding the possibility of mix up with materials required for the different models was a challenge, especially when there was an abrupt change of specification.

Second, a related problem was what was termed 'dead inventory' at CompCo, and this was mentioned by several managers, including Mr. Ar and Mr. AB. This term described those parts not moving for more than a month, or exotic parts of components lying idle for even longer (such as those used only occasionally for highly specific and rarely built marine engine models). In such cases 'exception reports' had to be prepared and assessments made, both by executives from purchase, material planning and production and by managers in the stores where the material was lying dormant. Obsolete items were to be removed to create space (at EWS there was a 'space crunch' for storing inventory in certain areas).

A third source of errors arose in the specification and categorisation of less urgent or generic parts. In this case there could be various component numbers on the system for one component, for generic items having similar functions but used on adjacent lines. This resulted in near identical parts such as nuts and bolts, that could be used as second best substitutes in the production process, finding their way to different lines because of system errors, so that line manager had a difficult time reconciling these items. As a result there were also problems with WIP mismatch with regard to subassembly counts of numerous smaller machined items that were bound for the next stage, which made tracing these smaller machined items a nightmare.

A fourth source of problems arose from mistakes made in data entry. Middle managers in material planning and stores could make errors, both in data entry and in material issue at various stages of the flow of inventory. Meanwhile the lowest level

middle managers, who managed 'on their feet' alongside the actual production process, could make a mistake in updating the details of inventory used on their line. In all these cases the inventory management system was not accurately updated.

Furthermore Mr. RGPN the manager of engine stores [13 January 2009] told me that an online mismatch (caused in this case by Material planning managers) precipitated a chain reaction which carried the wrong estimate on to the stores and sometimes it was impossible to trace the correct part. When stores personnel made a wrong entry of the part number based on what the system told it, then the production planning department also made its forecast on this mistaken basis, triggering an escalation of erroneous forecasts and hence causing excess inventory. Thus human data entry failures, often resulting from overlapping part specifications, ramified and cumulated through the stock control process, as earlier ones contributed to the later ones leading to erroneous displays of excess or scarce inventory in the system. However, line managers in production control were very resistant to going through the laborious process of going to the systems department and manually updating each and every part number. Managers such as Mr. AK had to be encouraged to do so, often by Mr. AB who would also turn to Mercury for support if he failed to convey what he wanted to them to do.

Finally, software errors magnified such entry and system errors and themselves led to the erroneous display of components. Middle managers such as Mr. AK and Mr. SMU recognised that the IT systems department argued that it was not to blame for the glitches in the software and the counting errors that led to complications for middle managers. Some people in systems were very touchy on matters of WIP and flaws in the inventory management software. It needed visits by Mr. AB, and on some occasions Mr. N, to tell the systems head about mismatches and the need to rectify software. However, the systems head would turn the tables on the litigants and

cite detailed programme routines and software usage instructions, blaming problems on the carelessness of the users.

Thus together system entry errors and software bugs in the online CompCo Inventory Management system created a lot of problems for line managers requiring components for production. For example Mr. AR emphasised that laxity and delay in data entry by stores personnel had disastrous outcomes for the interconnected inventory supply chain and for tracing the journey of the component through production. If the production line managers accepted the material from the stores and Mr. Ar was emphatic that they too had been casual about it they then had to have made sure that its specification, labelling and eventual utility tallied with the model and planned production mix of engines or medium duty vehicles for that day. In particular he argued that it was no use blaming sub-assembly quality control middle managers whose role was testing manufacturing components and accusing them of delays in certification, if stores were issuing and production were then using the wrong components. As the middle manager overseeing quality of sub-assemblies, he was adamant that all departments needed to do more to ensure coordination and inform their colleagues of any problems, rather than, figuratively speaking, shoving problems under the carpet, which occurred especially when those problems were of minor nature. On this basis he reiterated the importance of clearly demarcated and labelled inventory, located where it belonged, in clearly designated areas, so as to facilitate easy sorting and identification at every stage of the component's journey and its integration into the sub-assembly. The main problem and indeed the source of a lot of confusion could, he argued, be avoided if data entry was carried out in a timely fashion, rather than being deferred (which meant that inaccuracies could creep in or necessary actions be forgotten).

Overall, then, the human and IT processes of inventory management in EWS were challenged by an array of factors, sometimes pertaining to the conditions facing the company, but also relating to the competing priorities of middle managers. Increased frequency of model changes or abrupt halts in production because of unsold products complicated the measurement of inventory and led to WIP mismatch in EWS.

Alongside this, however, there were competing priorities among middle managers, such as release of time for other tasks versus spending time on physical inventory or on inputting data, an activity that requires concentration and care. Middle managers required time to supervise production and spending time on such matters as identifying or designing more generic components could reduce their time on the line and lead to them being blamed for lapses by operators. All this also suggests that the virtual inventory management system was often not the valuable aid to middle management that it was supposed to be, especially in delivering more in terms of a reduction of positive WIP.

Furthermore, the CompCo inventory management system was likely to come under enormous pressure where there were rapid model and component changes and when the amount of physical stock was driven down. Thus the mismatch between positive and negative WIP had important social consequences for the company and for middle managers, on which I will comment further below.

6.3 The Case Study of Inventory and Organisational Change 2: GEMBA Initiatives to Reform Inventory Management in EWS

In order to overcome some of the recurring problems with WIP, CompCo's corporate management hoped that GEMBA would help to streamline inventory management. The main area addressed by the following discussion is to understand

the manner in which streamlining inventory involves those managers (such as Mr. AB and Mr. N) who are the change agents charged with responsibility for pushing GEMBA and how this reform is planned to impinge on other middle managers who will be required to change their work processes. This section will also address the various pressures and/or incentives to be used to streamline inventory management and, hence, monitor the activities of middle managers in CompCo and EWS.

Chapter 5 has already introduced the hierarchy of GULS and GILS and the mechanism of trackers, and these were also important in addressing inventory. The human resource measures mentioned in that chapter, such as trouble shooting group activities leading to empower events and festivals, were also relevant to inventory management in CompCo. These events were held to recognise the contribution of groups of operators with the best solutions. Examples included making a collective effort to standardise parts, tools and/or consumables, and avoidance of ordering new parts for another model by using a common pool of parts already at hand.

Early indications of the plans for inventory reduction in the GEMBA initiatives were identified by Mr. AB on a bus ride I took with him from the plant to Bangalore, after our first meeting in early November 2008. Mr. AB, who was Mr. N's deputy, was around two decades younger in age than other senior and middle managers in EWS and, as part of a new generational cohort of well qualified managers, he was hired with a view to facilitating the GEMBA objectives. Our conversations became more detailed in due course as I was able to link them with my observations about the company during our many meetings both in the plant and during further bus rides. During such rides he would also switch on his laptop and follow up e-mails and edit the GEMBA trackers relating to inventory. These meetings provided an opportunity for me as a field worker to understand the relevance of GEMBA to inventory and also his

trepidations regarding the implementation of all the initiatives. Whenever I got an opportunity to observe his interactions with other managers I could also sense his obsequiousness in relation to top management and his civility when he tried to persuade or get his point across to Section Heads and senior managers.

In our meetings he explained that the broad aims of GEMBA with regard to inventory management in all of the automotive plants of CompCo was to "enable everyone to speak from the same page in the language of transparency with the predictability of inventory" [Mr. AB, 20 October 2011]. This would involve the implementation of GEMBA measures that were both technical and human resource based, as envisaged by the Executive Director of manufacturing, and the Executive Director of strategic sourcing, operating out of CompCo's corporate headquarters in Nellore.

In the rest of this section I will outline the organisational initiatives pursued by Mr. AB, and in the next section I will focus more directly on his efforts to motivate and control other managers to pursue these plans. The first initiative involved target setting and monitoring, and made use of both GEMBA trackers and a GEMBA-based Inventory Reduction and Analysis report (GIRAP). The second major initiative involved developing a 'Road-Map' for future Inventory Management, and this identified a series of both long-term and short-term measures to bring this to fruition.

6.3.1 Target setting and monitoring sought through GEMBA changes

With respect to inventory management Mr. AB and Mr. N pursued two analytical techniques, termed the GEMBA tracker and GIRAPS. The latter was specific to inventory, and was intended to make the inventory process visual,

analytical and transparent in line with lean manufacturing principles. It was also designed to create a mechanism to appraise and track the successes and failures of GEMBA units and their GULS. I will now evaluate what is involved in these two techniques, especially in relation to target setting and monitoring, and the difficulties encountered by middle managers in implementing them in an active production setup.

Training classes were held by Mr. AB to explain what he envisaged to be represented in the trackers, which he believed was congruent with the visual benchmarking measures spelt out in lean manufacturing and GEMBA. The tracker was meant not just to monitor inventory management, but to institute a set of defined goals in managing inventory and also to ascertain whether these goals were met or not. Each column of the tracker document addressed a number of parameters, such as cost per unit of inventory and average holding days per component in each shop. The tracker graphs needed to meet defined expectations at the inter shop or departmental level, the inter-plant level and ultimately at the intra-plant level. These trackers were similar to an array of criterion readings in the cockpit of an aircraft, showing various indicators that reflected organisational health. For instance, for inventory it showed indicators such as inventory holding in days in a particular plant, the cost of holding them, time taken for movement of inventory from gate to the plant and so on. This helped in drawing comparisons with other plants' performances. Depending upon the variables it intended to capture, a pie chart tracker would also provide a brief summary of specific shop level goals attained, exhibiting them in green in the pie chart, while red areas indicated failure to meet the target. These trackers, therefore, were one of the means of assessment in giving rewards for reaching the benchmarks.

Discussion of the results of the displayed tracker also illuminated points of disagreement and difference between the middle managers and the higher ups in the plant. The latter often felt that senior management added to their already

overburdened workload and that this reflected an obsessive dalliance with statistical parameters, instead of adopting a more hands-on approach to understanding the difficulties they faced. Thus the tracker was an important tool through which the company sought to control and monitor the performance of line managers, such as Mr. AK, Mr. SMU and Mr. ISC.

The GIRAP (GEMBA based Inventory Reduction and Analysis Report)[Refer Appendix 12 for an example of the GIRAP], was designed to provide a visual representation of how far a particular GEMBA based shop-floor group of operators and managers was able to reduce inventory. It was an 'Excel Spreadsheet based' representation of an array of production-related parameters, elaborating upon the following fields: first the GIRAP described the part number and it's description, it's value in rupees and the quantity. It also recorded the ideas advanced by the GEMBA team-members in the shop to reduce or clear the parts held, in terms of each of the particulars described, and the impact of the held inventory on the number of inventory holding days in terms of cost, space, and labour. Thus the GIRAP would provide a detailed overview of part families and particular items that needed to be reduced in terms of quantity held, and the GUL would have to report to regular meetings (discussed below) to ascertain the progress made in relation to a target date of completion.

The GIRAP was an important means to ensure that all the statistical figures could 'speak for themselves' and that the total quantity of inventory could be broken down to GEMBA level inventory in order to facilitate detailed analysis. It was mandatory for the GIRAP to be made by every GUL or relevant executive in the production area and Mr. AB argued that serious intent in doing the GIRAPS properly would best be realised by linking their appraisal to key result areas [Mr. AB, 21 November 2008]. In practice this tight interlinking of career appraisal to their

progress in GEMBA targets began to be implemented much later, after my exit from the field, and apparently in a half-hearted manner. However, while I was there I was assigned the task by Mr. AB to monitor compliance of GIRAPS by following up with each GUL whether he was completing the graphs properly.

Managers prepared GIRAPS reports that analysed the inventory data by going to the CompCo inventory management system, downloading values for each component specification, ascribing a reason for its WIP mismatch or non-exhaustion from that GEMBA work area, and explaining why the targeted date of completion (TDC) was not reached. Completing the GIRAP was an activity that took at least two hours and most GULS – who were also supervisors in charge of the line and were entrusted with the responsibility of overseeing production efficiently so that there was no disturbance that would affect other operators and line managers further down the line – felt that sitting in front of the shop floor computer could only be done after the production has been carried out for the day.

In this context, however, middle managers were also fearful of rebuke when they were not able to meet the deadline set by the TDC, and in due course tended to be evasive and vague in their responses in the TDC columns. As a result, Mr. AB told me to chase the middle-manager GULS in a relentless manner to remind them that they had to be clear and transparent in their GIRAPS. It was, after all, his baby and he continued to work hard to make it more effective and ensure its continued relevance as the coordinator of the inventory management project for CompCo. As a result he became synonymous with the GIRAP and middle managers saw him as 'GIRAP AB', whispering among themselves, 'Here comes GIRAP AB'.

Thus the GIRAP brought about key areas of fissure and discontentment amongst middle management which I will elaborate in my discussion of the reactions of these managers to these policies in the next section.

6.3.2 The roadmap

Building on these techniques, in November 2008 Mr. AB developed a broader conceptual plan of action, which he termed a road map for inventory management. This was intended to provide an objective framework on a yearly basis with well-defined rules that were codified, written and made explicitly clear for everyone, with everything visually represented to show the road ahead. This roadmap spelled out, in detail, expected milestones for MIFA, supplier integration, self-certification and other aspects of lean management. Underscoring the roadmap was frequent recourse to power-point presentations and an array of key performance indicators (KPIs). As proposed by the GEMBA team meetings, the targets in the roadmap were intended to have an impact upon the executive's career prospects.

As a result, the word roadmap became important in the vocabulary of the GEMBA team and much time and effort was spent by Mr. AB in front of the computer to prepare it, before it was taken to review at corporate headquarters in Nellore. This road map for inventory that he prepared in 2008-09 talked of training for both executives and associates, underlining an emphasis on cultural change. Among the important aspirations of the road map were to develop a culture of quality and this involved the lean manufacturing innovation of allowing operators (now called associates) to take the initiative to pull the 'Andon cord' [Appendix 14] which would stop the line, though no associate really does this because their Production Heads would come scampering after them, especially when the demand is heavy. Similarly Mr. AB's roadmap urged stores to move to a lean supply management system to improve productivity, and this was intended to bring about a displacement of the 'produce at any cost' mind-set of Production Heads and middle managers.

The success of this road map was, however, contingent upon sustaining accurate inventory forecasting and the effective co-ordination of inventory requirement estimates for about ninety-nine per cent of components, both by material planning and production control, and by the line managers handing out material for use in the line. In practice, however, such aspirations in the roadmap became undermined in a number of ways which will be discussed in the following sections of this chapter. However, it is appropriate to comment briefly at this stage on both the longer-term measures that were envisaged in the Roadmap documents, and the shorter-term measures which accompanied it. These features drew upon GEMBA measures that were already on the table, having been excogitated by Mr. N, Mr. AB and the Materials planning head Mr. TMS.

First, it was planned to produce an accurate estimation of base line inventory: an estimate of whatever inventory is there in the plant at a given moment providing the present health of the plant's inventory status. This means the removal of anomalies in the software and the correct reflection of physical inventory in the inventory management system of the plant for everyone to see at a glance. An accurate estimation of inventory also means strengthening the management of the information systems and invoking standard operating procedures for inventory management in the CompCo inventory management software.

This overall objective in the roadmap was contingent upon strengthening the systems department in the company and on a concentrated and conscientious effort from middle managers across the entire spectrum of material flow in entering WIP data to ascertain the emergence of negative WIP. This also meant that the middle manager in charge of the line should report any problems to his Section Head and also co-ordinate with the production planning department middle manager in charge of that line, to go to the systems room, inspect the IT information and make necessary

corrections with assistance from the IT systems team. If a problem was to persist, the DGM [Machining or Assembly depending on the shop in question] Mr. AB and Mr. N would have to get involved and work with the head of IT in EWS to resolve it. It was claimed that the aim of the roadmap was to eliminate management bureaucracy and the resulting procrastination about problems until they snowballed because of the delay. Instead problems were to be solved at their source by the middle manager in accordance with lean manufacturing principles.

Second, the use of MIFA (Material Information Flow Analysis) to implement improvement projects became another important buzzword for Mr. AB, and perhaps a way of imposing his individuality by trying to give it more priority, though Mr. N also shared this commitment. Again, however, from the perspective of the inventory roadmap, the use of MIFA was contingent upon an orderly flow of inventory, the correct organisation of materials and sub-assembly, and a correct tally of physical and online stock.

In addition to the roadmap, Mr. AB also championed short-term inventory initiatives that were intended to bring rapid improvements between November 2008 and February 2009. The first of these required the individual departments of Material Planning, Production and Purchase to co-ordinate and make a close study of supplier relationships to the plant and to review the inbound supply chain management process thoroughly. In this regard, Mr. AB emphasised the role of team-work, participation, and immediate and frank discussion of problems at the point of their emergence, as well as skill mapping of each executive to enable development of a personal development plan, mentoring and appraisal.

Secondly, at a plant level, senior production executives were required to meet with production planning and material planning and freeze the base line inventory. They would then sign the cut-off point as the maximum limit designated for holding

physical inventory in a particular manufacturing area, and this would regulate how much material that Material planning could procure on the basis of these norms. This laid the basis for MIFA initiatives and for Section Heads and GMs to set norms or inventory targets for each GEMBA, which Mr. AB regarded as important milestones.

Finally, regular cyclic counting was required which eliminated the need of IOH (Inventory on Hand), described further below. The GEMBA unit leader had to capture the physical level of components and sub-assemblies constituting WIP. The stores GUL also had to capture store-level inventory physically and make a separate record of what was called 'decision inventory', typically A value items where the plant kept reserve stock even if there was no immediate need. Furthermore, stores level inventory was to be tallied with plant level inventory online, and the plant level inventory should be linked in real time with the CompCo inventory system.

However the previous section has already discussed how and why WIP errors ricocheted throughout the CompCo inventory management system and made the work of middle managers very difficult. The next section therefore seeks to find answers to the question 'What happened to this GEMBA discourse about inventory?'. Were the above goals successful in streamlining and overcoming bottlenecks in inventory management? My rather negative answer lies in the different priorities of managers, who could not be forced to follow the GEMBA line, as well as the extent to which the recession exacerbated these different interests (together with the limits to CompCo's control over suppliers and contracted labour). Thus the next section identifies how GEMBA measures affected different departments and unpacks the tensions between different constituencies of managers, and more specifically middle managers, as the GEMBA management of inventory put different individuals and organisational structures at loggerheads.

6.4 The Case Study of Inventory and Organisational Change

3: The Responses of Middle and Lower Managers

In this section I will discuss the collision between the discourses of GEMBA and the discourse of targets because they employed a different set of rules and vocabularies even as they had similar ends of ensuring profitability and of keeping the line functioning smoothly. In particular they saw the underlying bottlenecks to inventory management rather differently, whether their source was external to EWS, organisational or based in the ways in which individual managers viewed their workplace. I will begin the discussion by trying to understand an important field setting for me as a field worker, where competing discourses and claims to be the dominant truth which others must follow, played themselves out; namely, the inventory meetings.

6.4.1 The Inventory meetings as an important site of discussion and resistance to GEMBA inventory initiatives

The inventory meetings provide different perspectives and divergences of opinion between the senior managers of EWS driving GEMBA on one hand and on the other the senior, middle and line managers who (in conjunction with workers) were responsible for implementing the GEMBA measures. The interplay between the various actors over the management of inventory brought to the forefront important tensions between corporate management's vision of what lean manufacturing could achieve and the reality of life in a plant dominated by the need to achieve production and income targets in a testing economic climate, thrown up by the economic recession. The following discussion of the weekly inventory meetings in EWS seeks to illustrate how senior management failed to give due consideration to some

significant impediments to implementation that arose from real-world operational constraints, posed both by machinery limitations and supply chain constraints. It will also demonstrate how corporate managers tasked with implementing GEMBA, such as Mr. N, were unable to get the wholehearted cooperation of middle managers and line managers, who were charged with implementing GEMBA on the factory floor, because of the competing priorities that they faced in their everyday working lives.

The weekly inventory review meetings were usually held on Fridays between 1500 hours and 1700 hours, either in the GEMBA room in EWS or in Mr. AB's office located on the first floor of Shop Six. Attendees would include line managers from the MDV area, such as Mr. AK, Mr. ISC and Mr. SMU. These were three individuals whom I came to know well during the course of my fieldwork in production planning and control, and included two of the three managers (Mr. AK, the late Mr. SMU and Mr. ISC) who were required by Mr. AB, to account for the progress they had made, first in getting to grips with the failures to attain the GIRAP targets identified at the previous week's meeting, and second regarding the extent to which these identified faults had been analysed and corrected. Attending inventory meetings was an important part of the role of middle managers in production and planning and the main task of Mr. AB and Mr. N was to ensure that those middle managers met the inventory reduction norms and key performance indicators identified in the previous meetings using the GIRAPS.

Individuals such as Mr. N and Mr. AB, who had invested an enormous amount of energy in GEMBA, saw their future careers as inextricably linked to ensuring the realisation of corporate management's new vision for EWS and CompCo. Typically an inventory review meeting would begin with each of the statistical pie chart trackers being displayed on the screen and the display of each tracker would produce an animated discussion between the superiors of the middle managers in the Production

Control Department, such as the Head of Purchasing. The discussion would then move on to assess the progress or lack of progress in inventory reduction of specific components pertinent to an assembly area that were illuminated by the GIRAPS. Line managers had to explain the success they had in reducing inventory through standardisation suggestions and the modification of machinery to eliminate components wherever possible. They would have to account for the work done to track inventory pro-actively, categorise components and eliminate WIP mismatches in their shops. All these had to be recorded in a GIRAP, a sample of which is provided in the Appendix 4. Mr. AB insisted on getting complete clarity from the GULS present and would 'drill down' to the fine details of what had or had not been done. He wanted to know how components had been categorised right from the moment of their specification through to the preparation of the baseline inventory (the significance of which was noted in the discussion of the roadmap above). Norms would be set for the usage levels of components, for their conversion ready for the next stage of assembly or machining and right through to their eventual exhaustion. Reduction of inventory was a key theme and all the norms set would be given target dates for their attainment. The full details were recorded in the trackers and the GIRAPS.

Mr. AB also focused on devising aggressive strategies to target reductions in the number of component and sub-assembly families through standardisation and the introduction of a proper value-stream based system of material flow. This he believed could only be done by establishing a culture of self-initiative and personal responsibility in EWS and CompCo, instilling a willingness proactively to reduce inventory and to believe in lean working practices to reduce wastage and reduce the costs. If attendees in the inventory meetings had failed to achieve the norms or targets laid down in the last meeting and the GIRAPS looked vague or lazily done, line

managers had a lot of explaining to do. Mr. AB would get irritated even though he expressed his irritation in a very diplomatic manner.

Mr. AB also worked hard towards reducing opacity regarding the flow of materials and their eventual exhaustion, realising that opacity often concealed a lack of progress. He travelled through the plant armed with various PowerPoint presentations and an array of trend diagrams and regression charts which, along with the pie charts and the GIRAPS, were intended to capture and monitor inventory. He saw no reason why the company should not achieve significant savings if every line manager and operator was proactive in kaizening, eliminating wasteful production processes and streamlining the inventory management process, including the software based inventory management system which (as the previous section illustrated) was seen by many as the main cause of WIP mismatches.

The inventory related GEMBA duties that managers performed included tallying WIP, ensuring that the correct specification of materials was sent to the stores and other specific activities pertaining to the MDV areas, such as tallying component usage and stock records and ensuring a proper and adequate supply of components. Periodically Mr. ISC and Mr. AK would be reprimanded by their Section Head, Mr. N, and by Mr. AB, for failing to follow up the inventory management and WIP mismatch reduction objectives decided upon in the last inventory meeting. Change Managers such as Mr. N and Mr. AB wanted to ensure that managers were convinced by, and committed to, the newer GEMBA discourse, which had to function in an older plant against the backdrop of a managerial style and organisational ethos that were more pragmatic and reflected the practical operational impediments and constraints that EWS faced in coping with some very immediate supply chain and machinery issues. This pragmatic style of management entailed recognising the existing limitations of machinery and human resources in EWS. It used a mixture of

managerial authority and utilised the long-lasting rapport that line managers and Section Heads had with senior workers to get them to do more work than necessary, such as overtime and working to meet sudden increases in the day's targets.

I observed that managers who had spent much of their career and their working lives in EWS were sceptical of corporate management's new troubleshooting and innovation discourse as a means of reforming the way EWS managed inventory. Corporate management wanted to base management activity upon precepts of lean manufacturing which promised not only to make the production process more efficient but also concurrently to operationalise a new vocabulary of Kazenning embraced and spoken by line managers and workers. The perspective on change management of those section managers and line managers I observed in EWS, as well as that of the plant GM, Mr. SDN, reminded me of the observation regarding older companies by Ackers and Black [1992: 193] who said that:

> "Older companies are richer in cultural constraints that are embedded in every level of the organization ... Like ocean liners, they cannot be turned around quickly, and except in a situation of extraordinary crisis (and not always then some go down like the Titanic), they usually prefer to 'manage change' by developing tried and tested strategies and relationships 'what works now' rather than rethinking their whole approach in the white heat of abstract capitalist logic."

Initiatives to streamline and improve inventory management in EWS were predicated on the assumptions that proactive participation and the empowerment of employees could be achieved through participation schemes, pro-active troubleshooting and self-driven initiatives, and that this would result in cutting down on all forms of waste that lean manufacturing identified as *muda*.

However, the organisational structure of EWS was grounded upon a hierarchy and a chain of command which resembled a matrix form of organisational structure that writers on organisation, such as Mintzberg [2008: 34], have characterised as the 'Machine Organisation'. Any measure of delayering of decision-making and active participation had to be introduced within the existing organisational structure, for the immediate and conceivable future at least. Running through middle managers' perceptions and responses to GEMBA were two tensions that existed at two levels. The first level of tension was at the organisational level of EWS, which involved the implementation of newer processes of inventory management that managers such as Mr. N believed represented the more efficient, flatter production regimes characterised by lean manufacturing in the context of the older hierarchy.

The second level of tension was between corporate management's vocabulary and language games of teamwork and participation, and the existing organisational linguistic community and meanings understood by managers as a part of a shared set of evaluations about other managers which enabled them to adjust their behaviour. This existing language community prized obeisance and prioritised the attainment of immediate, short-term targets. These managers lived for the moment and their success or failure was measured by the immediacy of their attainment and the related evaluation of their superiors, just as among Jackall's firm's managers:

> Managers think in the short run because they are evaluated by their superiors and peers in their short term results. Those who are not seen to be producing requisite short term gains come to be thought as embarrassing liabilities. Of course past work gets downgraded in this process. [Jackall, 1988: 84]

Line managers from the manufacturing and assembly areas – who might also be GEMBA Unit leaders or GULS, were often perceived by departmental heads – for example the Head of Material Planning, as not doing enough to achieve the various inventory targets identified in the roadmap or to eliminate blockages in WIP. As mentioned earlier, not meeting these targets and periodic failures to overcome the reduction of inventory of particular components in the GIRAP caused the plant to produce poor results in the inventory reduction initiative, so EWS lagged behind other plants in the group. Thus, in the meetings held at corporate headquarters in Nellore, which had been called by the corporate executive director for manufacturing and the COO Mr. VDS, EWS looked like the poor relation of the group. This in turn meant that with adverse statistical indicators, it was untenable for the GM, Mr. N, Mr. AB and Head of Material Planning to defend EWS.

Certainly, the attempts of Mr. AB and the subordinate GEMBA team managers who assisted him, to keep track of the status of inventory for CompCo as a whole, and to force EWS middle managers to concentrate on inventory, were undermined by more urgent priorities thrust upon lower-level executives by their Section Heads, in particular the demand to meet production targets. The underlying reason for the conflict between departmental priorities and the inventory meetings was because of the more immediate compulsions of Section Heads that were grounded in a framework of ensuring that the assembly or machining areas they supervised met the production targets set for the day, rather than seeing the broader organisational perspective of following systematic and detailed lean steps to cut down inventory. Managing as seen by the Section Heads was an apparently never ending sea of contingencies and they could not see that attaining both their immediate priorities and the GEMBA norms were equally important. In their view a failure to achieve these immediate and pressing production number targets would get their Section Heads into

trouble and would rebound on them because trucks and engines would not be produced as they needed to be to keep the plant running and exhaust the sub-assemblies and inventory.

The argument of the Section Heads, as put to the DGM (Machining and Tooling) and the GM, was that if their middle managers were doing GIRAPs or taking time out of the line to discuss lean kaizening this meant that they did not have time to ensure that daily production targets were met, but such arguments were considered farcical by senior management. Hence there were two competing discourses, and the language of attaining targets and protecting positions was dominant, and through that an assertion of the primacy of the production lines over what the Section Heads of MDV assembly considered a tangential activity, namely GEMBA.

In the face of such resistance a closer synchronisation of GEMBA, by systematically tracking and accounting for each anomaly, was sought through the GIRAP about which Mr. AB was so enthusiastic. Day-to-day inventory activities in, for instance, the production planning and control department were, however, very much controlled by the priorities decided by the Section Head, even though they sometimes appeared to be interrupted by GEMBA. This meant that the long-term developmental and integrative discourse of GEMBA sought by Mr. AB had to pass through and be made palatable to these managers and accommodate their perspective on how GEMBA and inventory should be managed.

Attending the inventory meetings provided me with an opportunity to observe how arguments and counter-arguments on the GEMBA inventory initiatives were exchanged in the day to day activities of managers, how they stated their positions and how they defended their activities. That line managers regarded filling in the GIRAP as an additional and barely tolerable burden thrust upon them, and that many

did it only with the greatest reluctance, was reiterated in the immediate context of the inventory meetings. Section Heads wanted to shower their indignation upon line managers and appear highly critical, only to show that they were attentive and diligent in their own departmental roles. When gently reminded by Mr. AB of what they had to do, they would concede ground only after much argument and only after being advised by Mr. AB or someone equal to themselves in rank.

The meetings also gave a chance for purchase managers and material planning managers to show that they were in total command and had a broad overview, but at the same time a detailed and almost microscopic vision of all activities and issues relevant to inventory in the manufacturing areas they monitored. In inventory meetings the Section Heads tried to counter the accusations levelled at them that positive WIP and, hence, inventory was accumulating, by attempting to disown any responsibility and instead they would attempt to direct the blame towards middle managers such as Mr. AK or Mr. SMU, who they felt were negligent in entering data and ensuring the effective monitoring of materials issue and usage. The above point also concealed what was in reality a subtle suggestion by the Section Heads that Mr. AB should first get his own house in order by rectifying known problems in inventory, rather than merely speaking the language of lean supply management and intruding into their domains.

Meanwhile the Section Heads and the Head of Material Planning would be animated and exceptionally harsh in their criticism of middle managers, although behaving obsequiously to impress their seniors and the GEMBA Head Mr. N whenever he was present, giving detailed accounts based on their idea of what they thought was the right way to manage inventory. Mr. N would come to the meetings intermittently and ask a few very significant questions but often meetings would lose their focus, as they became opportunities to praise important individuals such as

Mr. N or the COO or degenerated into vehicles for individuals such as Mr. N to display the full force of their authority.

Different middle managers across the hierarchy of EWS had developed different coping mechanisms against senior management's criticisms of their work during the inventory meetings. In these meetings, some middle managers such as Mr. SMU could still manage to hold their own by deploying *defensive strategies* [cf. Argyris, 2007: 416] to help protect themselves from blame, and they occasionally succeeded in subverting the attacks against them. Being busily engaged in contingency management, rather than spending time implementing GEMBA mandated actions, their key priorities were making sure that materials reached the Medium Duty Vehicle (MDV) assembly line and ensuring that operators worked properly to meet the production targets for medium duty commercial vehicles. Failure to achieve these targets would have had a cascading effect on EWS's manufacturing process and this contingency management implied doing whatever was necessary to keep the line moving, even if it meant disregarding requirements for paperwork and bypassing prescribed procedures.

The line managers responsible for reconciling inventory had their own priorities, namely completing the tasks set by their departmental heads and supervising workers, and they tried hard to defend their inability to measure up to the periodic targets set by Mr. AB and the GEMBA measures. They wanted to defend themselves against the blame thrust upon them in these inventory meetings and in particular accusations that they had not absorbed the GEMBA message that they should proactively troubleshoot accumulating inventory. Line managers were meant to offer suggestions to reduce inventory by eliminating components through modifications in the manufacturing process, or aggressively tackle WIP errors by co-ordinating with the systems department of EWS. Individuals such as Mr. AK were

consistently accused of failing to resolve issues through robust use of all the means identified in Mr. AB's roadmap, and thus failing to produce innovative solutions. Section Heads were accused of failing to monitor regularly whether the GULS or middle managers were working with their operators as teams, to ensure that regular cyclic counting was going on instead of waiting for the cumbersome and tedious IOH option.

The complex patterns of blame and excuses that resulted can be illustrated by an example. The GEMBA activities organised by the line managers in the MDV area (Mr. AK, the late Mr. SMU and Mr. ISC) fell short of targets in an area where they needed to pay particular attention to the details of the various parts, their features, their item numbers, their functions and their specifications, all of which consumed significant amounts of their time. By obliquely blaming the Section Head (Mercury) for not allowing them to prepare the GIRAPS or adopt a planned lean manufacturing style of inventory management, everyone present in the meeting attempted to put him at a disadvantage, then see how Mr. SMU, the line manager, would defend himself. In this context Mr. SMU knew that Mr. AB might urge the Section Head politely, whilst Mr. N would come down heavily on the lapses and failures to meet the GIRAPs targets, but the person who had the final authority to rebuke the Section Head was the DGM of his functional domain such as, for Mercury it would be the Deputy Head of Production Control or the DGM [Production Control].

This illustrated another important aspect of the jockeying for position when GIRAPS were incomplete. Section Heads sometimes argued that they were merely awaiting transhipments from the adjacent GEMBA or some (such as Mercury) would quickly disown their own middle managers, their subordinates, for not doing enough to reduce inventory in their own GEMBAs, perhaps because they had failed to get right certain organisational pre-requisites, such as ensuring shop floor order and

operator discipline. Other line managers such as Mr. ISC were not so eloquent and did not seem to have the presence of mind in the meetings to turn the argument around, but instead would have to listen to the dressing down of his Section Head (again Mercury) by Mr. AB and Mr. N. The graduate engineering trainee in Mr. ABK's office who at that point of time was helping Mr.AK in cataloguing components, specifications and their quantity both online and physical, summed up the plight of these managers: "They move from one meeting to another, scribbling in their notepads and often forgetting the crux of what was discussed in the preceding meeting." [Mr. ABK, January 2009, Works Office].

6.4.2 Change manager efforts to implement policies within and beyond the meetings

In this section I will review the attempts of change agents such as Mr. AB, faced with the reluctance of middle managers, to get their co-operation in the inventory meetings, and then address the differences in managerial styles between change agents tasked with implementing GEMBA based inventory measures and the responses of middle managers.

On one hand the change agents sought to gain co-operation by seeking higher commitment through training and instituting a new discourse that promised rewards for active participation and self-initiative. On the other hand there was a willingness to punish middle managers who would often bear the brunt of different disciplining mechanisms designed to subjugate them to the GEMBA concept. As a usual first recourse the GEMBA team, headed by Mr. N and Mr. AB, would try subtly to mould managers into 'self-starters' and 'problem solvers', to enable the easier monitoring they desired. The other disciplining mechanism, which was more blunt, was the high

probability of a humiliating dressing down in full view of their colleagues, including their bosses and the Section Heads, who themselves bore enormous pressure to meet the immediate production targets or else face rebuke from their DGMs.

First, then, I observed that at the inventory meetings Mr. AB tried to act as a mentor and coach to middle managers such as Mr. AK, asking them to take greater responsibility for their GEMBA and to take the initiative in fine tuning the inventory system. He wanted middle managers to ensure that everyone was gripped by the need to minimise wastage and could visualise inventory management holistically through aggressive root-cause analyses of increased inventory in their work areas. But when Section Heads stepped into the ring with their blunt 'lion tamer' managerial style that immediately tore into the arguments proffered by middle managers, Mr. AB had no other option but to change his own mentoring and coaching style of encouraging line managers to meet inventory deliverables without placing much emphasis on sanctions. Over time this changed the atmosphere in the GEMBA unit-based weekly inventory review meetings that I had a chance to observe, as frequently criticism was levelled at particular, failing departments by Mr. AB and also by Mr. N whenever he was present.

The Departmental Heads of Production, both assembly and machining, and the DGMs, production control and DGM Material planning, started attending meetings sometime after they started, from January 2009 onwards, owing to pressure from Mr. AB. This reflected worry about growing inventory accumulation in CompCo and corporate management's concern about a rise in unproductive capital expenditure in the company. In many ways Mr. AB was junior to these new attendees but he had the mandate of implementing the GEMBA project and all its accompanying authority. But Mr. AB could only go so far in exercising his authority in the inventory meetings and had to bear in mind that the GM production and the Section Heads could also

make a valid case in prioritising the tasks he assigned, over and against GEMBA tasks such as tallying the WIP and proactive kaizening with regard to inventory.

When the senior middle managers, such as the Section Heads, would not heed his calls to implement and follow up on the GIRAPs with a greater degree of urgency, he would turn to Mr. N, who was in the senior management stratum and had the ears of the COO. This forced attendance brought the senior middle managers into functional opposition to the GEMBA team and particularly Mr. AB (who, as I noted was much younger, and unlike the other senior and middle managers in the plant was not an EWS career man). I learnt from my observations at the inventory meetings that he could barely understand the local language (Tamil) and in the eyes of the Section Heads he was a junior who, as a lateral entrant, had overtaken them in the organisational hierarchy. As such he was seen to belong to a newer generation of managers who were highly qualified and hired with a specific purpose in mind.

The Departmental heads were not only much older but had been a part of the CompCo system and culture for many years, and had weathered many a storm in the past. The Section Heads had their own ideas on efficiency and lean manufacturing which were often not as well informed as that of Mr. AB or Mr. N., but nevertheless sat there, effectively in opposition. Indeed in one of my meetings with him on 22 November 2008, Mr. AB expressed the view that these Section Heads routinely refused to admit that they were wrong and they were prepared to accept only piecemeal adoption of a few measures of lean manufacturing if they saw them as being helpful in realising their sectional production targets, rather than viewing the whole plant as a totality, and seeing their parts as being subsets of the whole process.

Though Mr. AB and Mr. N were both advocates of the GEMBA change programme, they had different approaches to orchestrating middle manager commitment and activity, rooted in their different power positions, career trajectories

and personalities. Mr. AB belonged to a newer generation of managers who could be designated as 'shooting stars' and was a staff-specialist who had made a lateral entry into the habitus of the careerist managers of CompCo. As mentioned earlier, he had invested an enormous amount of energy and time in GEMBA and preparing its graphical indicators. He tried his best to charm the Section Heads on the few occasions that they attended inventory meetings, but even then they would miss no opportunity to score points off the middle managers, ignoring his 'problem-solving approach' and exhortations to them to show 'team spirit'. After the proceedings of an often rambunctious meeting, Mr. AB would speak with a calming voice, playing the role of a mentor and coach, emphasise the need for troubleshooting and teamwork, and talk encouragingly to any GUL whose GEMBA's GIRAP was wrong or whose figures were not very encouraging.

But where he thought it necessary he would also accuse other GULS or line managers, such as Mr. AK (who compiled and ensured the implementation of a more logical and planned flow of inventory) of a lack of effort. To drive the point home he would use varied rhetoric, such as suggesting that the relevant managers were lazier than their children. In addition he would often rely on the material planning head Mr. TMS, for help in giving credence to his pleas that the attendees should address the parameters in the GIRAP in a particular GEMBA. On my bus rides and in subsequent meetings he expressed his inability to change the mind set of middle managers and Section Heads. When I suggested that he took them to examples of plants that represented the best of lean manufacturing, of which there were many notable exponents in India, he shrugged his shoulders and said that he and GEMBA could only take a horse to the water.

Mr. N, on the other hand, was very self-assured in his demeanour, worried much less about GEMBA's permeation across EWS and CompCo, and thought that

all that was required to produce a mind set change was the active rewarding of participants through the Empower and Passport schemes discussed in Chapter 5. The inventory meetings clearly brought home to me the point that the older generation of managers were more authoritarian and were resistant to being 'talked around' by a person who was much junior to them in age. But there were exceptions such as Mr. N who was around fifty-nine years of age and came from an older generation of managers whose careers had progressed within CompCo. He made every effort to adopt the empowerment vocabulary and constantly urged everyone to kaizen their way to success within and outside the inventory meetings and tried very hard to disguise his true emotions by playing the role of a team motivator or coach, using his temper only when everything else failed. Nevertheless Mr. N's arrival in these inventory meetings would galvanise the meeting and he was all pomp and circumstance, lecturing attendees on the importance of being lean by asking a question that would flummox everyone, eventually training his guns on the Section Head and the middle managers. Sometimes it took the combined pressure of Mr. AB and Mr. N to get the Section Heads to move more rapidly over inventory by getting their DGMs to push the Section Heads hard in that direction.

Mr. AB realised that there were limitations to his ability to get middle managers and Section Heads to implement his GIRAP and the Trackers and to take his roadmap and inventory targets seriously, and he would try to defend his inability to get across the GEMBA troubleshooting message. Bus rides with him illuminated for me the challenges he faced in implementing an efficient inventory management system, in particular his difficulty in aligning the world-views of the production DGMs, Section Heads, managers and more specifically middle managers (who in his view were the real cogs that ran EWS), more closely to the view he shared with CompCo's corporate management. His expression that he could only take the horse

to the water, summed up his frustrations. However Mr. AB got along with younger graduate trainees and certain middle managers such as Mr. TJN, who administered the rewards system and decided the norms for engineering processes in the Industrial Engineering department, and this may reflect generational affinities. I presumed that being part of the younger generation of managers, he and his counterparts were more comfortable with the apparent atmosphere of informality that characterised some of the companies in the IT industry that were located further down the road from EWS near Bangalore. This contrasted with the measured strategy and vocabulary of words he had to deploy whilst talking to the older EWS hands such as the Section Heads and the Head of Material Planning Mr. TMS, which were characterised by an underlying generation gap and distinctive career pathways.

Mr. N, on the other hand, would talk directly to these line managers and their Section Heads, and suggest that corporate management would not be pleased if they did not implement the Targeted Date of Completion System [TDC] or monitor the attainment of TDCs. Corporate management expected them to account for their successes and failures in their review meeting trips to corporate headquarters whenever they were called, and they wanted to be seen in a good light. Mr. N would also hint at proposed changes when appraising managers who were suspected of not having implemented GEMBA properly. Together with Mr. AB, Mr. N would meet the Head of Material Planning and the GM Production to ensure that they understood what needed to be done in relation to WIP. They would go to the Head of the Systems Department in EWS and conduct a detailed review of how the errors in the software could be resolved and, in Mr. N's words, implement the necessary 'course correction'. Mr. N epitomised flamboyance. He sensed the change in the wind from headquarters, with the dynamic Mr. VDS having a greater say in the company, and was eager to be in his good books. This was essential if, before hanging up his boots for good, he was

to be inducted into the Executive Board of the company, something which carried immense prestige and authority and which would be a fitting finale after all his years working in EWS.

Mr. N was well on his way to thinking how to 'engineer CompCo's tomorrows' in synchrony with the thoughts of Mr. VDS, the COO of CompCo to whom he was very attentive and with whom he made operose efforts to be friendly. He thought he shared Mr. VDS's vision for the future, and I was able to pick up fragments of this as I listened to his summary of where he wanted to see CompCo go in future. Broadly he envisaged a 'world class lean organisation', operating state of the art technology and devoid of many of the departments such as Stores and Material planning that were viewed as costly drags on efficiency. On the one hand he argued that a 'tipping point' had been reached, but on the other he would often rehearse the popular aphorism that 'Rome was not built in a day'.

Mr. N, having served in CompCo over many years, also had direct access to the GM, Mr. SDN, and could talk to him in a more regular and frank manner whenever he wanted, in contrast to Mr. AB who was junior to him in the organisational hierarchy. Though both Mr. AB and Mr. N adopted the coach and mentor style of managing up to a point, it was not unusual for Mr. N to lose his temper and reprimand Section Heads and their middle managers for not having the 'lean mind set' and for the costs the company was incurring owing to quality lapses and accumulating inventory. Whilst Mr. AB used tact and diplomacy, albeit laced with threats that middle managers' progress, promotion and bonuses would be impeded if their non-cooperation was made known during progress meetings at corporate headquarters, he could always rely on Mr. N whose intervention was more direct and brought immediate results because of his senior position in the management hierarchy. When AB felt that senior middle managers were not paying heed to his

calls to ask line managers to rectify the WIP errors, he would turn to Mr. N who would give the Section Heads a piece of his mind.

The hierarchical organisation in the plant probably prevented the Production Control Department line managers and Section Heads from voicing what they really felt regarding poor performance from other departments, such as material planning. In this context the GIRAP, although intended to serve as an organisational tool, became a self-fulfilling statistical operation and an end in itself, because middle managers were prepared to dress up the data or even be ambivalent about it, either to get noticed when desired or to avoid rebuke by Section Heads or Mr. AB and Mr. N. The above discussion indicates the different strategies employed by managers to protect and defend their positions They would challenge the mentor coach discourse of Mr. AB, either by playing victim, or by justifying their failings by saying they were too busy for GEMBA. They could also emphasise that the Section Heads would run the shop floor the way they knew because that mode of management worked, or they would offer alternative views of what was going wrong. In short they would say and do anything rather than wholeheartedly absorb Mr. AB's suggestions on GEMBA. On the basis of my observation in the inventory meetings, I feel that the meetings provided an opportunity more for individuals to project themselves favourably and assert their relevance and importance, rather than acting as a forum in which people would work coherently towards a plan of action based on the lean supply chain management advocated by Mr. AB. The efforts of Mr. AB and Mr. N had limited successes but were also mired by major limitations.

6.5 The Case Study of Inventory and Organisational Change 4: Explaining the Scope and Limitations of the GEMBA Inventory Innovations in EWS

Having discussed the inventory meetings, different management pathways and the responses of middle management I will now examine the limited successes and failures of GEMBA with regard to inventory and how these successes were undermined by failures in recording inventory and other delimiting factors that inhibited the effective implementation of the GEMBA initiatives with regard to inventory.

6.5.1 A limited measure of success in institutionalising a new vocabulary of lean manufacturing and tightening the leeway which line managers and operators had to manipulate the system

GEMBA did achieve a considerable degree of success in establishing, for the first time, an understanding of the importance of the lean manufacturing concept of the internal customer. There was an increased awareness about pro-actively tackling accumulation of inventory and streamlining the supply chain. Notwithstanding WIP errors, and owing to tighter monitoring of inventory, there was some degree of reduction and this was partly because the recession exposed the buffers which, in the lean manufacturing literature, give a false sense of normalcy.

The internal customer approach had its greatest success in some of the areas seen by plant management as being critical to the manufacturing process, such as the engine assembly area. The GM, Mr. SDN, explained that in an internal customer culture, the manufacturing department would be the internal customer of the stores and the servant

of each of his counterparts in the production process until the finished goods reached the external customer – the buyer of the truck – with everyone behaving with honesty and sensitivity to everyone else's needs. The main objective of the internal customer ethos is the tighter coupling of sequential production processes to enable a continuous flow of processes in conjunction with JIT; however, perpetuations of errors and record keeping mistakes in inventory meant that the internal customer concept was not successful uniformly throughout the plant. Indeed, it had a long way to go before it could be said to have permeated the organisation on the part of workers that they had an obligation to help make the job of the next operator on the line quicker and easier. That said, the internal customer approach had its greatest success in some of the areas seen by plant management as being critical to the manufacturing process, such as the engine assembly area.

6.5.2 Understanding the limitations of specific innovations

I will not broaden the discussion beyond the inventory meetings to discuss the scope and limitations of parts and the physical stock taking of inventories such as IOH. I will begin by explaining what is meant by IOH and standardisation. Although specific measures outlined in the roadmap and the GEMBA innovations intended to intervene to reform inventory management were envisaged by Mr. AB, Mr. N and corporate headquarters, the effectiveness of these interventions was affected by limitations that were both internal and external to the company. Drawing upon the preceding discussion on the errors caused by WIP mismatches and the inventory meetings, I will discuss three important bottlenecks that undermined GEMBA innovations.

An important causal factor, that emerged in our discussion and which seemed to me to be likely to undermine Mr. AB's baby, the GIRAP, and thereby render GEMBA impotent – was explained by Mr. Ar. He pointed out to me that when the purchase managers raised orders against which the suppliers delivered their products to the stores, they did so without checking their records to see whether the particulars were right and that material planning had properly tallied the WIP and specifications of the components. This often meant that surplus materials either spilled over into assembly areas where it was not meant to be or corrupted CompCo's inventory management system with erroneous data. This in turn meant that any GIRAP that was being discussed was open to question as potentially inaccurate or even incomplete because tallied and recorded components that were not needed had managed to find their way into the system when they should never have been in the work area in the first place.

The hand to mouth work routine, the manhunts launched for urgently required components and the chaotic manner in which components were arranged adjacent to the production site, violated the fundamental tenets of 5S and the core of GEMBA, which depended on organised and methodical inventory management. It was evident that GEMBA did not make much of an impact here and that the impact of the inventory innovations was at best piecemeal and uneven. I could not but empathise with the line manager Mr. AK who would have to call on operators to launch manhunts for the components and then find them bundled carelessly together in another corner of the plant. Components were often not put away in the right place and operators and their managers regularly had to search for them physically and bring them to the line. They would have to bring two-three lots at the same time to feed the MDV assembly line which made a mockery of GEMBA's methodical proclamations of regular completions of the cycle count, sorting and categorising base-line inventory and adhering to 5S principles on the line. There were also situations where rejected C

value materials got into the assembly process owing to poor sorting or overlapping of these items from adjacent lines. But the Section Heads like Mercury would listen to none of these reasons for failure and would turn the tables on Mr. AK and blame it on his lethargy. Thus, as mentioned earlier, the inventory meetings, especially when they were attended by Mr. N, would provide excellent opportunities for the breathing of fire on to Mr. AK.

This left the only way out, the final terminal option to resolve long-standing inventory mismatch problems. His procedure was keenly awaited by middle managers as it provided them with a temporary refuge from Mr. AB, inventory meetings and the tirades of managers such as Mercury and GEMBA, by enabling them to insulate and protect themselves because it was all consuming, requiring them to work quietly and continuously so as to ensure that they managed to complete the operation. The necessity of IOH underlined the perpetuation of system errors and attested to the lack of coordination between various departments in making sure that physical inventory was managed and its flow monitored.

Manufacturing and assembly processes ceased in the work area as these comprehensive, cyclic counts of physical inventory took place. This meant that some operators and line managers could get a break away from the assembly line and machining process while the counts were in progress. IOH was used mainly for A value items (C value items were often given step-motherly treatment if they had to pack up the IOH fast). The IOH ritual would usually be carried out over the weekends or when the plant was a little less busy. A manual inventory count was made, part-by-part, of each individual item present in the area. Jumbled up items sitting in the wrong areas were identified and traced back to where they should have been. The physical inventory was tallied. By weeding out components of different specifications sitting in other areas, identifying missing components and house-keeping the storage areas, this

time-consuming process would eventually allow physical WIP to be balanced so it equalled the system's negative WIP and therefore eliminate the source of the mismatch that lay in physical inventory or software bugs.

In my interaction with Production Control, middle managers such as Mr. AK and Mr. SMU, I found their approach to the process of matching online and physical stock to be highly selective. This could be attributed to two factors: first that they were sometimes exhausted and on other occasions they could not make sense of the entry of items in CompCo's inventory management database. Thus the need for IOH became inevitable in assembly areas of the plant such as the engine assembly Shop Three and engine dressing areas Shop Six because kanbans would be triggered by the depletion of the stock in the line and in turn would trigger the system to direct the vendor to replenish the system. If there were bugs in the system, as there often were in the case of C value items, which needed constant replenishment, it was certain that the kanbans would be triggered frequently. The outcome of this conundrum was the frayed nerves of both assembly line operators and their line managers.

It was clear that line managers found the IOH rituals a crutch they could lean on instead of GEMBA. Line managers would tell their Section Heads that all other activities were feasible only after completion of an IOH count, without which they could not make much headway in production, and that in any event GEMBA would benefit from making a fresh start with corrected IOH data in the GIRAP. An indication of the limitation of the GEMBA project's attempts to wean middle managers off their IOH habit by active co-ordination, team work, 5S and regular cyclic counting was the periodic necessity of IOH in areas such as the medium duty vehicle assembly area. Mr. AB was of the view that if line manager did their root cause analysis and followed 5S systematically and did not look for short cuts in their job cycle, there would be no need of this IOH ritual.

Mr. SMU complained that on top of this IOH and production, he had the headache of doing GEMBA and it was clear that for many of them GEMBA was an imposed burden amongst their many other burdens and they complained forever of being slaves of the plant, sitting from 0700 hours to 2100 hours Monday to Saturday and even Sundays if there was a production-related emergency in EWS such as the need for ramping up production at very short notice. I later learned during a subsequent visit to the plant in January 2010 that Mr. SMU had died on 13 February 2009 at the threshold of his house after a long shift at EWS because of a massive cardiac arrest. This reminded me of Beynon and Nichols' caricatures of line managers and the capitalistic labour in their chapter about the capitalistic labour process [Beynon and Nichols, 1977:56]. Another point with regard to the counting done in CompCo [as pointed out by the late Mr. SMU, 1 May 2009, whom I paraphrase] is that the cyclic counting methodology was less effective than the previous "great counts" carried out once every six months or so that middle managers like him who predated lean manufacturing had been used to. They took longer but were very thorough and he saw them as markedly superior to the cyclic counting strategy in which small subsets of inventory were counted every day; furthermore, they need not allow mechanisms designed to streamline inventory to become an end in themselves and to eat into the busy schedule of line managers who were caught between satisfying their departmental heads and goading operators to work hard. It was clear that line managers found the IOH rituals a crutch they could lean on instead of GEMBA.

6.5.3 WIP mismatches and recording errors in the inventory software make a well-coordinated long term programme of standardisation difficult to contemplate

There were a few considerations to attend to by line managers who had to first establish which were the components that could be standardised for any two given models of engines or vehicles, the elimination of the components from the inventory stock in EWS that would be rendered redundant by the standardised component, the specifications that had be arrived at for the standardised components and whether they were either similar or distinct but standardisable through engineering modification. The kaizening suggestions made by the line mangers or GUL's and operators were conveyed to the Section Head and getting sanction from the finance department of EWS to sanction funds to make a prototype and then once the prototype passed quality checks during production and eventually the standardised item replacing both components is put into mass production. Material planning which would in turn codify the specifications of the standardised component throughout CompCo and the design centre would incorporated the modification and try to improve on the standardised item further. Material planning would pass the specification item to the suppliers to follow the new specifications or making necessary modifications in the computerised inventory management system the plant. Standardisation was an active policy to be pursued simultaneously by line managers, operators and the CompCo's component and product design centre located in the outskirts of Nellore.

The bottlenecks to the standardisation initiative were pointed out by Mr. RGPN [10 January 2009] who said that each part number is specific for a particular model and though there are similar parts for similar product families, it may not always be possible to have a common pool of parts for instance in the assembly and

fit-ment process of engine components. Mr. RGPN also explained that although management wanted a common pool of identical parts ready to use for as many different production models in order to save on the costs of procurement from the suppliers and save on the inventory it would have to keep, this was not always practicable. He illustrated this by giving the example of an abrupt model or design change where the Marketing Department at Corporate Headquarters told production head in EWS that they needed x quantities more of model type a as against model type b immediately, whereas they had originally asked for y quantities of b which now needed to be either scaled down or discontinued outright because the market seemed to be demanding product b right away. There were limitations, in standardising models a and b because they were in fact different vehicles, but to add a further twist market conditions could change rapidly again rendering the production of model b in its turn redundant and indicating a need to shift to a further new model, c. Much time and money would have gone into standardising models a and b or components relevant to a and b and that investment might now go waste because they may not be required in the immediate future.

This did not however mean that models A and B were totally extinct and there were example of models being resuscitated some time later. So, all this uncertainty tended to lead to the piling up of inventory and a diminution in the attractiveness of standardisation and made corporate management and Mr. N appear in poor light in front of line managers, Section Heads and workers because of the exactly the opposite effort of reducing inventory. There were limitations, in standardising model a and model b because they were in the end different vehicles and there could only be some distance that could be traversed with regard to standardisation of C and B value components and some A value items, but the market conditions changed rapidly rendering the requirement of model b less urgent. The shift in demand of a particular

type of model c which though identical with model a and model b may affect the specifications that were kept in mind in standardising model a and b respectively because the time, investment and inventory accrued of the older components specific to a and b and the standardised components common to model a and model b might now go waste because they may not be required in the immediate future but sometime later.

The drive for standardisation had another serious implication for the company, which could not be ignored. I was given to understand by Mr. RGPN [3 February 2009] that up until some time back product design had been carried out in its entirety by a single group of people in the CompCo's component and product design engineering centre. However, recently, with corporate management aiming for each engineer acquiring a core competency of specific engineering skills, each group of engineers (usually young graduates) worked in isolation on specific areas of a vehicle, such as the transmission and its associated products, without ever getting to know the vehicle's organic history or the relationship between the other components specific to that model. The above bird's eye vision led to a loss of continuity. The problem this brought about in CompCo by way of uncertainty and frequent component specification errors in addition to the already prevalent WIP errors in EWS inventory management system was explicated to me by Mr. RGPN where he said the design engineers at the design centre to cut and paste specific component specifications sometimes operated blindly and made mistakes in inputting values which led to specification errors at the very source of the supply chain. Mr. RGPN explained that this bird's eye vision lead to a loss of coordination and continuity in design, as disinterest stemming from a loss of job satisfaction caused frequent component specification errors at the very source of the supply chain. These faults compounded the inventory WIP software problems already described elsewhere in EWS. Mr. RGPN alleged that low morale and a fall-off in trust

in their seniors, led many young engineers to quit for pastures new as soon as they had finished their training in CompCo's design department in Nellore. CompCo was reputed to be one of the best developers of talent in India and these young engineers simply moved on to CompCo's competitors such as Daimler Benz, who were the main beneficiaries of the slump in morale and who were supposed to pay better salaries.

As Mr. RGPN pointed out, their replacements had to be trained from scratch in product design and the assigning of specifications to products and because the new incumbents did not know components' specifications or the exact manner in which these specifications had been arrived at, thereby aggravating the mistakes further down the line. To cap it all, corporate management's relentless drive to cut costs wherever and whenever possible meant that the numbers of even experienced staff in that department had been trimmed down significantly, despite there being a substantially increased work load because of standardisation.

6.5.4 Contract employees and attempts to trim the wages bill

CompCo's management was always trying to trim its waistline and it believed that the wage bill was an unproductive component of its expenditure and needed to be minimised in an expedient manner. As seen before and as mentioned to me by Mr. N, ideally at some point in the future he would want to see a stage where departments such as material planning stores were rendered redundant because of suppliers taking an active role in the self-certification of tools and consumables and the excessive bureaucracy in all departments in all plants in EWS needed to be minimised. Senior plant management resorted to outsourcing measures as mentioned in the previous chapter. It also hired temporary workers and tried gradually to ease out regular workers

and middle managers. Though temporary workers might save the wage bill, it did not necessary coalesce with the GEMBA measures to manage inventory, facilitate self-initiative and promote troubleshooting amongst line managers and contract workers. Contract workers typically worked for an external agency and were hired to supplement the regular operator force in EWS. Since their duration of work was uncertain, managers could not establish a working rapport with them because by the time they did they would move over to some other manufacturing establishment. By the time they learnt the skills required for their job they may have left their present job and this meant that the new incumbent had to be taught his work.

Line managers like Mr. AK blamed CompCo's short sighted policies of outsourcing and deploying contract labour and found it unconvincing that senior plant management at the same time expected line managers and operators actively to contribute to reducing waste and continually Kaizen to eliminate excessive processes and labour. For instance, Mr. AK cited the example of the stores of each manufacturing or assembly area in EWS which bothers to accurately count part by part actual floor level inventory in normal circumstances of full production was is in contrast done judiciously by the stores in recession bound times. [Mr. AK, 11 February 2009]. Mr. AK alleges that store count is not taken regularly and in normal times it is never done. He alleges that stores calculate stock only once in two weeks. Stores may issue material, but may not keep track because when it is tight there is quite a lot of pressure to bypass procedures. Mr. AK blames the binners who empty and refill the components needed for production, for not doing work properly and not putting the material in its rightful place. The stores people, in his view, are equally culpable in not tagging material systematically resulting in a manhunt for material. To examine Mr. AK's view on the stores, I went and interacted with the stores clerk

[3rd January 2009] in assembly Shop Three who alleged that the company has hired contract workers in place of regulars. These contract workers are not familiar with the work place and many have to be taught from scratch over and over again. The line manager in charge of that store told me that about two years back there were twenty permanent employees who knew exactly where each component lay, how to tag it and how to bin the material, and knew intuitively where each component was located, and mismatch and mixing up of inventory was rare. This function has been outsourced to contract workers who may not come to work everyday because of where they are dictated to head by their employers. Now there are only two line managers at most who supervise the contract workers and they are responsible for organisation of the components, tools, consumables and sub-assemblies, and they report to the stores manager. Contract workers drive the motorised vehicles that move material around to the line. In EWS much of the day-to-day store operations are done by contract workmen and some of the areas in the engine machining shop are done by contract workers. Even if there was a problem and plant management would want to listen to stores, the head of stores would in all probability give a version that shows many of the junior stores staff in poor light and that he was doing all that he could to keep the stores running in optimal condition. GEMBA unfortunately has not reached the store areas and for the contract employees it does not make any sense at all.

6.5.5 Patterns of reluctance and self-justification among managers rooted in their daily management activities

The discussion on inventory meetings demonstrated the persistence of the vocabularies of targets over the apparent dominant change vocabularies of GEMBA and kaizening. It also demonstrated the difficulty of getting Section Heads to

participate in illuminated competing priorities which also caused the recursive culture of blame game between managers and departments, with Section Heads trying to absolve responsibility and line managers blaming other managers or other departments. The low attendance of Section Heads and as a consequence their line managers at the inventory meetings amplified the lower priority given to GEMBA GIRAPS by Section Heads over their own departmental priorities. From November 2008 to early January 2009, Mr. AB found it hard to ensure attendance at every inventory review meeting during the early phase of recession. Attendance was so meagre that the GEMBA correspondent who kept a record of whether the GULS were sending in their records and attending meetings and who was a middle manager in the purchase department, had to call out each department's name and get a head-count of the number of relevant people represented at the meetings. I observed on many occasions middle managers, such as Mr. AK, the manager of the Production Planning and control department whose functions included overseeing the software process for issuing materials, overseeing production and supervision of operators and issuing of materials in the MDV vehicle assembly area, having to be chased by Mr. AB who ran through a list of phone numbers in his notebook to reach managers on their mobile phones to require them to attend. Line managers, in turn, would complain to Mr. AB that their Section Heads had held them back and they had to manage problems arising in the line and supervise operators in whose abilities they did not have full confidence.

GULS or middle managers were working with their operators as teams to ensure that regular cyclic counting was going on instead of waiting for the cumbersome and tedious IOH [Inventory on Hand] option. The Section Heads falling short of the day's mandated production target were worried about rebuke by their superiors such as the DGM engine assembly and this might in the long run affect their

appraisal by their superiors and promotion further upwards in the hierarchy of EWS. By prioritising targets they found a way of deflecting blame to their line managers belying their intention of not taking GEMBA wholeheartedly and instead implementing it selectively. These recursive features of blame and a lack of trust between line managers and senior managers and operators undermined GEMBA.

There was a multiplicity of agencies trying to make up their minds as to who could best initiate measures to bell the proverbial cat. Amongst them, were there many departments in EWS who were engaged concurrently in calibrating inventory but amongst whom there was little co-ordination? Their indecision caused considerable confusion which none of the sections involved in the material flow process, such as material planning, was prepared to admit. Instead, they blamed the problems on one of the other departments, Production Control, who in turn blamed stores and when everyone had finished blaming each other, they finally pinned the blame on the Quality Control Department. This pervasive organisational blame culture prevalent in EWS undermined Mr. N's and Mr. SDN's aim of implementing an internal customer ethos, within which each department streamlined its activities and the reconciliation of inventory began at the level of the operator and in the words of Mr. SDN, entailed the line manager and the operator taking responsibility for their job-cycles, and thinking carefully about each stage and the nature of the components used, so as to achieve the predictability of component usage that lean manufacturing required. Operators and middle managers would not then be able to dodge the consequences of poor quality.

From Mr. AK's perspective as a line manager it was not the shortage of systems, but the lack of co-operation and trust he encountered that was the source of his biggest problems. He felt especially affected by the doubting mind-set of his bosses and the way that caused them to treat people like him. Mr. AK's colleague, Mr. SMU

told me that he and his colleagues [the line managers in Production Control Department Mr. SMU, Mr. AK and other line managers in that department which had about 35 line managers in addition to line managers looking after MDV line and was headed by the Section Head Mercury] were the "leashed overworked Doberman dogs" of the plant ready to be beaten or exploited by everyone whenever they felt like it, whilst other managers took life easy and passed on the blame. He said that they could be kicked and none understood their plight. I later learned that Mr. SMU had died on 13 February 2009 at the threshold of his house after a long shift at EWS because of a massive cardiac arrest. One of the other things that worried Mr. SMU was that after purchase orders had been raised by the purchasing department, any changes in specifications needed to be avoided. But the practice of bad items not being weeded out in areas like MDV continued and they became mixed up in the final assembly with an inevitable adverse impact on quality and creating enormous problems for tabulation and necessitating reworking. This complicated and delayed the other lean manufacturing measures such as kaizening and self-inspection. Defective components could be arrested easily at some stages, but when production pressures were high and defects remained invisible during the engine's assembly process, nothing much could be done but to wait for the rework team to start from scratch at the end when the engine was found to have failed its tests.

Mr. AK for instance tried to fend off the allegation from Mr. AR and his Section Head that careless storage, or in his terms "binning" of material in the stores pointed out in the discussion on the WIP, lead to material becoming untraceable when it was most needed and he had to jostle between the Section Head, who was his ring master, and the GEMBA team's relentless pressure aimed at making sure that the right components reached their intended recipients on time. This pervasive blame culture in EWS, undermined Mr. N's and the GM Mr. SDN's aim of implementing

an internal customer ethos an important precept of GEMBA, within which each department streamlined its activities and the reconciling of inventory began at the level of the operator and in the words of Mr. SDN, entailed the line manager and the operator taking responsibility for their job-cycles, and thinking carefully about each stage and the nature of the components used to achieve the predictability of component usage that lean manufacturing required. Operators and middle managers would not then be able to dodge the consequences of poor quality of the product because of not checking the quality of the component they are using for manufacturing and making sure that it is of the right specification. Section Heads were accused by Mr. N of failing to regularly monitor whether their line managers were taking a pro-active approach in suggesting measures for reducing inventory and monitoring the implementation of the GEMBA projects in their assembly and manufacturing areas. GULs and line managers in charge of preparing the GIRAP for their work area, wanted to defend themselves against the blame thrust upon them in these inventory meetings: accusations that they had not absorbed the GEMBA message of troubleshooting. They were consistently accused by Mr. AB and Mr. N of failing in resolution of imbibing solutions to inventory problems through robust use of all the measures identified in Mr. AB's roadmap which was comprised of regularly evaluating the progress of shops in implementing and improving the material flow, its exhaustion through continuous pull and the transparency of the process reflected in MIFA. As illustrated above line managers adopted defensive strategies during the inventory meetings to protect themselves from blame. Some line managers were more adept in defending themselves against accusations of carelessness being levelled against them by their superiors while others preferred to listen to the rebuke of Section Heads who were clearly trying to prove that they were

on top of their role, in silence which pointed towards a pervasive culture of blame game within and between departments and individuals.

In addition to individuals and departments blaming each other there was a multiplicity of agencies trying to make up their mind as to who could best initiate measures to bell the proverbial cat. Amongst them, there were many departments in EWS who were engaged concurrently in calibrating inventory but with little co-ordination between them. Their indecision caused considerable confusion which none of the sections involved in the material flow process, such as material planning, was prepared to admit.

6.6 The Impact of the Wider Context on the Management Of Inventory: Evolving Sub-contract Relations and the Recession

The practical difficulties faced by middle management in EWS arising out of WIP mismatches were aggravated by the global recession of 2008. This section will consider how internal inventory control processes in EWS were affected by factors in the external environment, such as suppliers, and the downswing phase of the economic cycles being experienced during the global economic recession. The last section explored how GEMBA was undermined in a number of areas, thus undermining corporate management's attempts to cut costs through improved inventory management in EWS. This section will help us understand how changes in the external environment can affect management as they become vulnerable to the pressures of more powerful suppliers and in the process are forced to relinquish some control.

During the recessionary months from November 2009 Mr. AB tried to troubleshoot components by fastidiously identifying product families, classifying them, sitting with each GEMBA and working to agree remedies for software problems

with the Head of Systems. The advent of the recession provided an extra spur to plant management to reduce inventory using the best paradigm known to them, which was the technique of tightening material flow and reducing excessive buffer stocks. In this context erroneous recording of stocks added to wasteful expenditure at a time when reduced orders and sales meant there was little cash-inflow into the company. However, the company had also to scale down on production volumes and close production lines and the effect of reduced production undermined employee commitment and hindered management's efforts to implement GEMBA measures by eliciting their co-operation in pro-actively targeting inventory reduction.

6.6.1 The recession and the aggravation of conflicting priorities and organisational failure

The recessionary pressures CompCo faced translated into internal pressures that intensified the social divisions among managers in EWS and the resulting 'blame game'. The recession that started at the end of 2008 and continued well unto the middle of 2009 led to what were in effect contradictory policies: on one hand CompCo wanted to reduce its inventory holdings but on the other it needed to push trucks out onto the market to ease cash flow. It could only have achieved this with a highly efficient lean system, which it did not have, so that increased production inevitably meant higher inventory. Thus the recession highlighted both the weaknesses of inventory management in CompCo and the attempts of EWS's top management to remedy the problems through the very elaborate edifice of GEMBA-based attempts to reduce inventory, using junior managers and operators working together to carefully reconcile and monitor inventory through the MIFA, the GIRAP and the software system they had put in to place. Corporate management wanted

tighter coupling of production processes and continual improvement in each and every process. But lean manufacturing could not provide answers to the questions raised by a situation in which reduced demand compounded the problem of excess production contributing to higher inventory.

Although lean manufacturing and JIT were always being talked about and were implemented with a greater degree of urgency in WAP4, the newer plant further down the road, the urgent need to achieve accurate and systematic inventory management, which involved the selective application of lean manufacturing precepts, became an urgent priority for senior EWS management during the recessionary phase. Later on, in an effort to produce a respectable balance sheet (the rationale and the means by which is explicated further below), corporate management in Nellore decided it was time to ramp up production at short notice. Thus, after stopping procurement of components and putting the brakes on all forms of inventory accumulating in the plant, middle managers had no other choice but to treat GEMBA as second fiddle to the achievement of more immediate production targets that they were expected to deliver.

6.6.2 Changing management policy during the recessionary months

The recessionary phase aggravated the flaws prevalent in the inventory recording process and managers found it difficult to reconcile an accumulating inventory of A, B and C value components and finished products with mismatched inventory and WIPs. This difficult environment contrasted very sharply with earlier periods, with brisk demand and production in full swing, when the demand for inventory was robust and components entering the plant would be used up without much delay. As both the ethnographic and managerial accounts of lean manufacturing

literature would illustrate, the inherent wastage prevalent in the plant in this period would not be immediately obvious because of relatively quick entry and absorption of inventories and sub-assemblies. During such normal times of brisk production Material Planning, who were responsible not just for establishing what materials were needed but also for ensuring that components received met the specifications given to suppliers, were busy ensuring that the components passed quality standards and that Production Control received the components as quickly as possible. Minor inventory inconsistencies or the mixing up of similar parts used in different engine models would not cause undue concern because these issues could be dealt with in the actual manufacturing stages and besides there was an after assembly quality check team working away to ensure final product quality. The net outcome of all this was that positive WIP would be at manageable levels and would be consumed quickly. Given the pace of manufacture, any anomalies in material categorisation and inflow would either be largely invisible or would tend to be ignored because the priority was to maintain the pace of production. EWS was achieving its targets and the engines and medium duty vehicles produced were meeting set quality guidelines, so there was no need to worry about WIP discrepancies partly because they were hidden and buttressed by the rapid entry and exhaustion of material or because at that point of time their financial implications had not been perceived.

Senior EWS Plant management wanted to put an end to these recurrent recording errors that were pervasive in EWS and also to ensure that money was saved by keeping orders to suppliers as low as possible. GEMBA now had to determine accurately the existing inventory levels through the GIRAPs in each shop, including those where production had come to a standstill as opposed to those in which production was continuing and where kaizening could help eliminate excessive components throughout the production chain. A consequent embargo on the

procurement of A, B and C value items lead to stringent controls being introduced to regulate the flow of materials but this often caused acute shortages, even when the production of individual engines for each of the different vehicle models was spread over a few days and the plants were shut on several days of the week. During this time there were instances of lapses on the part of Material Planning, stemming either from the supplier concerned being one that CompCo could not control or from inaccurate ordering. The EWS plant was closed for an average of five days a week during November and December 2008 and for about four days a week during January 2009. Thus the recession complicated the already strained inventory management system and aggravated the errors in the system. An illustration of the spasmodic entry of components and the pressure intermittent entry of components into the plant during these recessionary months, while the plant was working for only a few days during the week was illustrated by inordinate delay in issuing passed cleared tags for some of the A value critical items, which required quality certification by quality control because EWS lacked the confidence to grant every critical component suppliers to self- certify the quality of what they produced. While self-certification was a long term aspiration it was not possible to allow defective components delivered intermittently without ascertaining their quality much as senior corporate management wished to scale down material planning to a few managers and leave the responsibility for quality to the suppliers. This inability to certify and tag A items as ready to be used, arose because material supply as this phase was spasmodic in nature and because it was not possible for EWS'S Material Planning department to certify inflows within a planned schedule periodically as it could have done under normal conditions. This caused blockages for line managers such as Mr. AK who even with reduced production volumes during the course of the scaled down working week had to contend with the sudden clamp down in component supply and acute component shortage.

The failure to record and reconcile WIP carefully during normal circumstances began to become evident during the recession when management wanted to save money by reducing the procurement of items it felt were not needed following production cuts. As noted above in section 3 regarding the complications brought out through WIP errors for middle managers, it became clear that there were serious misclassifications of identical material families used in different but similar models, mismatches between physical and online inventory, incorrect specification of items in the BOMs of different product processes and significant errors in the tagging of online inventory became evident when inventory which began to pile up during the recession months. This created considerable and burdensome statistical problems for Material Planning, Production Control and Stores, each of whom kept separate records and contributed to the problem by entering incorrect data in the Comp-Co inventory database system which had been upgraded in May 2009 to meet MIFA and lean supply chain management principles. As the recession made its impact felt through declining sales, the pressure to minimise procurement costs increased during the recession and senior plant management looked to standardisation as an attractive way to reduce procurement levels of less-used components and cut cash outflows to its suppliers. During the recession Mr. N exhorted middle managers and operators to standardise inventory ranging from C value parts, such as nuts and bolts, to more critical components known as A value items, in accordance with lean manufacturing principles. In his opinion standardisation was a key objective for EWS and Mr. AB and the manufacturing departments were asked to liaise with Material Planning to hasten the process of standardisation. However, as was seen in the earlier section, attempts to achieve standardisation were not without limitations and were met with limited success. Standardisation efforts were also hampered by suppliers who were

less prepared to attempt innovations when working capital was tight and when operating costs were high.

As we have seen the recession created a double squeeze on positive WIP [work in process] and inventory control. On the one hand procurement managers sought to save money and reduce risks by cutting down on orders for components from suppliers. On the other hand, marketing managers, under pressure because the vehicles occupying the company premises were adding to inventory and upkeep costs owing to natural wear and tear, were trying hard to maximise revenue by pushing products onto the market. Together these pressures exposed the limitations of inventory systems much more clearly and gave a heightened sense of priority to Mr. AB's initiatives to tighten inventory control.

6.6.3 Balancing the account books

The pressure to increase sales (or even reduce inventory by shipping the unsold vehicles that were occupying considerable space in the EWS plant and would have to be worked upon to retrieve its brand new condition) became particularly acute towards the end of the financial year, as it had a direct impact on the balance sheet because of declining cash inflows and liabilities to suppliers. The balance sheet deterioration was a potential threat to the company's share price.

Subsequently, during the financial year ending months of March-April 2009 when the balance sheets of each of the plants had to be supplied to add up to make CompCo's balance sheet, senior management in EWS decided to relax its tight inventory procurement policy and step up production in light of the urgency to improve its balance sheet but this relaxation could not easily succeed within the relatively weak system of inventory control. This expansion in purchasing and

production would have to be achieved even though the suppliers had stopped delivering components for over four-and-a-half months and had, as a consequence, severely disrupted the supply chain. Corporate management's plans for reforming CompCo's inventory assumed a fully functional plant but it recognised that given the imperative of a more respectable balance sheet, appearing in the balance sheet, it would have to work within the context of an imperfect inventory management system that was still very much work in progress and compromise on not meeting its slated GEMBA roadmap goals. For instance, I observed that, just prior to 31 March 2009, the end of CompCo's financial year; middle managers such as AK spent much of their time chasing components needed for production and there was little time for any other activities. When production became busy, it was back to the material chasing game with middle managers like AK running to the stores on some occasions because the components they needed were not immediately available and needed to be brought back to the line. In his many interactions with me AK said that communication reached everyone especially through the ever pervasive email, mobile telephone and numerous meetings but I still wondered how long it would take to stabilise an inbound supply chain system to deal with sudden surges. He felt that no superior, showed empathy, appreciation nor cared for his plight. But the chaos in the storage areas adjacent to the MDV line did not explain the arbitrariness with which suppliers pushed through materials and the lack of mechanisms to deal with immediate inbound requirements when demand was high and production had to be ramped up. Part of the answer lies, in the economies of scale of larger suppliers and the Hubli suppliers who were not pleased with the EWS finance department at not getting paid during the recession. Their influence on the supply chain and GEMBA is explained further below. This chaotic process of scouring components through the stores, getting components urgently from WAP4 if they had the specifications, went on in parallel

with Mr. AB's attempts in conjunction with Material Planning to brainstorm, ways of streamlining inventory management.

The contradictory policy of relaxing inventory control and suddenly ramping up production was explained to me by Mr. R, the retired GM in charge of exports at CompCo, emanated unsurprisingly from corporate management's mortal fear of its own performance appearing poor and its concern that pressure on the company's share price sliding would set in motion a self-fulfilling prophecy of negative sentiment amongst investors and lower sales to nervous customers. They decided therefore to produce more vehicles and dispatch them to their dealers, irrespective of whether they had orders, which meant that the inventory of finished vehicles and hence the number of engines held in the plant would come down. The dealer would invoice the vehicles as sold by CompCo and later send it back to the plant. It meant passing inventory from CompCo's storage area to the seller's storage area but gave the cosmetic appearance of the vehicle having been sold.

The surging up of production during the year ending months brought about two important organisational failures. The first of these involved *neglect of quality,* and was an example of a contradiction in lean manufacturing based quality standards. On earlier occasions when demand for a particular type of vehicle model was urgent, materials had been requisitioned directly by the line as and when the supplier's vehicle entered the premises, thus bypassing the quality control check and stores, which resulted in components of doubtful quality going onto the line. The urgent need to meet the impending year-end financial targets, exacerbated by the recession whose effects on demand had fed through and could be felt in terms of lower demand and production, meant the company needed to reduce its stockpile of finished inventory. The surge in production implied a bypassing of the detailed GR&D process which, as was pointed out earlier, was not defect free itself. This neglect of mandatory quality

checks in the in-warding process of GR&D carried out by the inspectors of the Material Planning department, was blamed on delays on the part of suppliers or sudden surges in production given that during the year ending period the pressure to dispatch vehicles was high. In the last week of February 2009 AK told to me that at the year-end of 2009, EWS had struggled to ensure that a minimum of 95 vehicles left the company each week and got to the dealers. Accumulating vehicles parked all over EWS made for a sorry sight for senior level plant managers such as the GM Mr. SDN. For instance during the first week of Feburary 2009, there was pressure to get rid of finished inventory stock and the MDV area had to produce and check the quality of these vehicles in 3-4 days in order to get the vehicles to the dealer's warehouse for the last week of March 2009. Normally that process would take a fortnight at least. The above drive for a year-end surge in production after a prolonged lull compelled the Section Heads and line managers to be complicit in compromising quality because there was only so much work the re-work teams could do on defective vehicles.

A second problem involved the ad-hoc nature of EWS management policy which involved window dressing of data even if it meant compromising on ethical standards. CompCo had been one of the two prominent players in the commercial vehicle industry but senior managers such as the GM Mr. SDN were clearer in their view that the automotive industry in India and in the rest of the world was cyclical. Poor results in the record books would manifest themselves in negative stock market sentiment and pressure on their ability to raise capital, which was the last thing they wanted in difficult times. CompCo's senior management took a gamble on increasing production volumes, hoping that market conditions would improve. Given the imperative to produce a good year-end they felt that they had to reverse their earlier decision to terminate all production and procurement and this meant that they would have engines and vehicles ready to enter the market as soon as the first signs of

improvement were perceptible. This was not however a longer-sighted strategic decision, taken free from pressure, but a consequence of the window dressing approach driven by contingency.

The arrival to a semblance of normal market conditions in June 2009 saw a return in demand and relieved the pressure on accumulating inventory in EWS. The streamlining of inventory supply and identifying and mapping out the process and the steps taken to clamp down during the recession had indeed brought down inventory levels of components. With vehicles being pushed out, the finished inventory in EWS also came down. The urgency of imposing GEMBA and lean kaizening, brainstorming on line managers and middle managers came down because production pressures and the return to daily production and sales targets made managers get back to the routine. As long as the senior managers like the GM engine development implemented their innovations and came out with newer ideas to implement models and did their deep dives once in a while to fix an area or machine line, the sales targets were achieved, they assumed that as long as they did their deep dives and periodically came out with product and design innovations using lean manufacturing principles such as allowing for production of multiple models in the same platform without avoiding frequent dye changes and getting everyone to kaizen to deliver profitability and vehicles which the marketing department could sell at competitive prices their task was more than accomplished.

6.6.5 Varying degrees of influence exerted by the external suppliers to CompCo

Certain large domestic suppliers such as Bharat Forge and multinational suppliers such as Deckel Maho Gildemeister [GMBH] and Bosch dominated the

Indian market and CompCo depended upon them supplying critical components such as connecting rods, upkeep and critical parts of critical multi-axle CNC machines which as seen in the preceding chapter were indispensable to the engine machining and assembly process. CompCo did not have the same influence over these big players and could not dictate the terms of trade as it could with smaller players in Hubli who manufactured less important and more generic components. Significantly, these big players adopted lean manufacturing practices themselves and speeded up component delivery by circumventing the gate entry and dispatch process, so it was not always possible to ensure that deliveries of components adhered to EWS's desired standards occasionally because EWS trusted these suppliers and believed them. That in turn meant that GEMBA goals of a totally streamlined and planned material inflow could never materialise.

For instance, on the engine assembly line there was a two bin system with an in and out bin; Compco wanted suppliers to take on the job of replacing the depleted bins with full bins as and when necessary. CompCo operated some arrangements under which manufacturers of A value components [A, B and C value items were gradations given to materials depending on their descending value by cost and importance] self-certified the quality of the components they supplied which relieved some of the pressure on EWS's Material Planning managers. However, the quality of components varied from manufacturer to manufacturer and although some could be trusted to produce components to the specifications laid down, other could not. This meant that relying on B and C value suppliers to operate a resupply system without quality checks was very dangerous.

Big suppliers, however cause other problems by choosing to sequence deliveries to suit themselves rather than CompCo to achieve economies of scale and delivering in one lot to different manufacturers in Hubli rather than delivering in bits

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and pieces. Deliveries were made in much larger consignments than CompCo would have wanted and in consequence EWS found itself entering a lot of material which the company did not want and could not manage to store, but had to receive because it was dependant on the goodwill of these big suppliers. This demonstrated clearly the power some bigger, multi-national suppliers, had over automobile manufacturing companies. Some of them supplied most of the big players in the Indian automobile industry and were able to turn the notions of lean manufacturing upside down and in the process pass more of their costs on to their customers.

This happened in January 2008 and February 2008 during my stay in EWS and during the inventory meetings the piling up of decision inventory inflated each GEMBA's inventory figures in the GIRAP. This created a sense of helplessness on the part of middle managers from the Engine Stores and their GEMBA and the Section Heads of Production and Material Planning. I observed that on some occasions in the inventory review meetings, that Section Heads and middle managers were resigned to the fact that corporate management had decided to keep this 'decision' inventory for better times in spite of it being conspicuous in occupying space in the storage areas and the self-evident need for it to be reduced. Decision inventory was inventory kept for future use even when the immediate need was not warranted.

Therefore I argue here that the need to reduce inventory existed with the contradiction of material shortages at the same time because of the rationing of materials to the line either because powerful suppliers were squeezing the company or because smaller suppliers were being paid late and deliveries were delayed. In the recession months from December 2008 to March 2009 the smaller suppliers based in and around Hubli for instance, found it very difficult to run their organisations, pay wages and manufacture their components, when payments from their main client CompCo were not made on time. They were reluctant to supply without being paid

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on time and the larger suppliers were spasmodic in their supplies. Without sufficient capital these smaller suppliers who were finding it difficult to pay their workers or find sufficient work for them and run the factory without working capital, stopped supplying to EWS as a mark of protest for some time. component shortage of C and B value items would not have been such an issue under earlier conditions when the reduction of inventory was not considered a priority and large stocks were maintained and CompCo could always bully smaller suppliers to fall into line. What is apodictic here, that there were different rules for bigger players and smaller supplier owners whose livelihoods depended on companies such as CompCo. Smaller suppliers operating out of Hubli and industrial areas of Bangalore had no choice to implement lean manufacturing or whatever manufacturing innovation they were told to do so by large companies such as CompCo including laying off workers or else risk losing custom and their local entrepreneurs running into heavy debt thereby putting their families in financial difficulty. Larger suppliers could flex their muscles and if need be relax on the precepts of lean manufacturing occasionally and could have much better terms of trade and flexibility to deliver regularly but with due planning.

6.7 Senior, Middle and Lower Management at CompCo: Patterns of Experience, Outlooks and Career Pathways Reconsidered

Section 5 above focused primarily on differences between departments and differences between hierarchical positions even among middle managers and how corporate management and senior management responses to external stimuli such as the recession and internal managerial contradictions discussed in section 4 such as the blame game and competing priorities affected middle managers and impeded the

success of GEMBA. I will now address the understanding of the career pathways and individual goals of senior management and middle managers, which is an important consideration in order to illuminate lower and middle management's response to managerial consultant led corporate management innovations such as lean manufacturing.

The conflicts and tensions between middle managers were also due to factors that went beyond the everyday challenges of meeting targets. The process of communicating the precepts of GEMBA with regard to inventory was fraught with difficulty because the proclamations of GEMBA had to be communicated within and across different managerial constituencies of senior or line management, each of which had its own expectations of what should emerge from its strategic exchange with the organisation. The difficulty in getting managers to apply the GEMBA inventory measures uniformly and consistently was described in the previous sections and this was intensified by the blame game, prevalent between different managers and departments, and the recurrent WIP errors that further complicated the implementation of GEMBA.

This difficulty in getting GEMBA accepted and the challenges faced by Mr. AB in his efforts to implement the roadmap and get managers to take the initiative in identifying the WIP errors, should be analysed beyond the immediately perceptible flaws in EWS's inventory management system and the difficulties it caused to line managers. Hence this section will draw argumentative resources from Watson's strategic exchange perspective and will widen the discussion to consider the manner in which the longer-term patterns of experience, outlooks and career pathways of the middle managers shaped their perspectives towards their roles and indeed towards change management. Using examples from CompCo and EWS managers I will show that there is substantial analytic purchase in combining Watson's perspective of how

the world-views of different levels of managers interact and shape the direction of organisations coalesces with Beynon and Nichols' explication of managers who, as constituents of the technical system [p33,1977], have no other choice but to survive and ensure its continuity. Cumulatively, they offer a new way of understanding the process of management and the management of the labour process the managers are all engaged in.

Section 2 outlined the patterns of managerial recruitment and progression within CompCo and commented on how managers occupying discrete roles in the organisational structure had shaped management policy in EWS. To paraphrase Watson, individuals bring their own agendas, priorities and private long-term strategic goals into the organisation they work for and interact with the organisation, which has its own history, its own ways of doing things and its own organisational ethos. These priorities and long-term strategic goals provide the lenses through which individuals view their workplaces, a process which Watson [2002: 213] terms as work orientation.

Work orientations are the meaning individuals attach to their work, which predispose them to think and act in particular ways with regard to that work. Watson advocates the need for understanding the general patterns of work orientation amongst groups of strategy makers in trying to grasp the shared meanings and approaches that exist among them, as well as considering each individual separately. Managers enter into an exchange relationship, which Watson calls a strategic exchange between the individual and the organisation where these priorities and their acquired worldview of people and management interact with managerial projects and organisational imperatives and there is a constant iterative exchange relationship between the individual and the organisation. The more senior the person in the hierarchy of the organisation, the greater will be the significance of their particular exchange

relationship with it. Within the work roles managers occupy, they constantly define and interpret the attitudes, work histories and distinctive life experiences that they bring into their practice of management.

Considering this interpretative relationship in which individuals as hermeneutic agents create meanings to constitute managerial vocabularies and their representations constitute discursive practices, we see that these discursive practices compete with each other periodically trying to dislodge each other as the dominant representation of management policy, as espoused by senior managers, that is applicable to all subordinates. Within this interpretative framework of viewing organisations Watson [2002: 214] argues that:

> "An organisation is not an entity equivalent to a person. It is a pattern of activities and understandings involving a range of human constituencies all of whom have their own interests and strategic priorities."

Senior managers control middle managers and direct their activities and they operate under the framework and structure provided by the overall organisational system, the maintenance and continuity of which is the main objective of this supervision and power, ultimately to generate surplus value. The hermeneutic world of managers as agents is interconnected to the technical system they operate under and whose continuity and success is the main aim of all managerial activity. I concur with Nichols and Beynon, [1977: 38] who explicate the meaning of the system:

> "The system is a bureaucratic system – a system of control. It programmes, monitors and processes the 'performance' of labour, including that of the labour of superintendence, which itself is

concerned with programming monitoring and processing in order to control."

As Nichols and Beynon [1977: 38] point out, the production process creates pressures on managers and requires them to control each other. If managers did not control each other the system would collapse and it is in this space of control that beliefs and truth claims about what constitutes the best way of managing and different vocabularies of management, compete with each other. At CompCo the corporate management sought tighter coupling of the supply chain, elimination of waste through GEMBA and wanted to transform the system of supervision into more subtle, direct non-hierarchical mechanisms of supervision and appraisal of middle managers over each other. Within this vocabulary (in the sense of what Wittgenstein implied by the representative nature of language), it expected everyone to use frequently certain terms that represent a culture dominated by self-discipline, pro-active troubleshooting, participation and problem solving. This contrasted with the accustomed vocabulary of EWS's senior middle managers which emphasised control, jobs, production targets and costs.

Watson identifies managerial vocabularies founded on tight supervision and careful monitoring of costs with a perceived need for an ability to make rapid savings if an organisation's costs began to exceed the return obtained and with various measures such as cutting 'headcount' sitting within a 'systems control' organisational structure [Watson and Harris, 1994:116]. Thus the emphasis amongst the senior middle managers directing manufacturing operations, was on reaching targets and training and managing the managers under them to enable those subordinates to deliver what was expected of them on the assembly line. Indeed senior middle managers' appraisals and future career prospects depended almost exclusively upon their achievement of targets.

Therefore, although corporate management might set strategic priorities and longer-term objectives for the company, the decisions of senior management within EWS had a greater impact on the actual evolution of corporate strategy. It was these local priorities, rather than GEMBA, that prevailed in individual plants on a day-to-day basis and formed the core of the motivation of those line managers and senior middle managers who were responsible for keeping the plant running. I argue therefore that it becomes very important to understand how the recruitment and career pathways of managers nurtured different management cultures and the perspectives, which governed the way they approached inventory and change management.

6.7.1 The heterogeneity of middle management: the importance of both departmental and hierarchical differentiation

As I discuss the career pathways of middle managers I register how the appraisal mechanisms of middle managers moulded their attitudes towards discharging their responsibility. There are differences between (a) departments and (b) hierarchical positions even among middle managers, both senior and junior, who hierarchically belong to senior middle management and junior middle managers who are further subdivided by age and vary in what they aspire to get out of theirs job in CompCo. I will demonstrate the manner in which the individual career aspirations of senior and middle managers have defined the ways in which they constructed vocabularies of meaning and beliefs that conditioned their 'truths' about managing and management, which vied for dominance with GEMBA as vocabularies for managing individuals and worker-capital relations and which cumulatively affected the outcome of change

management in CompCo. For instance within CompCo, corporate management included managers, such as Mr. VDS, who typically had spent a number of years in the corporate managerial world and were recruited for their international expertise and their ability to provide the company with vision and leadership. They sat right at the top of the organisational hierarchy and the owners of the company expected them to be what Watson calls the carriers of 'corporate focus and responsibility' [Watson and Harris, 1999: 70].

I am in agreement with his elaboration of the phrase 'corporate responsibility' which denotes the ability of management to prioritise the objectives of the company so it was able to deliver quality to its customers and ensure its success and indeed survival in the rapidly changing market conditions of the automotive Indian automotive industry, whose changing contours I have already addressed in the India section.

Those immediately below the COO, such as the Executive Director Manufacturing, might be recruited from other manufacturing firms on the basis of having a reputation of delivering corporate goals or might be new entrants to corporate management who had spent a number of years or most of their working lives in CompCo. These managers have climbed their way up to corporate headquarters after having occupied senior plant management roles, through their hard work were recognised as having delivered CompCo's targets consistently and been at the forefront of technical innovation. The organisational 'tree' at Appendix 1 shows the structure of the senior corporate management cadre.

The second rung of senior management sat below corporate management and was comprised mainly of career men who were on the verge of retirement and typically were senior plant management such as the GM Mr. SDN and Mr. N. Individuals like Mr. N had invested a lot of their effort and energy in change management such as GEMBA and seemed to aspire to jobs at corporate management

level before they retired. While they did visualise the big picture of CompCo in relation to the competition it faced and day-to-day business objectives and targets, they had to institute new visualisations of vocabularies of GEMBA and make managers forget the older vocabularies of contingency management. Therefore they had to concentrate their attention on instituting and managing change management programs within and across all the plants of EWS they oversaw, with each plant having its distinctive set of contextual problems. They needed to appear to be cheerful, strongly driven and young at heart in order to motivate the younger recruits into the management hierarchy and in this way hoped to impress individuals such as the COO. By creating a favourable impression they hoped to further their career aspirations.

The third rung of senior plant management was comprised of specialised managers with specific responsibilities for critical domain functions within the organisation such as finance, purchase, material planning and production as the organisational chart at Appendix 2 shows and were in CompCo parlance known as the GM's who were much lower in organizational rank and power compared to the GM Mr. SDN. They have to make sure that their departments meet their targets and have to supervise their deputies and Section Heads to deliver their domains' targets. Again, they were usually career men who had occupied similar roles either in other organisations or in CompCo. They were known for their loyalty to CompCo and in most cases their long innings' but occasionally one or other would leave EWS to join another engineering company if better terms and conditions presented themselves or if there had been some internecine warfare with their superiors. Holding independent charge and only third to Mr.SDN and Mr.N was Mr.TRN a very competent and experienced manager the overall production head of EWS. He ensured that the plant functioned properly. Their position in the hierarchy is illustrated in the organisational chart at Appendix 3.

The fourth rung of managers were the deputies of the technical managers known as DGMs on rung three. These were the Section Heads who held the plant together and can be seen as representing the production cost vocabularies.

The fifth rung of managers such as Mr. AB could be described as staff specialist Managers [Refer Appendix 4] with the objectives of a specific project borne in mind. They were recruited from the top management or scientific institutes in India and were tasked with implementing specific, project based objectives such as GEMBA. Even though they belonged to middle level management they tended to identify themselves with the senior plant management, with whom they worked very closely and whose aspirations they tended to share. These managers had a circle to square. On one hand they had to lead the implementation of corporate management's transformational agenda and thereby meeting its expectation and on the other, that had to negotiate the authorisation of senior plant management for their projects whilst persuading senior middle management and line managers at supervisory levels to implement their agenda.

The lowest rung was composed mainly of line managers who had spent decades in CompCo and had to meet divergent expectations of their Section Heads, reconcile errors in CompCo's inventory managers and get operators to meet production targets. As the GM Mr. SDN said; they were the cleaners-up of the mess others made and were the wheels of the plant. The younger generation amongst this group was envied by the older cohort for the facilities provided to them and because their youth and qualifications gave them a mobility in the labour market that their older colleagues did not enjoy. They might leave on any day were job prospects to present themselves. They were not bound by notions of loyalty unlike the GM and believed that the ascent up the corporate ladder to senior management could be traversed faster by changing firms periodically. CompCo's corporate management had invested a lot of money in

training these recruits and saw them as the future managers who would "engineer the customer's tomorrows", even though it knew it would be difficult to retain them.

6.7.2 The heterogeneity of middle management: introducing the role of career pathways and orientations

As I mentioned in the earlier paragraph, distinctive management cultures were also linked to different career pathways and career orientations among managers, illustrated in Appendix 11. I will introduce below the main types of career experience and orientation by making a distinction between insiders and outsiders and using Nichols and Beynon's useful typologies of managers in order to develop my own. This will help register how these career routes and strategies could either reinforce or cut across the departmental and hierarchical contrasts depicted above. Understanding these divergent career pathways is made easier by the following matrix.

	Insider career managers	External recruits
Senior middle managers	More senior company men	Outsider recruits into senior management
Junior managers	Junior company men	Younger shooting star managers

I will build on the matrix by using a typology that will explain the career routes and ndividual career strategies of managers as follows: Outsiders, Senior Career Men, Shooting stars, Survivors, Firefighters, Fading Away Types and Opportunists. I will next elaborate upon each of these typologies by using them to

illuminate the contrasting experiences and outlooks of the various groupings of managers.

Managers such as the COO and those immediately below him were cross-overs into senior plant management in CompCo, having previously worked in corporate management at Nellore, and brought with them into the plant some distinctive orientations. They could draw upon vast experience of overseeing CompCo or other plants and organisational structures in other firms and had a clear vision of the change they wanted. This was the rung of management into which managers such as Mr. N wished to move.

These managers' decisions had a decisive impact on the career prospects of other groups of senior and middle managers because in conjunction with management consultants they created the company's corporate strategy and key change management decisions, such as the move to introduce GEMBA. The outcomes of their policies could result in many middle managers losing their jobs. Even though they took advice from senior plant management they and, in the final step the COO, were the final arbiters of the direction and outcome of management policy. They supervised all the plants within CompCo and it may be recalled that Mr. AB, Mr. N and Mr. SDN had periodically to attend inventory review meetings with them to bring them up-to-date with the progress being made in inventory reduction.

The COO, Mr. VDS, presided over the governance of CompCo and sat at the very summit of the hierarchy, having had previous experience in "world class firms". He had been head-hunted directly into corporate management after an extensive search using personal contacts amongst senior corporate managers in the global automotive industry. Recruitment mechanisms at senior levels, as I inferred from a conversation with Mr.RC [3rd January 2009], ranged from a

combination of discreet word of mouth identification of talent in the industry to the use of executive search consultants operating world wide to secure managers with global experience in the best companies in manufacturing such as Boeing, Pratt and Whitney. The individuals approached received lucrative job offers that would help prevent poaching by industry rivals because as Mr.RC would say, the automotive industry was a very small world in which word travelled very fast.

These top managers brought with them distinctive features of cultural capital and had their own views on how companies should be managed that were immune to the existing senior and middle management organisational ethos of the organisation they were entering. They also brought with them reputations for 'turning things around' in the companies they had worked for and for steering those companies through the tempestuous waters of market instability and corporate change. This vision which was derived from their intentional experience in a phenomenological sense, served as the basis for the change management strategies they advocated and was the basis for their criticism of existing workplace managers. There was a perceptible insensitivity to the culture of the organisation they had been brought in to manage.

Their vision, though overarching and long-term sometimes, resembled Chris Smith's [Smith, 2003: 354] comments on corporate strategy in which enunciation was an end by itself and its incessant revision with constant redrafting towards perfection seen as an achievement. Yet this approach to strategy was often intensely academic but incongruent with the realities on the ground. There was a perception of strategy as an essentially linear process which, if done correctly would produce almost inevitable results, rather than as something which was essentially emergent and needed to adapt and emerge in the specific environment of CompCo.

Senior company men perceived these managers as a threat both to the company and their own career advancement because of the authority they exercised. This was illustrated by the obsequious manner in which managers such as Mr. N spoke to Mr. VDS but it was now much harder for senior managers who were long-serving CompCo men through and through and at the end of their careers, such as Mr. N, to hope against hope that they would break in the pinnacle of corporate management positions of CompCo at Nellore after becoming the GM of a plant. They realised that because they had to compete with outsiders whose CVs boasted experience of working in and 'turning things' around in companies around the world, their prospects were limited. The age cohort of these senior corporate managers such as Mr. VDS and the team he lead, in Nellore, ranged from 52-65 years.

The social strata of these managers such as Mr. VDS could be inferred from interest in golf which is not played very widely in India, their patronage of classical music and art, their discussion of Western and Indian genres of music and painting and their frequent trips overseas, typified their exalted social habitus and the cultural capital they were at pains to deploy and demonstrate. These corporate meetings were held at places familiar to them such as London, where the proprietors of the company were based, and industrial centres in the sub-continent, the Far East, China, Japan and the US.

The strata of these outsider managers at Nellore could equally be inferred from the chauffeur driven limousines they travelled in and corporate headquarters in Nellore, about which I learnt from Mr. AB and the trainee Mr. ABK, had an opulent ambience akin to that of a five star hotel, which characterised and showcased the company to the world and projected its ambitions to become a leading player across all the segments in the commercial

goods and passenger vehicle industry globally. Its ambition to engineer its customers' tomorrows from this corporate Valhalla was in stark contrast with the grease and grime of the MDV area of EWS. And it was in this environment that outsiders recruited into the company and immune to its culture and ethos and resistant to its organisational practices could be contrasted with the experienced managers who had spent their careers in CompCo and previously with very good track records could have expected to reach senior corporate managerial positions and perhaps head the whole company.

The point I am trying to make is that the success of the firm and the realisation of its goals and the firms outward projection reinforced and sustained the cultural habitus of the COO. This was very much a tale of two firms: one glittering with strategy and vision and futuristic technologically and the other conscious of its limitations and operating contingently in the grease and grime of a truck plant to, as experienced CompCo hands saw it, protect the company and produce its profits.

As the organisational chart in Appendix 1 illustrates, the COO Mr. VDS, was aided by the Head of CompCo's HRM who oversaw personnel management in the firm and devised payment, recruitment and training strategies. Immediately below the COO was the Head of Corporate Communications, who was responsible for constructing the image of the company. This key position, concerned with presenting the company to its shareholders, customers and other stakeholders was filled by a woman, an exception in an otherwise male dominated manufacturing organisation like CompCo where the few women if any performed administrative roles and tended to work in departments such as finance and occasionally in product design on the outskirts of Nellore.

Senior Managers in EWS, such as Mr. SDN the GM, exemplified this typology. The GM had long experience in the same company and like his contemporaries had climbed the corporate ladder to senior middle management positions after having started as young management trainees, fresh from university, three decades back. They had chosen to ignore offers from other firms and believed that by dint of hard work which they believed would never go unnoticed they expect to climb through the CompCo hierarchy. The GM had extended his tenure because he had a son who was paralysed and wanted to make sure that he could construct a home for such a physically challenged child and had committed himself to charitable causes. Although he was looking towards retirement corporate management valued his long experience in various posts across many functions in CompCo and he was totally committed to the company and willing to make personal sacrifices to address the firm's problems. The GM had been due to retire a few years back, but considering that he was indispensable at a time of transition in EWS, he had requested an extension of service. His view was shared by corporate management who could see that his experience of keeping EWS going was far too important for CompCo to lose at such a critical time.

Managers such as him had their distinctive reasons for continuing in CompCo after retirement and did not necessarily aspire to make it to the Board, unlike his colleague Mr. N. In the case of the GM, he also hoped that the extension would allow him to raise funds for his dream project, a home for adults with reduced motor, language or self-help skills.

The GM believed in pragmatic realism and this approach of being constantly aware of the limitations imposed by constraints external and internal to EWS demarcated him from Mr. N who was up to speed with the very latest

managerial recipes and guru texts and wanted to see their implementation in CompCo. The GM, Mr SDN believed that it was essential to put EWS in good order before any attempt was made to implement lean transformation in the manner envisaged by Mr. N and in accordance with his favourite book *Lean Thinking* [Womack, 2003]. The GM was also aware of the limitations posed by suppliers and also that while efficient manufacturing practices through lean manufacturing could be useful in producing greater efficiency, over production was not necessarily the answer at a time of recession when the company faced critical short-term challenges and a fight to survive in a highly competitive market with falling demand.

He believed in getting things right which to him implied managing employees, material and machinery with common-sense and reaching out to suppliers in order to work with them, identifying their problems before implementing any overarching programme of change management. Equally subtly, the GM was a firm believer in having a quiet chat with other managers and operators when there were problems rather than making demonstrative gestures. He believed in keeping a low profile and being a very modest man and wanted to build consensus within the plant and to see that consensus reflected in positive outcomes. The GM's managerial approach is well represented by the following pre-requisites for a managerial role identified by Watson and Harris [1999:104]

a) The importance of interpersonal relations in all business matters.

b) The need to be liaising and persuading if you want anything to get done.

c) The importance of communications and having to build contacts with all the agencies you have to deal with.

d) How you have to listen and always see things from the operator's point of view before you make a decision.

e) Establishing networks and listening constantly.

f) Building trusting relations with the people whose help you need in getting your job done.

The GM, Mr. SDN, valued all these principles but establishing networks and listening constantly were at the very heart of his managerial project in EWS. His pragmatic realism was reflected in his belief that the company needed to monitor its markets incessantly and identify products the market needed to fill its order books rather than making over-engineered products that might sate corporate management's obsessive desire for quality for its own sake, which he argued afflicted some of the proponents of lean manufacturing, but incurred delays to market and excessive costs with poor returns for the company. Mr. SDN believed that the road transport conditions in India and the almost certain inability of CompCo to force large suppliers to adhere to JIT would undermine lean manufacturing and its effectiveness in the context of the Indian automotive industry. He was also had a clear view of the coercive consequences of lean manufacturing regimes, as amplified by recurrent management labour tensions in nearby automotive plants made which made it clear to him that he could push work-intensification only to a certain point. What mattered to him was the ability of line managers and permanent CompCo workers to work together in order to secure gradual gains in efficiency without recourse to the overtime working that typified many lean operations. Instead, he believed, creating a camaraderie amongst

employees would cause them to work a little longer of their own free will whenever the company needed their services. The GM felt that Mr. N, who prior to being appointed as the overall head of the GEMBA project of CompCo, had headed the overall end product quality assurance apparatus of EWS [Refer Appendix 3]ought to have known, the structural constraints EWS operated under better than anyone.

Mr. SDN wanted Mr. N to be more selective and concentrate on getting people to actively imbibe GEMBA's vocabularies more voluntarily instead of just expecting people to participate half-heartedly. He was clear that voluntarism and emotional commitment would allow the company to implement measures such as the GEMBA inventory roadmap, with everyone understanding what needed to be done, rather than acquiescing in a top-down initiative driven by senior management. His conclusion implied that the GM was aware of the inability of the GEMBA team to get operators and middle managers to adopt lean supply chain management practices wholeheartedly and inculcate the various guidelines which Mr. AB had proposed.

On the other hand managers such as Mr. N were seen by many to be all pomp and flamboyance personified in his conduct described earlier in the inventory meetings section. Mr. N had sensed the change in the wind with the dynamic COO, Mr. VDS, having a greater say in the company and was desperate to be in his good books and, in my opinion, get promotion onto company's board before hanging his boots for good. He saw board status and a role in corporate management after all these years of working in EWS as carrying the prestige and immense authority he deserved. Getting on the board was becoming increasingly difficult because of the limited number of spaces available and the possibility of lateral entrants from other companies competing with him for the post. If he wanted this preferment, Mr. N could never be perceived as accepting the current limitations in CompCo's production and managing within those limitations because that would mean that he would appear

unenthusiastic and unwilling to embrace change in the way personified by the COO Mr. VDS.

As I have shown in the context of the inventory meetings and Mr. N's style of management, Mr. N tried to mask his authority by deploying a vocabulary that would make him appear to the attendees to be a nurturing coach and empowering agent mirroring the mentor style of management and ascribing towards being a facilitator of the attributes that characterised the learning organisation. [Senge, 2007] However, Mr. N would only go so far in having in countenancing an accommodation of the operator's perspective. He did not have the patience to build contacts and listen, two of Watson's pre-requisites for successful management: instead he expected operators and line managers to possess the right mind-set, as he saw it, and meet his expectations without effort or persuasion on his part. He wanted deliverables and would jettison his 'coach' demeanour and become blunt and direct with erring subordinates, such as Section Heads, without much provocation. Then the persona of coach and motivator in him would be replaced by a more direct authoritarian style that emphasised deliverables, with the aim primarily of instilling fear and respect amongst subordinate senior and junior middle managers alike to make it more likely that they would deliver the GEMBA project's targets.

Mr. N was constantly engaged in thinking how to engineer CompCo's tomorrows in synchrony with the thoughts of Mr. VDS, with whom he made operose efforts to be friendly and attentive to everything that Mr. VDS spoke, never ever attempting to disagree with him. He thought that he identified himself with the COO's vision for CompCo of which I got to know a few fragments, both from his phone calls to Mr. VDS and his chats with me during the ride back to Bangalore. During these journeys I listened to Mr. N's vision for CompCo as a world class, lean and functionally contiguous organisation without many of the departments, such as stores

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and material planning, that he viewed as drag coefficients on the company. He had direct access to Mr. VDS and in his capacity as the head of GEMBA spoke to him on a more regular basis than almost any other manager and had to concur with Mr. VDS's future vision of a company incorporating the best practices of the global automotive industry. He said that although a 'tipping point' had been reached he would often point out to the popular aphorism that 'Rome was not built in a day' when the limitations of human and productive capital in CompCo were singled out. As I have pointed out above, this tenacious but optimistic perspective on managerial strategy contrasted with the more low-profile pragmatic realism of Mr. SDN the GM of EWS.

Senior Middle Managers represented a bridge between corporate management and senior plant management and supervisory line management. They were the adhesive that held the plant together and ensured its uninterrupted day-to-day functioning. The implementation of long-term change management projects could not be guaranteed without the plant's uninterrupted functioning so they occupied critical roles. Senior Middle Managers represent the segementalist tendency and for their own survival in the firm had no other choice other than to speak the language of numbers and targets.

Section Heads such as Mercury commanded fear and respect amongst operators and line managers. In times of crisis such as industrial accidents and when it was time to ramp up production at very short notice, the long standing networks and personal rapport cultivated and enjoyed by senior middle managers such as Section Heads with senior operators, who in-turn influenced other operators and their hands on control over employees and line managers was undoubtedly of more immediate relevance to the company rather than the theoretical constructs of GEMBA. Both the survivors and the fire-fighters had spent virtually all their working lives in EWS and were fiercely loyal to the company. Managers such as Mercury, the boss of Mr. AK

and the late Mr. SMU, and who tended to be in their late forties or mid-fifties were willing to endure great problems to make sure that they were never ever late for production and so began their 2 hour commute to the plant at the crack of dawn and stayed late into the night if required.

One of the outcomes of my feedback on the state of GEMBA, where I mentioned the continued presence of line managers in the same departments for many years giving rise to a dominant subculture and a segmental outlook, was the breakup of the group of a triumvirate of line managers Mr. AK, the late Mr. SMU and Mr. ISC who were all in their early fifties. In December 2009 the GM Mr. SDN transferred them and other entire blocks of line managers and operators from EWS to the other plant, WAP4, to disrupt their subculture. I became aware of this development, when I went to EWS to enquire about developments after my exit from the field.

It was evident to the GM Mr. SDN [24 January 2011] that the company could go only get so far by belittling line managers such as Mr. AK and Mr. ISC who had to maintain inventory records, take the GEMBA message to the line and monitor operators. These managers would not rise much higher in the hierarchy and in the view of Mr. SDN were unemployable elsewhere but had skills specific to CompCo and could be called upon at any time of the day to meet any contingency. Though widely perceived as inefficient by the GM, he said that they were a necessary evil as these line managers cleaned up the mess other managers and operators had made and the reason for using the word 'survivors' is because that is the phrase the GM Mr. SDN used to best describe them. The plant's running and orderly functioning relied upon such committed career-people who were tenacious survivors and had seen many a management buzzword come and go as their hair had become white in the many years they had spent in EWS, the GM, classified managers such as Mr. AK, Mr. ISC,

the late Mr. SMU and the disciplinarian Section Heads such as Mercury were the rivets that held EWS together.

The GM Mr. SDN attributed this instinct to survive rebuke and continue working, as being attributable to the same qualities of tenacity and persistence these managers displayed to evade transfers and continue in the same departments. He described this as symptomatic of 'the old man and the sea syndrome' and saw them as possessing the attribute of timelessness. When pushed at an earlier point of time by the GM to comment on what I thought about the triumvirate of line managers whom I had spent considerable time with [April 2009, when I was following up Mr. AB's inventory GIRAPs], I had in very vague terms indicated to Mr. SDN [April 2009] this tenacity and their ability survive their superior Mercury's periodic humiliating dressing down sessions. They were comfortable with their colleagues whom they had known for many years and did not want to trade that accomplished sense of familiarity for any other job outside their immediate surroundings. The measures they adopted consisted of rectifying the flaws Mercury had pointed out in their work and doing everything to satisfy him combined with the deployment of an array of defensive mechanisms that ranged from impenitent silence to arguing incessantly about the definition of any given situations. They had developed tacit and non-verbal understandings and camaraderie had come to develop over the years by working on the same desks and assembly lines and these enabled them to handle managers such as Mercury, who they rightly predicted would eventually tire and climb down. The promotion prospects of these managers depended upon their appraisal reports prepared by their Section Heads such as Mercury but both the GM, Mr. SDN, and Mr. N ensured that reaching important GEMBA milestones such as those mentioned in the roadmap, which were broken down into weekly targets, now constituted an important consideration in the promotion prospects of these managers.

Mr. AK and others lived modestly and had managed to accumulate substantial savings because most of their day revolved around EWS and they rarely took holidays. Evidence of this emerged when he told me had managed to build his own house in a street in which other EWS line managers lived and let them rent it, which afforded him an additional income. Later in January 2011 when we met, I noticed that Mr. AK had managed to move from a two-wheeler to purchase a car which he would pool with other line managers when required to commute to work.

There was another generational strand of lower middle managers, such as Mr. RGPN and Mr. SGM [now a manager overseeing the Pre Delivery Inspection Area, who had started his career in WDP4 as an operator but moved to the other end after passing the recruitment tests and had been in CompCo for nearly twenty five years], who did their work sincerely and quietly, meeting the company's requirements without wanting to stick their necks out too far and getting blamed for what they saw was not their creation. They wanted nothing more than to finish serving their time after which they would fade away into retirement when they would concentrate on other priorities in their lives such as being indulgent grandfathers to their daughters' children or, in Mr. RGPN's case, look after the orphanage which he helped [Mr. SGM, 24 January 2011; Mr. RGPN, 26 January 2011].

In the face of GEMBA their coping strategy was to lie low. These managers were survivors who, like Nichols and Beynon's line managers, could not find employment anywhere else because it was too late for them, as single company men, to learn new skills. As survivors, they would do what was needed to survive but not much more.

Nevertheless, CompCo needed this organisational constituency, for its intimate knowledge of the plant and their ability to keep it running at times of stress but was not interested in furthering their careers anymore or investing resources in them.

Within EWS there were inter-generational tensions between insiders and shooting stars occupying different positions in the organisation that were accentuated by their different backgrounds. For example, the key GEMBA manager Mr. AB came from Northern India and could barely understand or manage to speak a few words of any of Tamil, Kannada or Telugu, the three southern languages spoken in Hubli. He tried to be Phil of Beynon and Nichols [1977:35] but failed eventually in spite of his genuine and sincere efforts to implement GEMBA and not to upset anybody particularly senior middle managers who resented his lateral intrusion into their organisational demesnes and saw him as a junior upstart and a threat to their authority. As a northerner who could not speak the same languages he was more easily distanced.

Mr. AB belonged to a newer generation of managers who could be seen as a particular sub-type of 'career-shooting star' and as a specialist had made a dramatic entry into the habitus of the careerist managers of CompCo laterally, more or less as a gate crasher. His promotion over the heads of many managers meant that he carried the imprimatur of corporate management who for all practical purposes considered him at the threshold of senior management. The fact that he had direct access to corporate management in Nellore, a luxury not enjoyed by most middle managers who had to go through their departmental heads or go only when summoned, a prospect they dreaded because it would mean a dressing down or on rare occasions that they had to attend an award function for winning a GEMBA Empower festival prize or collect a souvenir just before retirement. Mr. AB was expected to be a very successful manager delivering results and was remunerated accordingly.

The difference in styles of management were stark: in contrast to Mr. AB's kaizening, troubleshooting and coaching vocabulary and wide management repertoire sat the vocabularies of targets and numbers deployed by fire-fighter senior middle

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managers such as Mercury who was schooled in being blunt, hands-on and getting on with the job even if it meant shouting at subordinates.

Mercury had little time for polite niceties in his dealings with Mr. AK, Mr. SMU and Mr. ISC. Underlying his management style was an implicit acceptance that whatever the company did was for the common good and should be complied with. He and his firefighter colleagues saw no reason to seek greater efficiency through the process of dialogue, persuasion and participation that was readily accepted by the newer generation of managers, whose entry cut right across the company's hierarchy.

In contrast the fire-fighters believed in 'doing things on the spot right' and were certain that through tight management they could manage to deliver the same outcomes promised by lean manufacturing in terms of cost, quality and quantity more easily. This contrasted with the more theoretical outlook espoused by the newer generation of managers such as Mr. AB who I noticed wanted to be up to speed reading the latest issue of the Harvard Business Review.

As I have explained the mutual undercurrent of subtle antipathy was reinforced by cultural contrasts between Mr. AB and careerist senior plant managers and senior middle managers of CompCo. But he also faced difficulty in breaking down the distance between himself and the operators, who found him very theoretical and technical. Although they talked to him politely, they absorbed what he said only partially and occasionally with difficulty. Thus, if they met him at all they met him half-heartedly and could not concur with his world view, however hard he tried to convince them.

The inventory meetings clearly brought home to me the fact that the older generation of managers were more authoritarian with regard to their subordinates, refused to admit they could be wrong and were resistant to being 'talked around' by a person who was much junior to them in age. In the inventory meetings some of the

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middle managers would indulge in cross talk in Tamil, a language AB could scarcely understand as soon as the first opportunity presented itself, for example when he had to take a phone call from the Executive Director Manufacturing in Nellore or deal with an inventory management question from either the Northern or Central Indian plant. The younger Mr. AB who was in his late thirties, and his contemporaries were less inclined to loyally serve one employer until the end of their careers, quite unlike long established managers in EWS who had started as apprentices after their engineering degrees and risen up the career ladder in the same company, being rewarded for their loyalty and hard-work by promotion. As I have noted in the inventory meetings section, AB would try to get across his point in an English laden with technical vocabulary which was fine with senior managers such as Mr. N, the GM Mr. SDN, the widely travelled COO, Mr. VDS and the individual domain heads of functional departments and to a significant degree EWS DGMs, GM and Section Heads. However, this vocabulary was sometimes incomprehensible to lower level line managers and operators who preferred to speak Tamil mixed with some English.

As mentioned earlier, Mr. AB had invested an enormous amount of energy and time in GEMBA preparing its roadmaps, doing the GIRAPs and trying to get veteran senior middle managers, who had seen many a management fad come and go, to cooperate and take the initiative in aggressively reducing inventory. His efforts to get them into developing a scientific methodology that pre-emptively would reduce waste and cut costs, measures that required additional diligence and time over and above the production activity on which all their efforts were concentrated, meant that often he had to stay in the factory very late or be away from his young family.

As mentioned earlier the underlying generation gap between the shooting stars and the company men was illustrated by the way Mr. AB got along with younger graduate trainees and certain middle managers. I presumed that being the younger

generation of managers he and his contemporaries were more comfortable with the apparent atmosphere of informality that characterised some of the companies in the IT industry located, just down the road from EWS near Bangalore, rather than with the measured strategy and vocabulary of words he had to use whilst talking to old timers in EWS such as Section Heads and the Head of Material Planning, Mr. TMS. Thus the shooting stars developed a separate way of talking and behaving, very distinct from that of the company men. I learned later from managers such as Mr. RGPN and the trainee Mr. ABK, who has since left CompCo, that Mr. AB was disappointed with the way GEMBA was going and that differences had developed between himself and Mr. N who epitomised pomp and flamboyance. Managers such as Mr. AB were also constantly on the lookout to advance their careers, in other companies if necessary, and such differences and the inevitable frustrations could lead them easily to move on to pastures new.

As young graduates or trainees these employees had limited experience and only tacit knowledge of CompCo's organisational ethos, but they showed a willingness to adapt to new tasks. But the GM Mr. SDN admitted that in contrast to their older colleagues they wanted to try to avoid the 'grime' of the shop floor if at all possible [Mr. SDN, 27 January 2011]. They were also shooting stars and the senior management knew that they would not stay long within CompCo, even as it invested substantial resources in training. This was demonstrated earlier in the example cited by Mr. RGPN, where design engineers were leaving the firm. They were ambitious for advancement and more than ready to move firms to achieve it, resulting in a high turnover of junior managers. This generational group, along with the main body of shooting stars, believed it would rise higher in the managerial hierarchy by changing jobs frequently, with each job in the new firm offering higher pay and status. That

outlook contrasted with the older generation that cried out for job security and saw its future inextricably linked to a single company.

On the other hand for the opportunists who were just starting their careers, the burgeoning IT industry and its attractive pay packages and perceived excitement compared favourably with the tedium of manufacturing jobs and meant that CompCo had to struggle hard to retain talent. The GM Mr. SDN opined that the notion of company loyalty had changed so that these people had to be paid the best salaries and given all reasonable amenities such as accelerated training and the latest notebook computers. These gate-crashers, as Mr. SK who held a clerical post in the financial audit section in the second floor of the EWS administration building [refer Appendix 8], who had become a manager after starting out as an operator, liked to call them, were resented by the survivors, the line managers and senior line managers who had to ensure that the plant functioned. They believed that these younger managers would benefit from 'seeing the real world of the line' rather than sitting in air-conditioned cabins preparing drawings and graphs. This point was acknowledged later when trainees began to spend more time in the line but EWS management was reluctant to demotivate them at the beginning of their careers, not least because manufacturing paid lower rates of pay than the service sector to which they might otherwise be attracted. Yet, despite its concern to keep them and in spite of its expenditure on them, CompCo saw a high rate of turnover amongst the opportunists.

I conclude by observing that the cohort visualised by me as a fieldworker in EWS would be the last the generation of career managers of CompCo and that eventually they would give way to managers who were given more stringent performance parameters to adhere and whose employment would be predicated on shorter employment contracts rather than employment for life. Hence I argue that, patterns of recruitment, commitment and career pathways affect the strategic

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exchange between managers and shape organisational structure as much as it shapes managerial policy.

6.7.3 Resume: The interplay of departmental segmentation, hierarchical positions and career orientations in the experience and activity of CompCo managers

Whilst career pathways and orientations to some extent cut across and complicate the effects of departmental and hierarchical differentiation, departmental divisions remain important while hierarchical relations remain pivotal. As soon as Mr. AB left the company in December 2009 after my fieldwork and Mr. N was promoted upwards to head WAP4, GEMBA lost its champion and its essential vigour. Even though its practices were followed, the grand vision of lean transformation lost some of its impetus and overriding pre-eminence within the company. Mr. AB was an important pivot in the GEMBA project and losing him meant the loss of the engine that drove lean manufacturing forward.

6.8 Conclusions

This chapter addresses two competing vocabularies: of the vocabulary of immediate targets and strong management with the vocabulary of persuasion, participation and the achievement of longer-term aspirations through lean manufacturing.

The implementation of a new system of inventory control led by corporate and senior management sought to improve on the extant procedures by establishing a more tightly regulated and recorded flow of components which would allow savings through stock reductions, without jeopardising production schedules, provided the

new system was implemented in the methodical manner envisaged. However, the proposed procedures did not abolish persistent tensions between the competing objectives of immediate production and longer-term reduction in stock levels, and these tensions were manifested in the competing priorities of different mangers who gave foremost priority to the preservation of their own functional domains.

Limitations of time, person power and competing vocabularies and imageries were particularly important in making it difficult to reconcile these competing priorities and so generated subterfuges and provoked disagreements between managers and across departments. These factors also had a broader temporality, as changing market conditions led to shifts in pressures within the company and different generations of managers, each with its own aspirations and expectations towards work, drew on their personal experiences and reflected its own interests.

The pressure to reduce inventory brought out the tensions between the competing rhetoric of long-term change management and the rhetoric of the short-term meeting of targets to preserve the company's bottom line. Importantly, this section also links the pressures of inventory management to the career pathways of managers by drawing conceptual resources from Nichols and Beynon and from Watson.

And underlying these other factors were the effects of the recession and stock market pressures that forced corporate management to react focusing contingently on meeting the targets necessary to produce the presentable balance sheets that were immediately important for the company's survival. Thus lean manufacturing had to be accommodated within an environment of complicated uncertainty and I therefore advocate a critical realist and pragmatic appraisal of regimes of production and their adoption in different economic and social contexts.

The patterns of disagreement and subterfuge and conflict did not of course just run horizontally between departments or within project groups (and out beyond the

organisation into the network of suppliers) but were strongly linked by vertical relations both within the management hierarchy of senior, middle and junior managers but also between managers and shop floor workers.

In this regard although the original exponents of change and the sponsors of new systems may have been specialist managers, the systems had to be implemented by designated middle managers whose compliance could not be taken for granted. Meanwhile, other middle managers, along with their subordinates, were likely to defend their departmental priorities and protect their functional domains, subverting the demands of these change agents. Finally, ordinary manual and white collar workers were likely to be sceptical of the claims and objectives of the innovators (not least because they involved tighter monitoring and control of the work processes) and would seek to avoid the demands placed on them.

Chapter 7 Workers' Attitudes and Trade Union Responses to Change Management Initiatives

7.1 Introduction

This chapter will analyse workers' responses to the change management strategies introduced by corporate management and implemented by plant managers and middle managers, against the backdrop of changes in the nature of operators' employment contracts over the years that were described in Chapter 6. In considering the responses of workers, I will argue that the deployment of the precepts of lean manufacturing and GEMBA did not find favour with a large majority of workers in EWS, and I will examine the reasons why managerial rhetoric and the rewards promised by GEMBA failed to secure the acquiescence of a large majority of workers. CompCo's corporate management wanted operators to change their vocabulary from one doubting the intentions of management to one believing in its linguistic visualisation of participation and troubleshooting. They insisted that both operators (now called "associates") and managers were important participants in "engineering the tomorrows of the customer". EWS, rather than any of the other CompCo manufacturing units, will be the focal point of my attention in understanding trade unions and workers' responses in this chapter.

The overall analytic aim of this chapter is to: examine workers' attitudes towards GEMBA in EWS; examine trade union reactions to workers' attitudes to GEMBA; highlight the implications and experiences of managerial policies such as GEMBA for workers and the trade union responses to their grievances that shaped these attitudes; and finally, to consider trade union responses towards managerial

policies in what was an evolving pattern of IR in EWS. I will break the analytic aims of this chapter into three tasks. The first will be to gain an insight into the impact of GEMBA on workers' attitudes and an understanding from their vantage position of the repercussions of management policies that contradicted and undermined the participatory rhetoric of GEMBA. Explicating on the above point, I have earlier demonstrated that a medley of dynamic internal and external vectors pierced CompCo as a company and threatened both its market position and its survival. The external vectors, some of which, are dealt at length with regard to the discussion on changing political economic context in India in chapter 4, such as recurring cycles of economic recession, the changing structure of the Indian commercial vehicle market and evolving and increasing customer expectations, raised questions for which there were no definitive answers. Instead, the company adopted strategies that it realised were both adaptive and emergent. The internal vectors had their origins in the inefficiencies of old plants with deeply embedded working practices and cultures with multiple textures of relationships, using machinery which impeded the sort of efficiency the company wanted. Reacting to these vectors, corporate management was determined to tailor and deploy GEMBA to bring about fundamental changes in the plant's work culture and working practices. However, GEMBA was a long-term strategy whose success could not be guaranteed, and if it did succeed it would take time to 'capture' all the benefits. Thus, faced with immediate challenges, managers at corporate headquarters saw no alternative but to drive through episodic bursts of cost cutting that included substantial job cuts. Indeed, such were the issues facing the company that any other new idea that corporate management thought would deliver results and therefore secure CompCo's future seemed fair game. In that way, EWS' workers were the targeted recipients of management's participatory GEMBA rhetoric, but at the same time were also the victims of corporate management's

plans and perambulations as it sought to define the best strategic pathway for the company.

A second task of this chapter will be to trace the history of trade union mobilisation in EWS so as to deduce their responses over time, and then link these responses to an understanding of whether the trade unions were successful in reacting to the managerial strategies that they thought were fundamentally inimical to the interests of the plant's workers. The trade union responses that had to be formulated in a modern India had come to differ, in many ways from the time of Ramaswamy's *The Worker and his Union* [1977]. trade unions and Management now had to interact in an Indian economy that on one dimension embodied neo-liberal capitalism – but in another dimensions typified crony capitalism, powerful hierarchical patron and hierarchical client relationships that perpetuated the pervasive denominators of social inequality such as caste and widespread economic disparities. In recent years, CompCo's trade unions faced a considerable challenge in having to react successfully to the changing contours of corporate and plant management's onslaught, and protect workers from its consequences, whilst at the same time maintaining their relevance for workers and bolstering their support in a competitive union environment. Because the issues EWS' trade unions faced were in the midst of an ongoing transition in India's social structure, they had to react to workers' aspirations to upward social mobility on the one hand, whilst on the other assuage their deep-seated concerns regarding job security. The two did not always sit comfortably together, as some cohort of workers competed with each other for advancement whilst others wanted to preserve the status quo.

A third task of this chapter will be to bring out the multiple textures of the interpersonal relationships that existed between individual workers, shop floor conveners and managers, and to unstring the dynamics of the contradictory nature

of their relationships. This will help in understanding the contingent forms and locations of the accommodations reached between workers themselves and between workers and their line managers, within and across various shop floors in EWS. This process of accommodation had co-existed with sudden flashpoints of worker opposition, which reinforced the history of animosity between management and labour that had begun in the 1980s. I will now outline the thematic content and layout of each section to explain how I have gone about achieving the three analytic tasks I have just outlined.

Section 7.2 identifies how workers responded to GEMBA and the reservations to GEMBA that shaped their scepticism. Section 7.3 will try to bring out significant features of industrial relations in EWS by etching the plant's industrial relations history. The historical account provided here serves as a bridge linking the previous section to Section 7.4, which understands workers' attitudes, contemporary trade union aspirations, their mobilisation strategies and corresponding responses in EWS, and their responses to managerial prerogatives, which were irreconcilable. This section concentrates its attention on the evolving pattern of industrial relations during the period of fieldwork, which was one of declining militancy, punctuated by only occasional bursts of protest. It points towards a tapestry of relationships that existed within the shop floor between workers and management and within and across trade union management relationships in EWS.

7.2 Workers Responses to GEMBA

At the outset and before proceeding any further, I would like to point out that caste differences did not emerge as a major determinant in shaping the reactions of two age cohorts of EWS workers to management policies. Indeed, if the converse were

true, key informants among the older operators such as Mr. VDVN, Mr. TNS, Mr. KNM, the middle manager Mr. RGPN and other operators would have replied in the affirmative to my repeated probing on this topic and its effects on industrial relations and more restrictively GEMBA in EWS towards the end of our interaction. I attribute the non-emergence of caste as a clearly discernible determinant in workers' reactions to management policies, to the constant pressure faced by managers and workers in EWS production process functioning in the manner described by Beynon and Nichols [1977: 76]. They demonstrate how different managers and workers in ChemCo collectively played their cumulative part in ensuring that the technical system survived, and how extraction of surplus value was integral to the continuity of the fragile technical system, which would have collapsed if each part had not played its functional role effectively. It may well be that the caste of particular workers might have shaped managerial attitudes subjectively in terms of their assumptions about the work ethics of their colleagues and plausibly could have coloured their assumptions about other workers and managers. However, based upon my observations and the empirical data, I believe that senior plant management in EWS did not have time for manipulating or blatantly discriminating based upon caste, because it needed all the human capital and machinery it possessed to work in optimal synchrony; consequently, it was pre-occupied in ensuring the functional contiguity and survival of technical system.

Workers in EWS were not a single block, and different age cohorts of directly-recruited workers brought with them different perspectives on work and work histories in the company. In addition to the directly-recruited workers who had been hired on the contracts which were usual before economic liberalisation, there was a class of contract workers hired via outside labour contracting agencies (who supplied labour to large industrial concerns in Hubli) with little job security who were viewed

as a threat by directly-recruited workers, the last of whom was recruited in the late 1990s. In addition, there were some other workers within EWS who were, in effect, probationers who were taken on during a limited drive to recruit operators in 2005 and who were waiting uncertainly for CompCo's management to regularise their employment as permanent employees having a semblance of job security. Senior management had not made up its mind and was yet to regularise them.

I begin in Section 7.2.1 by picking out the reactions of older workers, younger workers and contract workers in order to understand the manner in which GEMBA affected the different categories of workers.

7.2.1 Generational differences in workers' perceptions and their relationship to management appeals

The two generations of workers in EWS tended to have different views about GEMBA and varied in their optimism with regard to managerial innovations. It is important to identify how their perspectives were shaped by the context of their employment. The older workers, whom I call 'old veterans', had been hired straight after matriculation and had gathered experience by 'learning on the job' and getting a feel for the machines they worked with. These older workers, hired by EWS in the late 1970s just before it commenced manufacturing operations in 1980, were first generational migrants mostly from neighbouring areas in the states of Tamil Nadu, Karnataka and Andhra Pradesh. They were attracted by a reputable and large company like CompCo setting up a plant in Hubli, and were particularly drawn by the job security it offered them. At that point of time, the older operators had not had the luxury of undertaking higher education, beyond attendance at the technical trade training institutes, and had to learn elements of the job as they went along. Some of the

operators nevertheless managed to study further after joining EWS, even acquiring university degrees.. Union convenors such as Mr. VDVN with his long experience as a trade union activist, demonstrated a perceptive awareness with regard to the labour law and the limitations of its functioning in India. These operators, now into their late-fifties, had been witness ess to a tumultuous and acrimonious phase of industrial relations in the company in the 1980s, which I will describe in the context of trade union and management relations in Section 7.3. This shaped their scepticism towards management and GEMBA, which they viewed as yet another passing fad. For instance, Mr. SMGN (now a quality inspector attached to the mobile quality inspection team of the 'End Product Quality Assurance Department'), previously a worker, observed that he had seen many a fad come and go, and that GEMBA might well be one more of them. It should be noted, however, that corporate and senior level plant management did not really tailor their appeals towards these veterans. It knew that it would be extremely difficult to secure the co-operation of the veterans and, though it would make an effort, believed it would be better to allow them to retire through voluntary redundancy schemes or early pension arrangements. Instead, as one of my management informants pointed out [Mr. RC, retired GM Exports, 27 December 2009], managers concentrated on two categories: the cohort of younger operators hired at the end of the 1990s, who were regularised or permanent employees, and the group who had been hired in 2005 but yet to be confirmed and who were in their middle thirties or early forties in age. These workers had seen spasmodic bouts of industrial conflict, such as the strike of 1996, but were seen by the older workers/activists [such as Mr. VDVN] as lacking political consciousness and as caring first and foremost about their own interests.

 Management thought that the vocabularies and representative imageries of participation and teamwork they offered would be better appreciated by these

relatively younger, middle-aged workers. It wanted to believe and hope that GEMBA would appeal to these younger operators who had been recruited from the Industrial Training Institutes and therefore had a greater degree of formal training. They had made it to CompCo through a tougher selection process, which involved written tests, an interview, a probationary period and finally confirmation as permanent employees. I discerned that, although repetitive assembly line production was not their preferred employment option, their first priority lay in holding on to their jobs in a tight labour market. These younger workers, in the thirty-to-forty age band, had young families to support and had growing aspirations. Accordingly, they made up the target group that management wanted to convert to the GEMBA cause and saw as critical to the company's future. It set out to nurture them.

This group felt under pressure to earn more in order to fulfil their own and their families' aspirations, which ranged from procuring the latest consumer durables to getting better life chances. Plant management tried to appeal to these motivations by terming them 'associated' and by urging them to take an active part in the 'GEMBA Empower' festivals and reward programmes. These 'associates' would then be rewarded periodically for their achievements through ad-hoc cash hand-outs and coupons which they could exchange for consumer goods, the value of which were directly proportional to their hands-on participation in GEMBA, in troubleshooting and in submitting kaizening suggestions.

However, plant management's efforts to speak the new language of growth, self-initiative and participation with greater politeness and beneficence proved to be difficult to sustain all the time and could thus be seen to be patchy and piecemeal, especially because some Section Heads appeared habituated to managing in a commandeering manner. Furthermore, their anger, although directed at their

subordinate managers, was transmitted to other line managers and via them to the workers they supervised on the line.

Yet both the younger and older operators, though varying in their response towards management policy, with one cohort being in the evening of their careers and the other being in the middle stages of their working lives and reluctant to fall off the boat on which they were sailing, did have similarities. Neither wanted their children or grandchildren to be operators, but instead hoped to see them employed, with better pay and comfortable desk jobs, as part of the burgeoning services sector, in areas such as IT enabled services and BPO, in cities like Bangalore rather than enduring the sort of repetitive manual job routines their fathers had come to expect week after week at the factory. Indeed, even a committed communist trade union convener like Mr. VDVN told me with some measure of satisfaction [Mr. VDVN, 28 January 2011] that he had managed to provide a good education for his son, who was now on his way to join the IT industry as a technical manager and who therefore would not have to follow his father's footsteps. Mr. VDVN continued to toil in the fond hope of mobilising the working class against their oppressors, capitalistic management, but this aspiration for upward vocational mobility points to the emergence of a technical class of younger operators who identified themselves with the desk-based office jobs of the service industry, rather than the grease and taxing physical labour of the shop floor.

That said, this optimistic perspective on GEMBA amongst the younger workers was to prove ephemeral and the causes for its negation are explored below.

7.2.2 Worker responses over time: scepticism reinforced

When first introduced, GEMBA managed to attract the attention of the cohort of operators recruited by EWS in the late 1990s, who saw good reasons to work with corporate management in building what the company called "a shared tomorrow for CompCo, its employees and its customers". As well as aspiring to a higher standard of living, this cohort of workers hoped that the vocabulary of empowerment and the fulfilment of the easier job routines promised in the EEI initiatives, the training classes held periodically and the N7i objectives that delineated the company's plan of action, would translate into their daily job cycles. They surmised that a more participative environment and complex job cycles would result in making their work more interesting and remove some of the repetition and tedium of their daily routines. That, together with monetary rewards earned quickly through the kaizening scheme, the Empower festivals and the GEMBA rewards scheme, made up an enticing prospect. Thus Mr.SGM [Mr. SGM, 13 December 2009] told me of an operator in the assembly area of EWS who wrote a poem about GEMBA in his enthusiasm, little realising that greater efficiency accompanied by empowerment would almost inevitably bring downsizing and more focused management. However, Mr. SGM felt that, over time, initial optimism had given way to scepticism and this scepticism continued to be fed by a feeling that operators were rarely given credit for the work done by them. He said that before, GEMBA workers had always been interested in the work they did and had routinely offered their suggestions through the channels of communication available to them. For instance, he said, although GEMBA had formalised and codified a large number of production practices in accordance with the precepts of lean manufacturing that emphasised continuous improvement of quality and cost reduction, workers felt that they had already been

doing their bit by participating in pre-GEMBA improvement programmes and cost reduction initiatives. As Mr. VN, another operator (from engine stores), explained to me, prior to the introduction of GEMBA there were involvement mechanisms such as quality circles. He noted that:

> "GEMBA was brought in by a multinational consulting agency but we had an ad-hoc but functional participation mechanism already and in spite of workers' grievances they actively took part in them. This mechanism was labelled as 5S and was really imported from Japan but the consultants gave proper structure to this import and had defined its scope." [Mr. VN, 3 April 2009]

Indeed, he emphasised the co-existence of participation and conflict in this earlier period. Workers had their grievances with management, but as employees of CompCo who made up networks of relationships with line managers and a sense of loyalty and duty, they did whatever they could to participate and better utilise their experience. This did not imply that they were not sceptical about management's motives – and certainly, the underlying oppositional struggle culture was pervasive, as the next quotation from Mr. VN will illustrate – but it annuls the impression that after the advent of GEMBA, workers had a change of heart with regard to CompCo's management:

> "In EWS we had quality circles before GEMBA and we used to participate there and give suggestions in spite of all the problems we have. But we have had to fight for everything and the union has moulded us in that culture." [Mr. VN, 3 April 2009]

In his opinion, workers understood that GEMBA was introduced because management wanted to codify, streamline and concentrate operators' suggestions and use them as a basis for continuous improvement, and it was not that workers were always hostile to participation. To illustrate his point, he gave an example of an occasion when workers expressed their willingness to participate as intelligent stakeholders who were equally interested in the wellbeing of the company; but in this context he also highlighted the limits of management's response:

> "A new Tata truck was bought and examined and workers gave far reaching suggestions on how to reduce wastage in assembly and cut down costs. These suggestions were not taken seriously by plant management. We got some compliments from the then GM, but nothing much after that and we got no recognition or appreciation of these efforts. Managers are rude and very discourteous towards workers and do not even acknowledge efforts of the workers. I won so many quality awards for Madras." [Mr. VN, 3 April 2009]

As a result he concluded that, even when workers made efforts that benefited the company (as he had done), they did not feel respected or recognised by management. Hence he lamented:

> "How does CompCo care for us? Workers are very sceptical and apprehensive about the possibilities of being rewarded for their efforts at any time by management, with or without GEMBA, and the denial of recognition makes them even more dubious of it."
> [Mr. VN, 3 April 2009]

This lack of recognition accompanied a deeper underlying tension, which united older and younger workers: concerns about job security and suspicion of management's latest tactics. Contract workers and probationary employees who had yet to be confirmed as permanent staff also came to realise that GEMBA's participation and self-initiative rhetoric did not have much in it for them, as corporate management tried continually to fine tune its adaptation of lean manufacturing and trim down the lines. They eventually joined the liturgy of workers sceptical towards GEMBA. These two groups of workers soon came to believe that they were dispensable and were being manipulated by plant management to put pressure on permanent employees, but would be the first target of any bout of belt-tightening as soon as it suited the company to make them redundant. They had also no trade union shoulder to lean on in EWS.

Another informant, a manager who was no longer an employee of CompCo, added the dimension of hindsight to this picture, which suggested a further basis for the growth in scepticism. He suggested that the negative attitudes were exacerbated by the trade unions cautioning operators participating in GEMBA by telling them of its pitfalls and refusing to be responsible if things went awry for any worker who stuck his neck out in embracing the troubleshooting and lean rhetoric chanted by senior plant management. [Mr. SGN, 12 April 2009, Pune].

Finally, while the manager quoted in the previous paragraph believed that the unions had responded to threats to job security by discouraging participation, some union activists believed that GEMBA involved a more insidious agenda. In particular, one of my main informants [Mr. VDVN] argued that GEMBA wanted to appropriate the only assets that the operator had: his tacit knowledge that he possessed over the production process, especially those skills that he had acquired through experience to get the most out of machinery and to manoeuvre around machinery he knew very well. He felt that GEMBA aimed to snatch away all his

assured incremental pay and seek to control him continually and predictably the way management wanted, so as to keep him permanently on edge. Indeed, many workers – including Mr. TNS, Mr. VN, Mr. SMGN, and not just union activists such as Mr. VDVN – believed that a core objective of GEMBA was to individualise workers and sever their association with the trade unions. Because management did not listen to individual workers, they needed a union to hammer home their case to management.

The next section tries to understand the consequences and outcomes of EWS's plant management trying to push through GEMBA.

7.2.3 The repercussions of plant managers trying to impose GEMBA upon workers and expecting their participation

As the previous chapter indicated, line managers such as Mr. AK were the wheels on which the chassis of corporate management's plan for implementing GEMBA sat and were in the front line of persuading workers to embrace GEMBA. Here I will discuss the effects of their efforts and show how workers' immediate resistance to GEMBA was aggravated by deep seated anxieties, described in detail in the next Section 7.2.4. In the following pages I explore several topics: pressures upon workers; limited and uneven participation of workers in projects; the inoperability of financial initiatives; plant management's dubious relationship with statistics; and the scepticism reinforced and undermined in GEMBA training classes.

First, pressures upon workers which were exerted through the management hierarchy – EWS's senior managers such as Mr. N, Mr. AB, all Production Heads and their subordinates – meant that the workers had an obligation to satisfy an

impatient headquarters in trying actively to draw in more operators to participate in the GEMBA activities vortex. Indeed, the middle manager, Mr. RN – who worked under Mr. RGPN and who was in charge of an engine stores section which dealt with the dispatch of finished engines, reported that middle managers and Section Heads were actively pressurised by their superiors [Mr. RN, 14 January 2009]. The operator's reluctance with regard to participating in GEMBA was perceived as a failure by middle managers and Section Heads, whom people like Mr. AB accused of having a pre-programmed tendency not to look beyond the immediate target. They were accused of lacking vigour and enthusiasm, and Mr. AB thought they spent their time finding suitable persons to pin blame upon – a theme explored at length in the previous chapter. It was also alleged by the operator, Mr. TNS, that departmental views generally crushed any innovation, and that Section Heads and other managers were always concerned to protect their own interests before those of the operators. In this context many workers, like many middle managers, were hesitant to instigate initiatives themselves. Within this atmosphere of 'blame culture' of management, Mr. KGN [9 May 2009] wondered what the point of GEMBA was when the 'charge sheet mentality directed towards workers' was so ingrained in the psyche of senior plant management, whilst they sought to identify and punish the worker rather than first listening to his problems with empathy.

In this scenario of multiple levels of organisational interaction, another experienced worker who had almost two decades of experience in CompCo, Mr. A an operator in the engine machining shop 5[23 April 2009] wondered: "What is the point of this GEMBA nonsense?" believing that the operators who had worked for the company for years were, after all, foes of management. I would like to note that Mr. A, with his considerable experience in EWS, appeared to me to have seen most of the senior managerial cadre and had formed definitive opinions about them and their

management style. Mr. A reminisced fondly about a GM he had known in the past. He recollected that his GM in engine manufacturing in the mid-1990s was very concerned about workmen's well-being, but the depth of this now long-retired GM's altruistic concern was not shared in equal measure by his managerial colleagues. Mr. A had worked and observed at close quarters many a manager and seen many a shooting star such as Mr. AB and their GEMBA-like projects come and go, as well as other line managers who were survivors and those who concentrated on weathering the storms of change and passing pressures to live to fight another day. Mr. A was strongly of the opinion that the company worked on a flawed premise, which was that it had too many workers and that the best way of promoting efficiency was to reduce their numbers. In the blame culture that existed, Mr. A felt that managers operating under conditions of competition from other managers had as their first priority the need to "keep the boss happy, serve him well and ensure their survival and protect themselves and their future rise in the hierarchy from the machinations of competitor managers." He also said that the reality was that middle managers were under pressure to ensure that the balance sheet stood up to scrutiny because showing a profit was the primary motive of the company, and heads would start rolling through the hierarchy if it failed to do so. Under these circumstances, middle managers tried to play safe at all times and dared not risk the ire of their immediate superiors, and workers had to adjust their expectations and live with the results of these complex interactions between managers at various levels.

GEMBA targets were set and GEMBA computation work was done by line managers, who were under pressure to deliver from Mr. AB and Mr. N, with some participation by a few young operators and some veterans. Operators were made to sit in front of the shop floor computer with middle managers and asked to suggest ways in which they could improve the efficiency of material management in

inventory and offer other suggestions to improve production. To date, however, operators like Mr. KNM [16 March 2009] from engine assembly who performed a repetitive task welding bolts to engine blocks, felt that GEMBA had only mixed results. Some acknowledged that the deep dive initiatives done by cross-functional teams of managers had a substantial effect in shops like engine assembly Shop Six, but in other areas overall there had been only marginal improvements in processes and some minor improvements in product quality. Moreover, some managers such as Mr. RGPN suggested that the real leap in product quality had occurred because of the success of the centralised Research and Innovation centre from product conception to prototype production in Nellore rather than the limited production related improvements work in the production areas. Meanwhile other middle managers believed that in most cases it was middle managers and Section Heads who had brought about real improvements in work processes, rather than operators. He believed that in these circumstances of suspicion of each other's motives, management were faced with a difficult task of coaxing and ensuring operator's participation in GEMBA, because of the complete breakdown of trust between management and workers. His view was that, instead of starting out with GEMBA, the primary goal of management ought to have been to win the trust of operators and display sincerity in its interaction with workers before launching anything so ambitious.

Having discussed the pressures that workers faced, I now discuss their limited and uneven participation in projects. Management and labour found it difficult to find a tractable modus vivendi and this was partly because different age cohorts of operators with varying personal aspirations and at different stages of their careers contributed their different cumulative perceptions and interests or disinterests in the GEMBA project. In this context, veteran operators like Mr. TNS reasoned that whilst

some workers took part in GEMBA, these predominantly younger workers simply wanted to impress and flatter the bosses, and he claimed that younger operators who had joined over the preceding ten or so years were searching for some sign that they were progressing towards more senior grades. Meanwhile older veterans, like Mr. TNS (who had once been a union activist) did not want to be conspicuous, but wanted to fade into the background, biding their time quietly as permanent operators and getting through their shifts without issues so they could ease their way out of EWS and get on with the things that really mattered in their lives – things which had nothing to do with EWS. Many older workers had set their eyes firmly on retirement.

Mr. SMGN [April 15 2009] felt that where a worker was being asked to Kaizen within that which management had already decided from above in production processes, that was quite different to being consulted in the first place on matters relating to efficiency and production cycle times, and not surprisingly elicited a less favourable response. Furthermore, Mr. VDVN felt that corporate management was not in touch with ground realities of EWS, which middle managers and workers had to negotiate on a day-to-day basis, something which the discussion on inventory brought out clearly.

With regard to the limited impact of financial initiatives, seven operators were introduced to me by Mr. VDVN in phase 3 of my fieldwork (as explained in the methodology chapter), and I was able to put some leading questions to them. In addition, I met about ten other operators including one in Nellore, with whom I had brief but quick interactions during my walks around the plant and who even went to the extent of claiming that they knew nothing of GEMBA. The seven operators said many of their colleagues shared that perception and neither they nor their colleagues wished to stick their necks out, in spite of the fact that corporate management was exerting pressure to get senior plant management to ensure the participation of the

maximum number of operators possible, and was trying to secure finally the voluntary participation of workers. In that context, there was widespread scepticism about the financial rewards that were promised for participation in GEMBA. Union activists – such as Mr. TNS, Mr. VDVN and older operators such as Mr. KNM – felt that deigning to trickle some rewards to the operators once in a while through the passport scheme was not enough to sustain workers' commitment in the long run. Furthermore, the opinion of an operator in the engine stores captures his resignation and scepticism towards management. Mr. VN suggested to me that such rewards were often difficult to extract:

> 'Management would refuse to part with money even if it were a meagre sum of Rs.100 and if it comes eventually it's always through layers and convoluted loops, so it would be too little too late. I had to coax and cajole managers to release payments to my other operator mates who participated in the quality improvement project who had dropped out. Whenever workers ask for money, management will always say it is a problem for them.' [Mr. VN, 10 December 2009].

Overall, then, such workers believed these incentives were unlikely to motivate operators to participate actively, especially as they felt they could see through the management's game, and in any case none of their long-standing grievances had been resolved, an essential precursor to them believing that management had had a change of heart.

When we look at plant management's relationship with operator participation statistics, Mr. RGPN [Sunday June 26 2004] also alleged that middle managers had possibly inflated the participation figures of operators in terms of the occasions where

operators had come up with suggestions in the kaizening and troubleshooting process. Senior middle management, he said, submitted overly positive reports to plant management which were sent on to the review meetings in Nellore and suggested to corporate management that an exaggerated number of operators were actually taking part by showing increasing numbers of suggestions and modifying the records for attendance at the 0800 hours meetings which allowed operators to accrue GEMBA passport reward points. Corporate management seemed not to worry too much about checking the accuracy of these reports, ostensibly because they presented a picture of involvement and progress that pleased them and implied that GEMBA was working. But, Mr. RGPN said that corporate management knew the limitations with regard to participation and was unflappable for the moment regarding these putatively massaged figures, because they knew nothing much could be done immediately to resolve the situation. Mr. RGPN felt that workers' reluctance to embrace GEMBA was best illustrated by the manner in which they resisted management rhetoric in the training classes, something the statistics did not reveal.

With regard to the scepticism reinforced and undermined in GEMBA training classes, one form of resistance was the rather subtle disruption of GEMBA training classes in which attendees would constantly pose extraneous questions regarding the organisation of the plant, with which trainers from outside organisations could not cope. This undermined the courses and rendered them ineffective. The majority of operators I overheard speaking during my stay in the plant – including those I came across in the afternoon training classes conducted to instil the precepts of lean manufacturing and GEMBA – were apprehensive of management's lean initiative and surmised that this was yet another ploy to squeeze more work out of them. It appeared to them that the trainers found them easy targets for all the faults prevalent in the company. Thus the operators undertaking the training programme said that the

trainers started with the assumption that workers needed to learn about the precepts of lean manufacturing in order to be productive, something they contested. Mr. KNM [16 March 2010], was very sceptical of management's attempts to facilitate job enlargement and greater variety of tasks within an operator's job routine, and its seeking to elicit more out of workers' job cycles by introducing 'takt' time and kaizening. Furthermore, he pointed out that, having asked people like him to take part in GEMBA and do more work, CompCo's management was now telling him that his task could be done by a machine . He also told me that in the new lean ecosystem there was no need for an extended role for the maintenance department since the operators should now learn to troubleshoot and carry out their own repairs, and identify the root of the problem themselves; failing that, they should seek the help of line managers and if that does not resolve it, they are urged to call the maintenance department. With heavy irony and a marked scepticism towards training, he said that management would, in his words, prefer to see the maintenance department on fire so that other staff were busy and constantly preoccupied doing maintenance rather than their staying idle! He argued that management, ever receptive to new cost-cutting ideas, wanted to emulate its neighbour in Hubli, the two-wheeler company TVS, where sixty per cent of employees were on short-term contracts, and only forty per cent were permanent employees.

Operators were highly doubtful of the elaborate quality infrastructure of which they were supposed to be a part. While this was premised on supposedly sophisticated, statistical quality measures such as Six-Sigma, rudimentary stores management was not practiced; this was a failing, operators contended. For example, EWS's management allowed surplus parts of the projects of the IVECO model (being phased out) to continue to occupy space and gather rust. Attendees at training courses were quick to point out such examples of what they saw as plant management's

negligence and its concentration on new theory-driven initiatives and grand stratagems, such as lean manufacturing, rather than relying on common sense, working effectively as individuals because none knew their machines as well as they did – a knowledge acquired through learning on the job and regular housekeeping, whose values were proven. They argued that plant management should sort out basic failings such as these before berating workers or adopting sophisticated tools and theoretical constructs of efficiency and quality optimisation initiatives, lean manufacturing and Six-Sigma.

On other occasions trainees would talk amongst themselves whilst the trainers were struggling to retain control, and these discussions would draw in the entire class, normally on issues and job routines in which the operators specialised, but where trainers had limited knowledge. In this way trainers could lose control of the classes they were teaching and the attentions spans of attendees would be exhausted.

In this way trainers, who might have been managers, consultants or experts on lean manufacturing brought in from some technical institute, engineering firm or consultancy in Bangalore, would lose control of their classes and would tire before the short classes ran out of time and workers had to return to their lines. Indeed, even training sessions on GEMBA seemed problematic because trainers would be asked questions about matters of detail to which they could not possibly respond because of their inexperience of the plant. Operators' queries were often highly specific and bore little relevance to the specialised lean topic of the day, and operators working in the logic of *reductio ad absurdum* made the trainers look idiotic. These visible forms of passive resistance to senior plant management's resolve to implement GEMBA were exacerbated by the training environment in which sessions were held, after lunch, in comfortable, air-conditioned rooms, whose effect was usually soporific. Even the efforts of Mr. N, who would try his best to speak courteously to associates in

accordance with his invigorating empowerment and troubleshooting rhetoric as he always did with workers, would prove in vain. This passive resistance and the scepticism to GEMBA had an underlying cause, which was related to loss of pay resulting from management's attempts to link operators' pay with GEMBA participation and active kaizening, in exchange for monetary increments. But, workers in EWS harboured other persistent anxieties in addition to their concerns about variable pay, which all formed part of the fabric of resistance: job mobility, medical insurance and security, health and safety and decreasing control over their shift and job routine, with management continually scaling up what it expected from them in a working shift. These various anxieties along with senior plant management's confused attempts to impose GEMBA, described above, ensured that apprehension and doubt overwhelmed and tendency to acceptance.

7.2.4 Worker cynicism coagulated – contextual anxieties

There were four persistent contextual factors that underpinned workers' anxieties and conditioned their sense of an 'us' versus 'them' environment in which they were pitched against EWS management. These anxieties were instrumental in maligning the chances of GEMBA winning over workers, and their wholehearted embrace of corporate management's new found commitment to the rhetoric of empowerment and its stated perceptions that, as 'associates', workers were equal stakeholders in the company's future. These anxieties shape the following discussions, and include: existential anxiety on losing assured incentive pay; unpalatable alternatives; the fear of a flippant attitude towards health and safety; and the tighter coupling of production processes and cycle times.

First, a crucial anxiety of EWS workers was their existential anxiety concerned with losing their assured incentive pay. This fuelled their reluctance to buy management's GEMBA rhetoric, and the assertion that they would earn more through participation was the fear of a permanent loss of what, hitherto, had been more or less assured incentive payments based on productivity growth. These were a major source of income over and above what workers saw as their modest basic salaries.

This dynamic incentive wage plan – as against the present piece rate system of a worker getting a definite increment provided he met his individually mandated quota of pieces working 430 minutes per shift over and above his base pay – was premised upon workers reaching the average day's production targets, as defined in the earlier settlements arrived at with the unions. This would alter the existing norm whereby operators were paid a basic wage but could earn piecework bonuses on top depending on their output for the day. Provided the operators achieved pre-determined targets, that had been agreed through collective bargaining, the bonuses would be paid. Management wanted to increase the working day from 430 minutes to 480 minutes with no increase in basic pay and with the piecework bonus frozen.If plant management in CompCo had their way in getting trade unions in CompCo to agree to its terms. Corporate Management viewed this piece rate system as unscientific and wanted *eventually* to do away with the trilateral system at the time of the labour settlement, where trade unions of a particular plant [using the labour settlements arrived at other plants as a reference point], the industrial engineering department within each plant and plant management sat together and fixed the increment.

Closely entwined with the increment was an argillaceous description of the job cycle and the time taken by each worker to complete the requisite operation, which varied greatly depending on the nature of the job routine within assembly

operations or machining operations. These negotiations also spelt out the number of breaks he could take from lunch and tea breaks Management wanted to do away with this piece time pay basis and link part of operators' pay to a management-determined time system that could vary based on the exigencies of production. It would be far more flexible because it was not susceptible to labour settlements bought through collective bargaining. This means if there was less target to produce the workers could not demand the incremental pay that was guaranteed to them for reaching the target. Pay would now be variable through kaizening and group performance. Management promised that it would benefit each worker individually rather than a flat piece rate.

Corporate management in Nellore wanted to push through these measures that ensured that operators' job cycles could be subjected to constant revision and tight scrutiny, but at the same time gave it greater control over the variable component of workers' pay. Performance based pay would be paid for reaching targets mandated by management, rather than by negotiation with the trade unions, not only in terms of volume, but also quality, thereby giving it almost complete control over the variable component of pay. It argued that workers could earn more by kaizening and rapidly accruing GEMBA passport points and reaching targets set by it, than they could under the present piece rate system which management feared carried a risk of workers overproducing (anathema under lean), so as to maximise their earnings. This pay system based on 'takt' time would simplify and automate payment systems and make it easier for the company to scale down production rapidly based on what it called dynamic market analysis, without any prior notification.

Consequently operators would lose a major source of assured incremental pay arrived through trade unions, plant management and the industrial engineering department at the time of signing a wage settlement. This assured pay would be

replaced by performance pay based on management prerogative which would become uncertain and unpredictable. This flexible payment system, driven by the precepts of lean manufacturing, marked an intent of management to make a clear departure from the existing system of deciding cycle time through negotiation with the union and in conjunction with the industrial engineering department during the process of productivity bargaining. And as a by-product, piece rate system payments would gradually do away with the need for the industrial engineering department whose closure was a long cherished desire of Mr. N, and in time allow CompCo to end collective bargaining over pay.

The anxiety generated amongst workers by the shift in the payment architecture was highlighted by the pamphlet issued by Mr. MCL [11 February 2008], who reported that in its ongoing discussions, the senior plant management of EWS "wanted [Mr. KS's] union to accept the result of the time study carried out by the industrial engineering department of EWS and therefore succumb to management's demands". In return for a base salary of Rs.5,250, management wanted agreement to a rate of working comparable to that agreed with the union at the WDP4 plant near Nellore, to accept working for 480 minutes continuously and produce more pieces (which varied from shop to shop across plants) in order to get incremental pay. This would alter the existing norm of an operator working continuously in one shift for 430 minutes of production per day on a piece time pay basis, and would link part of operators' pay to a management-determined time system that could be varied based on the exigencies of production and was not susceptible to collective bargaining. This means that if there were lower targets to produce, the workers could not demand the incremental pay that was guaranteed to them for reaching the target. Pay would now be variable through kaizening and group performance, even though management promised that it would benefit each worker individually rather than a flat piece rate. Mr. MCL forewarned

workers of the possibility of Mr. KS's union agreeing to senior plant management's demands for this new system.

When we look at unpalatable alternatives, it appears that workers felt trapped within their job roles as workers. They had only two alternatives: to cross over to the other side as management, when the opportunity presented itself, but in so doing risk the loss of trade union representation and the apparent job security they enjoyed as workers; or, to stay in their current jobs with no progression throughout their careers. For instance, Mr. KNM,[12 February 2009], pointed out to me that many workers preferred to remain as operators because it gave them a measure of job security that was supported, at least on paper, by the Industrial Disputes Act [1947] discussed in brief in chapter 4, even though that precluded any substantial increase in their incomes or changes in their social status.

Workers can be defined as those who are directly or indirectly (such as store room housekeeping) connected with the manufacturing process. Workers who are termed as entry-level operators directly fall into two categories: those who are skilled and those who are semi-skilled. Skilled operators came into the company as graduates of industrial training institutes and remained on probation for three years, employed in the S1 Band. After that probation period they would then move into the S2 Band but could take a machining skills test which, if they passed it, would qualify them to move up to Band S3. Semi-skilled operators were employed in roles supporting production, such as driving pick-up, vehicles and performed technical operations on the margins of the line that were repetitive and did not involve any extensive background training or skill. The nontechnical workers in EWS were gardeners, janitors etc., and they also stood a good chance of getting confirmation of permanent employment after seven-and-a-half years. After reaching Band S2 operators could opt to move into junior management roles, provided they passed the relevant aptitude tests.

I will now explain the entry-level wages structure of operators in EWS, and how it compared to managers. Within EWS an operator received an entry-level cumulative wage of Rs.11,000 per month (correct at the time of fieldwork), whereas an entry level manager received Rs.20,000 per month. Below these two groups there were daily-paid workers who were handed a flat sum of money at the end of each completed shift; these were mostly cleaners and other employees carrying out simple tasks. There was a wide disparity between the pay of permanent operators of EWS who came under the ambit of the IDA Act 1947 and contract workers discussed below and those who were directly recruited by CompCo but on probation and not yet confirmed, doing which would bring them under the ambit of the IDA Act 1947.

At this point, it is worth noting that current Indian labour laws make it difficult for management to dismiss a worker without a protracted judicial process, which costs management time and money. This apparent inflexibility and the lengthy legal procedure involved in dismissing a worker alone would have encouraged the move towards employing temporary workers who are not protected under the Industrial Disputes Act 1947, but who instead worked under the more lax Indian Contract Labour Act 1976, as discussed in chapter 4, which allows employers to pay contract employees lower wages for the same tasks performed by permanent workers and allowed the employers to hire and fire contract employees relatively easily.

In contrast to contract employees – a large majority of whom were hired through labour contractors who were bound by relatively inflexible pay scales agreed through contractors or, for the rest of those who worked on probation from 2005 onwards or were occasionally hired in very limited numbers on an ad hoc basis, whose pay scales were decided by EWS's management-prevalent wage policy towards them, which varied from plant to plant – permanent operators in EWS were able to progress through fixed pay bands described above as they moved from first

being appointed as apprentices to being confirmed as permanent operators. After the freeze in recruitment instituted by senior plant management in 2005, which is discussed in greater detail below in Section 7.4, this represented the prevalent mobility pathway for operators.

Yet, operators could hope to rise only a few rungs up the career ladder during their careers, whereas managers had access to much higher pay bands as they moved from junior jobs to higher executive positions. Even if EWS workers did opt to make the move into the management cadre, this transition was easier said than done, as was explained by Mr. SMGN [8 April 2009], an erstwhile trade union activist who was now a manager in the Quality Assurance Department. He explained that those on transition would be junior in rank and would occupy similar positions to those filled by direct entry management trainees. But to get to that point, they first had to pass a written test to confirm that they had the requisite technical and theoretical knowledge and, second, had to satisfy the Section Heads and senior managers involved in the selection process that they possessed adequate managerial acumen. These workers, who had bitten the bullet and opted to make the arduous climb up the organisational ladder, faced particular problems in competing for jobs with management trainees. These direct entry management trainees would have enhanced training and wider skill-sets which gave them an enormous head-start over the former operators. It was very difficult for people who, although they possessed practical skills that were very relevant to the line, had to compete with management trainees with a management and/or engineering degree from university and benefited from a detailed and formalised training programme through which they were being put in CompCo's training institute.

These probationary graduate engineering trainees had to pass internal exams with an average of a least fifty-five per cent in the subjects they studied in CompCo's

training institute before they could be confirmed as managers in CompCo. But once the trainees were confirmed as executives, they could look forward to being given experience in various functional roles and could expect a relatively rapid rise to higher-middle management positions in the plant. With regular promotions and after two years in the company, a junior executive could expect to have the equivalent of five years seniority in position over a promoted operator, even though trainees tended to be much younger than their ex-worker counterparts.

A fundamental part of corporate management's GEMBA pitch was to instil in the minds of operators the idea that they had a fundamental part to play in "engineering the customer's tomorrows", and that GEMBA offered them exciting rewards and the real prospect of moving into management and becoming a part of the knowledge ecosystem CompCo wanted to create, instead of having to be satisfied with very limited progression they had available to them as operators. Unsurprisingly, this caused a proportion of operators to conclude that GEMBA, with the option of either promotion and lower job security or by continuing to remain in the category of workers stagnation in pay and prospects as operators but with a perception of job security, left them between a rock and a hard place. Mr. RGPN, the middle manager, pointed out an important difference between managers and operators, that managers could lose their jobs as a result of continued poor performance. Workers were assessed differently compared to managers. Managers' promotions initially depended upon what their immediate superiors evaluated by of their performance in the Key Result Areas applicable to their departments, as they made up the performance appraisal report which was liable to change because corporate management wanted more objective assessment criteria based on GEMBA involvement and target delivery, rather than just being judged by an immediate superior's performance appraisal reports. Workers did not have to undergo periodic assessment and were

managed instead by wage settlements. They had limited upward mobility in their careers but greater job security. For them promotion and increase in pay was not contingent on meeting changing performance parameters. Although there were different payment arrangements for workers based in EWS and WAP4, WDP4, WDG3, WAM4 and WDM3A, in all cases their pay still depended on wage settlements agreed by their trade unions and management and not appraisal.

This existential dilemma was pervasive amongst EWS workers who were convinced that in most cases it would amount to occupational suicide because a shift to the 'other side' might usher in a change in their social status, but it would certainly guarantee a loss of the support they enjoyed from their fellow workers and in some cases would cause them to suffer opprobrium in the eyes of their peers. This dilemma was accentuated, Mr. SMGN [8 April 2009] pointed out, by the risk that operators who joined the ranks of management were in danger of antagonising their union too. He said that trade unions might throw up their arms when ex-workers, now managers, needed representation after getting into trouble as junior managers. This fear simply increased the despondency workers felt and the perceptions of social distance between 'us and them': between the community of workers and management.

There were also concerns – and the perception of workers – that workers' health and safety was ignored by target-conscious EWS plant management. It was alleged by Mr. TNS that workers got injured in production especially while welding or using the lathe, and if the injuries were minor they had to ignore them and get on with their work or run the risk of their line managers ridiculing them for their lacking masculinity. Mr. TNS said that management was obsessed with targets and it was only as an afterthought that safety was added to the list of N7i initiatives [Mr. TNS, January 2009]. Whether the trade unions became involved in safety problems or an

accident involving a worker was contingent on the gravity of the accident and the views of the colleagues of the operator in question: if they felt that he was to blame, the weight of the group's opinion would pressure him to shoulder the blame and accept management's rebuke. The seriousness of accidents – or, for that matter, the implications of any acts of negligence for other operators in the area – depended on whether they were in the assembly or machining areas. Barring any individual rivalries, where an operator was indeed a victim of a defective machine or highhandedness by the management, the union in power would come into play. The accident might bring the line to a temporary halt (as observed by me in March 11 2009) and cause heated arguments between workers and management. Management would then invite the union and set in train a joint review of the events, followed by a process of negotiation between the personnel department, and the union and conciliatory mechanisms, elaborated on in Section 7.4.5, would come into play to cool things down. Management's priority was to reach a "compromise", a word many middle managers despised with all their hearts, to avoid production problems.

This contingent approach to safety was ingrained, and it took considerable pressure from workers on the shop floor on their middle managers and line disruptions, which cut across party lines, to make management include safety as an N7i objective. However, Mr. VDVN said that this apparent epiphany was produced not by a new-found paternalistic spirit, but to integrate safety into body movement in line with the company's EEI initiatives mentioned in Chapter 5, added to the N7i initiatives (discussed in Chapter 6), in order to advise workers constantly on safe best practices, and to avoid the inconvenience and disruptions to production that accidents caused. Extrapolating Mr. VDVN's argument from a trade union leader's perspective, I argue that EWS's senior plant management, answerable as they were to corporate headquarters, saw the protection of CompCo's brand image as an imperative (as

illustrated in Section 7.5) and wanted to be seen as a conscientious company engaged in best lean practices, and in that way to deflect any aspersion that it was not very concerned about safety.

This implied an apparent shift from the quiet chat to a codified set of steps, delineated in the EEI, adding safety as an important item in the N7i initiatives which draw their contents from the lean manufacturing literature, where a worker could instead be said to be at fault for not obeying steps that were purportedly for his benefit.

Another cause of increased anxiety was medical cover and medical insurance. The disparity in the protection the company offered to workers during illnesses cemented the perception that managers and workers occupied different social habituses. Operators including Mr. TNS and the ex-operator Mr. SMGN claimed that managers, their in-laws, wives, children and parents could avail themselves of free annual medical check-ups with the company footing the medical bills of employees and their immediate families. Middle managers and senior managers could also take advantage of a range of insurance and other financial products on very favourable terms because of linkages the company had with insurers. Furthermore, corporate management enjoyed unlimited and free medical care with treatment in top hospitals, Mr. TNS alleged.

Workers, on the other hand, were not covered under a free medical insurance scheme and instead had collectively to fund a group insurance scheme run by TTK Health Insurance (a private limited company), so as to create a pot of money that could be used for an emergency. But the amounts available were limited and in March 2009 other workers donated money to a fellow operator to help him get his kidney transplant operation. The contrast between the treatment of management and the treatment of workers caused considerable anxiety amongst workers, and did

nothing to cause workers to believe in the self-initiative dimension of the GEMBA message that everyone working for the company should share a single set of aims.

The final anxiety stemmed from the tighter coupling of production processes and cycle times. Senior plant management wanted to speed up the imposition of lean job cycles during production and claw back any free time workers had in the gaps between the end of one job cycle and the beginning of another. Workers were apprehensive of the minute scrutiny and surveillance they were suddenly being subjected to through the use of the Effective Ergonomics Initiative, which was part of the N7i measures and had the overall aim of disciplining their bodily movements after scientific study and careful measurement and timing of each action in every job routine to eliminate 'muda', in lean parlance wasteful movements, and promote efficient and optimal bodily movements which management claimed were safe and for the benefit of workers.

Mr. VDVN alleged that senior plant managers wanted to eliminate what it perceived as loopholes in cycle times that provided operators and their work mates with the opportunity to pace their work or get momentary periods of rest after finishing assembly line tasks. They would do this by intensifying job routines by adding more tasks for each single operator so as to reduce idle time. [Mr. VDVN, 21 May 2009]. For instance, the pamphlet issued by trade union leader Mr. RK's group [20 February 2009] said that management was trying to scale down the time operators had for basic human needs such as lunch and tea breaks. As mentioned in Chapter 4, the first shift in EWS began at 8a.m. sharp and ended at 16.00hours, the second shift started at 16.00hours sharp and finished at 1.00 Hrs., and the third shift ran from 1.00 Hrs sharp to 8.00hrs. The pamphlet issued by Mr. MCL's grouping [Mr. MCL, 16 February 2009] implored management to be sympathetic to workers' human needs and argued that they needed one and a half an hours in each shift for

food and toilet breaks. It told workers to compare the implications of the working conditions under the present dispensation with the settlement arrived at with Mr. MCL before 2007. It also argued that management must give due consideration to the need for worker rest and recreation in concordance with the standards set by the ILO.

Meanwhile, it was clear that managers such as Mr. N were keen to factor in as much of the required GEMBA activity as possible, including GEMBA meetings, outside and above the production shift. By doing this they could eat away at any limited spare time or breaks workers had during their shifts. This added further to the workers' scepticism of GEMBA.

Having dwelt on the causes and origins of workers' opposition to GEMBA, in the next section I will broaden the analysis to locate workers' hostility to GEMBA within the difficult industrial relations history of trade unions, workers and management in EWS. Subsequently I will examine the challenges faced by trade unions as they have sought to remain the main channels for communication of workers' interests and their declining power in the face of management's varied stratagems, including GEMBA.

Section 7.3 Trade Union Militancy and Representation: the Industrial Relations Context of Worker Responses to GEMBA

The discussion herewith will explore how operators' resistance to GEMBA, documented in the previous section, was rooted in the wider context of difficult industrial relations in EWS and was conditioned by the patterns of trade union response and institutional regulation at various points of time. A historical account of the industrial relations trajectory and salient events such as the strike of the 1980s will show how this shaped the opinions of operators and led to persistent grievances, so

that GEMBA never managed to convince a significant majority of operators in the factory.

In order to demonstrate how different trade unions reacted to GEMBA, I will first introduce the different trade unions that operated at the factory. I will then situate the company's industrial relations historically within different epochs of labour militancy, state and judicial intervention and corporate strategy. Thus an integral argument of this section is that an understanding of this historical context is important in comprehending the responses of workers to the change management initiatives pursued by CompCo's corporate management.

7.3.1 Introducing the different unions in EWS

There were four main trade union groupings in EWS, which together made up the CompCo Employees Union, and each had its different leaders, policies and political affiliations. The way the industrial relations system worked was that elections were held periodically in which all workers could vote, and the outcome determined which of the union groupings would act as their bargaining agent with the company. Usually this led to a clear cut result and the winner became the official voice of the majority of the workers of the plant in their negotiations with management for a designated number of years, until the next elections were held on a date agreed with plant management. At the same time the other unions also continued their activities in the workplace, and specific episodes of agitation and unrest influenced the outcome of the next elections.

The oldest trade union grouping in EWS was the Communist union, which was affiliated to and drew ideological support from the Communist Party of India (Marxist). It must be noted that the Communists were the first recognised trade union

in EWS but had enjoyed diminished influence, not having achieved representational rights in elections since 1997. Unlike the other unions, they did not have a personality-driven leadership, but instead depended on a group of conveners who met periodically in their office at Hubli to review the industrial relations situation and listen to specific problems workers brought to their notice. I was introduced to its activists by Mr. VDVN, who was one of several trade union conveners for the Communists and was a worker in EWS with over twenty-eight years of work experience and was witness to most of the important fissure points in the industrial relations of EWS. The second trade union grouping was led by Mr. KS, a senior operator who retired from employment in the mid 1990s and who drew ideological and political support from the major Dravidian party, the DMK. This union became the majority union after elections were held in 1997 and remained in power until 2001. Having lost its dominant position in 2001, it regained a majority in 2009 and retains this position currently. However, this was not the only union affiliated to a Dravidian party. The third grouping, led by Mr. RK, drew ideological and political support from another Dravidian party, the AIADMK, and this was the majority union from 2001-2004 and again from 2007-09. Mr. RK had been a Communist Party member, but had been suspended from the party in the 1980's on charges of fraud, and there was no love lost between him and the communists.

Finally, another external trade union leader, Mr. MCL, led the fourth union grouping, which saw itself as an independent union, and had enjoyed one period as the majority union, from 2004-2007. As will be seen, this union played a key role in the 1981 strike, which saw its leader establishing roots in the plant, and at the time of my fieldwork Mr. MCL was once again one of the most popular union leaders in EWS. At the time of my exit from fieldwork, and based on numerous varied interactions with workers and managers such as Mr. RGPN and deductions I made

from the pamphlets used by the different trade union groupings to run down management or each other, I estimated that out of a pool of 1100 workers in 2009, approximately thirty per cent owed allegiance to Mr. MCL, twenty-five per cent to Mr. KS, fifteen per cent to Mr. RK, and around twelve per cent to the communists, whilst about thirteen per cent of operators were either selective and calculative or undecided about trade union representation.

As the above outline of trade unions and their leaders implies, the different unions possessed distinctive resources that they could bring to the table. The Communists in EWS relied on the mobilisation of larger ideals, whilst they appealed to workers not to cease in resisting management and hence capitalism. Mr. MCL, by comparison, promised his adherents that he had the capability to achieve the best material terms in contract settlements. The other two unions, led by Mr. KS and Mr. RK, played upon workers' regional and linguistic Tamil sentiments, and promised them that they could exert a considerable amount of pressure through the Dravidian DMK and AIADMK political parties, from which they drew support and backing. These parties were presented as having political clout, which allowed them to pressurise management, and an ability to influence the institutional governance of agencies such as the Labour Commissioner (whether by legitimate or corrupt means). However, the other groupings argued that these parties had never been pro-labour, as they distinguished sharply between political action and industrial activism and so long as their political interests were protected, they were inclined to see industrial issues through management's eyes, as a 'law and order' problem.

As the periods of dominance of the different unions enjoying representational rights suggest, it was rare for any union leader to be elected as the sole representative voice of all the workers in this company twice in successive elections. Furthermore, this system was almost guaranteed to produce animosity and the four leaders could not

stand each other. For example, Mr. MCL would not even enter the factory when either Mr. KS or Mr. RK was there. A review of the important milestones of strikes and lockouts will bring out the underlying tensions, both between management and workers and between the different unions that helped to shape the industrial relations of the company. It will also illuminate the wider context in which these tensions were played out, especially in terms of the changing attitude of the judiciary towards unions and union activists. I will now trace the industrial relations history of EWS from the 1980s through the 1990s to the current day.

7.3.2 The epochal 1980s decade revisited

1981 witnessed the most violent strike in the annals of the Company's history, which forced the management to declare a lockout as the workers resorted to arson and physical attacks on managers as a means of venting their anger against the policies of the company [Mr. RV, Senior middle manager Material Planning who coordinated supplier deliveries, their timeliness and ensured they stuck to their immediate planned delivery schedule], 8 January 2009]. This was a significant dispute during which seventy-eight workers were suspended, and the early 1980s also saw large-scale dismissals of workers and this was barely a year since this plant had begun its operations.

There have been other strikes at the plant, in 1984 and also in the 1990s and 2000s. But of all the disputes, the 1981 strike stands out as an important milestone in the history of EWS because it was marked by considerable violence and left an abiding memory amongst both managers and workers. This strike also led to the emergence of Mr. MCL as an important union leader in the factory. The events of the 1981 strike led to the widespread impression in EWS that MCL was driven entirely

by shop-floor labour concerns and always bargained hard to extract the best deal he could for his members, and that it was time to try his services because the Communists had not gone far in getting better terms for workers.

One vignette of the company's difficult industrial relations history in this period can be found in the records of the High Court of Tamil Nadu, which adjudicated on several cases that emerged from the strike because the verdict of lower level labour courts continued to be challenged by either aggrieved party in the next higher court.[High Court Judgement of Tamil Nadu, 7 December 1998, High Court Judgement of Tamil Nadu, 6th November, 2003]. I will use this material, together with evidence from relevant interviews, to: illuminate how these events shaped management behaviour over time and workers' responses in EWS; demonstrate how these events provided the opportunity for MCL to make an entry into EWS; and explore how workers depended on important individuals such as Mr. MCL to represent them. The court documents offer not only reports of court judgments but also a summary of management's view of the activities of Mr. MCL and other activists. Thus my piecing together of events is reliant on these documents together with the recollections of the manager Mr. RN, and senior operators Mr. TNS and Mr. VDVN.

These accounts suggest that the 1981 crisis was sparked by the actions of an operator ('Respondent Two' in the court case) who, within two months of joining the company as a temporary employee, resorted to stoppage of work in a concerted manner on 29 August 1980. The same operator during that time also engaged in riotous and disorderly behaviour, for which he was given a charge sheet memo (a disciplinary sanction) by plant management dated 1 September 1980. Since the above operator expressed regret for his conduct and gave further assurances as to his future behaviour, he was penalised only with a few days' suspension without pay. However,

following another similar incident on 19 November 1980, he was again awarded a punishment of suspension without wages between 20 November and 11 December 1980; later, after misconduct which took place on 29 June 1981, he was again cautioned and let off after he gave further assurances. EWS's plant management believed that this operator, who was recruited as an employee on probation previously in 1980, was proving to be a disruptive element on the shop floor and was slowing down production.

This worker managed to galvanise support over grievances that were hitherto latent subsequent to the time period between his entry and eventual suspension. During his suspension this worker sought the help of Mr. MCL then an ambitious young trade union leader, who saw this as just the right opportunity to promote his image in EWS by exploiting the situation. Mr. MCL's foray into EWS Trade Unionism and IR began with the worker and him indirectly mobilising support and a section of workers in the assembly area began a concerted but brief flash strike on 29 August 1980.

Yet, on 12 August 1981 the same worker, along with a group of employees incited by Mr. MCL (Respondent One in the court case), went to the canteen in the factory and in the resulting affray assaulted the contractor who ran the canteen. Following this incident, a group of workers began a series of violent acts of larceny and arson in which a number of executives and supervisory staff of the Company were assaulted. Mr. RN reminisced that this included an assault on the then Departmental Head, Mr. VS, who suffered serious injuries when he asked Respondent Two why he had incited others to stop work. EWS management now believed that it had given this worker a long rope and the time had come to act tough not only with this worker but with all other workers who wanted to become militant.

The above climactic events marked a shift in senior management's industrial relations approach from that of finding a consensus to a more assertive perspective that has to this day persisted in the minds of EWS senior managers who believed that giving workers many chances or an opportunity to make amends was bound to have deleterious consequences. As a result, Respondent Two was charged by the police and after a full trial was convicted. In view of the grave situation, the Deputy Superintendent of Police in Hubli also promulgated an order under Section 30(2) of the Police Act to prevent any further escalation of the incidents.

Mr. VDVN [25 April 2009] agreed that these events marked one of the most militant phases of trade unionism in the plant, because of the assault on a manager and the commencement of a perpetual undercurrent of labour-management distrust. Mr. VDVN contended, however, that operators had simply wanted better working conditions and a longer time to complete their job cycle. Management had refused to negotiate and the operator who raised this demand originally was effectively silenced by cloaked threats and periodic suspension and eventual dismissal. However, his protest articulated the grievances over working conditions and job routines that operators were feeling and proved simply to be a harbinger of the strike of 1981, which was strongly supported by the majority of workers. So, Mr. MCL was beginning to cement his credentials as trade union leader.

Mr. MCL initially sought the support of the communists, who were the strongest union in EWS at that point in time since its inception in January 1980, but by 1988 he had formed his own union, which drew support from workers from EWS and a number of other companies' plants in and around Bangalore. Mr. RN's recollections and the court documents also revealed this chain of events.

Again, the court documents can be paraphrased to summarise how the dispute developed. Having found Respondent Two guilty of violent acts he was summarily

dismissed on 18 August 1981. The court papers say that no enquiry could be conducted because of the tense situation prevailing in the Unit and its vicinity and the lockout declared by the Company. Second, the documents reveal that, in response to these developments, CompCo senior plant managers took the unprecedented step of declaring a lockout, which continued for nearly three months from 25 November 1981, in the hope that this would put an end to what they perceived as worker indiscipline. Despite this, the deadlock in negotiation continued throughout this period. During that time, Mr. MCL provided legal support to those workers who were members of his trade union in the 'petitioner establishment', and with great tenacity raised an Industrial Dispute and fought a legal battle over the dismissal of Respondent Two and a few other workers.

Following pressure from the Tamil Nadu Government, which was concerned by the tense situation prevalent in both the factory and the town, the Industrial Tribunal in Madras came to a decision on the industrial dispute and as a result the dispute was settled eventually under Section 12(3) of the Industrial Disputes Act 1947. Thus the lockout ended and the plant went back to work, but the case of the dismissed workers continued in the Labour Arbitration Tribunal and management and labour continued to distrust each other. There were other intermittent strikes concerning working conditions, which lasted for two to three days in July 1984, and were a reaction to increasing management attempts to gain greater control over the ways in which operators worked.

Eventually a settlement was arrived at and under the terms of this settlement it was agreed that the Union and management would discuss the dismissal issue bilaterally and settle it amicably. There was also a formal agreement that the industrial dispute, which had in any case been ended by the court, was truly settled and it was therefore treated as 'dismissed as withdrawn' by an Award of 21 December 1986.

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Thereafter the individual case issues raised, including the dismissal of Respondent Two, who was charged with inciting violence, were discussed at great length and finally resolved in a settlement between management and the formally recognised union, dated 26 May 1987. Clause Four of this settlement provided that only twenty workers out of the seventy-eight that had been dismissed would be offered re-employment as fresh entrants and senior management remained obdurate that under no circumstances would Respondent Two be re-employed. This was accepted under the agreement. Another seven workers whom senior management believed to have aggravated the strike and indulged in rampant indiscipline were also not accepted back into EWS. They were viewed as having aggravated the strike by using an opportune moment to indulge in rampant indiscipline.

As will be evident, this case was fought in the courts over many years, and only a minority of reinstatements was secured. The above account and evidence from the court also suggests that Mr. MCL saw these events of the early 1980s as an appropriate moment to test his strength, and, ambitious as he was to expand his leadership base, he went on to lead a large number of industrial plant trade unions in and around Bangalore. In 1989 he broke his tactical alliance with the communists in EWS.

The 1981 strike and the other brief flash points of industrial relations over the period after 1984 went on to determine the trajectory of industrial relations between senior plant management and operators. Even though after a long time the scars had receded somewhat clearly, the dispute was still not forgotten also because both the individual aggrieved worker or union and management in reaction to the former kept appealing against the verdict of the lower court in the next higher court. Indeed, in the summer of 1988 there was a further short dispute over allegations of indiscipline, which led to the suspension of a number of workers; plant management clearly

decided that workers needed to be put in their place. Data from my interviews with communist trade union activists in the WDG4 support the view that the 1980s were extremely difficult times for management labour relations overall in CompCo. An operator and activist who worked in the heat treatment plant of EWS [Mr. TNS, 16 March 2009] reported that, after the 1981 strike, workers turned to Mr. MCL, who promised them greater democracy and a pragmatic approach to resolving their disputes, compared to the communists whose conveners had always had to adhere to the primary aim of their party. Thus for them, striving for the achievement of ideological goals as defined by their party superiors was of paramount importance, even though in the course of that process of class struggle they might also achieve the better material terms demanded by EWS workers. I will return to the above point in greater detail when discussing trade union strategies in EWS in Section 7.4.3.

7.3.3 The difficult 1990s: labour-management antagonism and the beginning of the decline of organised labour's voice

While the conflicts of the 1980s were particularly sharp, disputes continued into the 1990s. Thus there was a strike in 1991 over wages, at a time when the company again faced a difficult market situation. In that dispute, management suspended 600 people for over six months, although most of them were taken back eventually. Then in another strike in 1997, Mr. TNS, the operator and activist cited earlier, who had been a member of the communist dispensation in the 1980s, was imprisoned in Hubli for fighting for better working conditions and facilities for workers. He challenged his sentence with the financial support of his fellow workers, who raised 700,000 rupees to pay his legal fees and look after his family, and, though the case prolonged until 2004, a High Court judgment of the state of Tamil Nadu

eventually reinstated him. Again these disputes were a springboard for another union leader to establish his credentials, and by 1997 Mr. RK, an operator who had taken an active part in the 1991 strike, had managed to establish a modest following amongst workers who pledged trust in his leadership, whilst he drew tactical and political support through an affiliation with the Dravidian party, AIADMK. According to Communist Party activists, this was despite his having been expelled from their union for committing fraud by appropriating subscription funds during the mid 1980s (and they continued to call him a "thug", a "congenital liar and a habitual cheat") [Mr. VDVN, 26 May 2010]. However, it was not until the new century that Mr. RK was able to mobilise majority electoral support for his union.

Meanwhile, in the period immediately after the 1997 strike, it was a union affiliated to another Dravidian Party (the DMK), led by Mr. KS – a retired senior operator – that gained majority support. Since the communists retained the loyalty of a significant minority of union activists, and MCL's 'independent' union also retained substantial support because of its leader's strong efforts to build support at the grassroots, the 1990s were a period in which competition between the four rival unions intensified.

7.4 Declining Pattern of Industrial Relations of EWS since 2000

Continuing from the earlier pandect of trade union history in Section 7.3, data from informants indicate that there had been a perceptible decline in workplace militancy from 2000 compared to earlier periods. This section commences by registering declining militancy in EWS, and then lays out the immediate context of trade union marginalisation encompassing fears of job-insecurity, outsourcing and casualisation of labour, and the subcontracting of production facilities. It concatenates

trade union marginalisation within the wider political economic context of changes in regulation regimes controlled by the state and the judiciary, and indeed the regime of accumulation in post-liberalised India. Enunciating this context of trade union marginalisation will highlight evolving patterns of industrial relations in EWS that co-existed with and perhaps reinforced certain features of shop-floor attitudes and responses, to understand the circumstances in which the trade unions in EWS operated. Understanding the evolution of trade union strategy and the character of workers' attitudes and responses to management policies since 2000 will place the moribund trade union response in EWS in the context of the difficult environment they operated under, which was accentuated by a determined management out to impose lean manufacturing projects and other cost cutting stratagems. The trade unions' inability to offer a coherent response was complicated by the fragmentation and internal divisions between themselves.

There were notable strikes in 2001 and 2004 continuing into January 2005. These events seemed to reiterate the trend of the 1980s when union factions continued to compete for influence, and these strikes tended to mark moments when a different union became recognised and then challenged management's prerogative. For instance, the 2005 strike was about productivity where management wanted to ramp-up production, lay off workers and offer only marginal increases in pay [Mr. TNS, 15 May 2009].

7.4.1 Changing worker attitudes towards trade unions and a changing external political economic context

In the context of declining strikes and militancy, trade union leaders also had to bear in mind the expectations and anxieties of the veterans and middle-aged

workers considered in Section 7.2. trade unions had a difficult job keeping their power bases intact, and staying relevant to workers whilst responding to management's multifaceted offensive, which they were ill-equipped to handle. Mr. VDVN told me that in this context being a trade union organiser, listening to workers' problems while at work and taking up trade union functions after work, became a full-time job, without any holiday. As a result, the shop-floor activist had to endure a lot of hardship and pain – for example as a result of conflict with hostile Section Heads, though he also saw this as an inevitable part of his bargain with the people he represented. Mr. VDVN contrasted his attitude to defend workers with that of the younger workers who would approach him only when they felt threatened personally by management's initiatives and seemed to lack any collective consciousness. This tendency made trade union activity more difficult compared to the past and this was attested by some further reflections by Mr. VDVN [4 April 2009; 24 April 2011], my main informant from the communist union, on the difficulties faced by union activists. He believed that it was easy for many workers currently employed in the plant, who were inexperienced in shop-floor activism, to blame trade union activists for a failure to meet their expectations and expect them to deliver whilst sitting back and watching the action unfold without taking on any of the responsibility for expressing dissent themselves.

However, the decline in militancy compared to the yardstick of the halcyon days of conflict in the 1980-90s should not be entirely overstated, since there had been brief flashpoints of unrest in more recent years. Significantly, in my conversations with union representatives such as Mr. VDVN and middle managers such as Mr. RGPN, I discovered that they rated various CompCo plants according to their potential for militancy. They concurred that WDP4 ranked first in militancy, being one of the oldest plants, followed in decreasing order by brown field sites such

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as EWS. Militancy was much reduced in WAP4, which almost entirely employed casual workers, and in WDG3A and WAM4, which were green field sites where the company was starting de novo. The trend of declining militancy was seen increasingly as being attributable to this increasing degree of casualisation of labour, which was evident also in WDG3A in the North and WAM4 in Central India.

But there were other causal factors in declining militancy related to the far-reaching changes in the environmental context in which workers and trade unions operated. The current external, political and economic context in India is that provincial governments are in competition with each other in order to attract investment and to facilitate inflows of global capital as pointed out in Chapter 4. From the purview of labour arbitration and legal case precedent, the changing attitude of jurisprudence towards unions, across the world but particularly in the UK, has not gone unnoticed in the judgments of the Indian law courts which have, from the late 1980s, begun to see trade unions and any expressions of dissent in an unfavourable light. They have been increasingly willing either to give managements injunctions to delay impending strikes or declare them as illegitimate, seeing them as being more about law and order issues rather than a legitimate form of protest. Furthermore, the litigation process in industrial disputes is quite often cumbersome and time consuming, because a verdict or arbitration award can be challenged at multiple levels: in the district level Labour Commission; in the High Court; and in cases where one party has identified a grave miscarriage of justice, a serious tort or a fundamental point of law, the final court of appeal is the Supreme Court of India. As in the UK, this process tends to work in favour of employers by delaying effective industrial action.

Moreover, there have been repeated allegations by union activists of favouritism, bias or nepotism and corruption in the Labour Commissioner's office

(influenced, it is said, by favours and bribes from large corporations with much deeper pockets than workers and their unions). This added to the perception on the part of the unions that only long, drawn-out agitation would produce results: just the sort of agitation that some of their younger members would be less likely to support.

7.4.2 Specific managerial strategies that shaped worker attitudes towards management and affected EWS trade union responses

In the prevailing political and economic context, corporate management continued to drive far-reaching changes to cut costs and jobs. With particular emphasis on the recessionary period between 2008-09 when I was pursuing my fieldwork, I will now explore in more detail how managerial stratagems to cut labour costs, increase outsourcing, and enhance automation, threatened job security, formed the core of workers' concerns and moulded the variety of trade union responses towards management in EWS.

In terms of reducing headcount and the loss of guaranteed employment to children, like the crew of a sinking ship, the operators were reluctant to abandon EWS and found themselves both needing to move higher and higher to avoid the rising water of job insecurity in the present as well as peering into a future that threatened to engulf them. Thus, Mr. VDVN [24 January 2009] reported that the total aggregate number of workers in EWS had fallen over the previous ten years from 2,300 directly employed operators to 1,100. He also said that despite this, the company considered that it still had 660 employees too many in the factory, and wanted to shed a further 300 through outsourcing and its continually evolving 'efficiency optimisation initiatives'. Further, the abolition of the *Warrish* (a Tamil word for 'heir') employment scheme and delays in settling their pay demands added to the already

considerable disillusionment and sense of impotence felt by a large proportion of the workers. Mr. VDVN pointed out that in the past, around 700 employees had been hired through a *Warrish* family recruitment system, but this had been discontinued and he questioned where his and other workers' children would find jobs. This paternalistic arrangement, which mirrored a practice on the Indian Railways where widows were eligible for jobs, guaranteed all children of CompCo employees jobs if they were fit and able to work. This *Warrish* system had since been scrapped silently by management, and there seems to have been no return to it since the implementation of GEMBA. *Warrish* was in obvious conflict with the move of the corporate management's all-round effort to make the employment contract more 'flexible' – i.e. to introduce less structured and secure employment policies and bring a 'tightly structured hard HR' focus to its employment policies. This scrapping of the *Warrish* system and management's determination to gain control over the terms of employment was illustrated in its setting up the new greenfield commercial vehicle plant in Northern India to bring it closer to the northern markets of the country. The new plant had been very expensive and CompCo wanted to make terms under which it employed operators as flexible as possible to recoup its investment. For example, Mr. RGPN, the manager in engine stores, said that the total number of operators in WAP4 amounted to about 500, of whom forty per cent were contract employees.

Additionally, company plans for automation and the movement towards the adoption of Euro4 and Euro5 emission norms exacerbated the prevalent fear of job cuts. Management's decision progressively to outsource some component manufacture and allow suppliers to set up line side delivery, with the closure of entire machine shops and assembly areas, in conjunction with automation which we have discussed before, had left a large section of the operators apprehensive. The senior operators who had worked in a machine shop or assembly areas for many years were

particularly apprehensive about management's policies, which they criticised as being shrouded in secrecy and lacking transparency. These moves contributed to worries about their future. With the movement towards Euro4 and Euro5, plant management would find it expensive to retrain many operators and replace or modify the existing machinery, and those factors meant that the future of many permanent operators could not be guaranteed.

Management argued that since labour costs represented the largest single element in its total costs, any attempt to reduce overall costs to compete with other manufacturers was bound to have a significant effect on employment and employees. The older operators in EWS were given options to retire early through various voluntary retirement schemes and were rarely replaced by directly-employed operators. Moreover, as noted earlier, there had been no substantial new recruitment of directly-employed operators in any cadre for the past twelve years, other than a small cohort who were recruited in 2005 as probationers whose appointments were made permanent. In 1995 for instance, operator level Industrial Polytechnic trainees were hired in WAP4 but the company told them to leave after ten months, saying that it did not have sufficient money to keep them employed after management suddenly realised that they had over-recruited [Mr. VDVN, 20 February 2009]. Mr. RK [13 March 2009] in his pamphlet said that the decline in the number of permanent operators employed in one shop, from forty in 2004 to just five in 2009, with about fifteen contract workers, was illustrated in the discussion pertaining to inventory in Chapter 6. For instance, as was pointed out to me by workers during my conversations with them at various junctures, in 1997 CompCo employed about 15,000 workers in its plants and produced 30,000 commercial vehicles. Now, in 2009, it employed some 8,000 workers but was making 60,000 vehicles. Workers' nagging anxiety that they would lose their jobs and be unable to support their families was pointed out to me by Mr. SMGN [18 March

2009], who had been an operator for many years but crossed over to the other side to join management (with the permission of his union). Unemployment would also imply a loss of social standing and undermine the self-esteem of the workers. Whilst these threats grew, corporate and senior plant management saw trade unions as irritants rather than as serious players committed to the future of the company and were keen to reduce their influence further in the recessionary period. Faced with this new pugnacious approach of corporate management to employment, the union headed by Mr. KS, which at the time was the recognised union, sought to reach an accommodation with management, believing that it lacked sufficient industrial strength to win a confrontation. This moderate stance and the deadlock in negotiations are illustrated by the pamphlet issued by Mr. KS on 28 March 2009, which stated the following:

> 'Talks have been going on for over 17 months and approximately Rs.5,250 salary increase is warranted and this as per this union was agreed by the management. But they want 35.5 percent increase in productivity when things come back to normal. Workers have not been able to work for the last 4 months and due to the recession talks between management and union have also come to a standstill. Management on its part is still sitting on the agreement doing nothing. This is leaving the workers sullen and depressed.'

Another pamphlet, issued by Mr. KS's union on 3 December 2008, surmised that management's argument was that it was an economic reality and that neither the workers nor management had any choice but to adjust their expectations to suit the circumstances of the market. It claimed that no worker wanted to be removed from his job; no one wished a lockout and denied that there was any ill feeling amongst them. It claimed that in response

to its demand, management expressed its inability to pay the increased wages because of the recession and said that if it did so it would set a precedent that would have to be followed in all other plants. The total cost company-wide would amount to Rs.80 million, an additional cost that Compo could ill afford at that point in time. For its part management was insisting that the operators accepted frozen basic salaries. Thus a sense of precariousness confronted Mr. KS's trade union in dealing with the problem of EWS workers, who probably felt at that time it was better to accept some cuts in real salaries instead of losing their jobs is illustrated by February 7th 2009 when the company was struggling faced with a global economic recession. Mr. KS tried to fend of allegations from other trade unions that it was siding with senior plant management in agreeing to pay cuts in order to protect jobs. He argued that the fact that the company was able to keep the factory during the recession was a big thing in itself, particularly since it had done so without large scale layoffs of workers. He was at pains to defend himself against the other trade union groupings and needed to do so because the Communist affiliate, Mr. MCL and Mr. RK's grouping were certainly adamantly opposed to any pay cuts. Additionally, the pamphlets corroborate the discussion I had with Mr. VDVN at his trade union office in Hubli on the 28th February 2009 when he spoke of the anxiety of workers who seemed to be waiting indefinitely without work. Mr. VDVN told me that he resented management's behaviour of giving the impression that there were no layoffs because workers were losing a major part of their pay because of closure of the plant and became aggressive when I quoted to him from the KS group pamphlets. Another example of Mr. KS's limited manoeuvrability is reflected in the pamphlet dated 7 February 2009:

> 'The workers are aware of the recession. Operators are aware of the company's precarious position. During the month of November and December there were 13000 chassis for sale but owing to the

recession there was a massive drop in sales. Fearing that this may continue, for instance in November 2009 as many as 18 days were declared as nonworking days. This drop in working days was agreed by the union representing the employees and the management. During the recessionary period the central finance minister also said that while pay cuts were inevitable owing to lower productivity and what ought to be avoided was job loss.'

Senior plant management was steadily but perceptibly chipping away at the foundations of workers' job security by closing departments and machining shops. As pointed out by the middle manager Mr. RGPN [March 24 2010], a large number of machining operations which were hitherto done in-house, had been outsourced, forcing a large number of workers to be made redundant or be redeployed to other plants. The closure of production modules for instance was presented by the staff in the engine machining shop, where previously the entire grinding milling operations had been done in EWS. In another example, the gear manufacturing process had been outsourced to an external supplier's factory outside EWS. This resentment against what he saw as managements' mendacity in creating doubt and tenaciously sub-contracting production came out strongly in union representatives, such as Mr. VDVN who made a counter case for keeping production in house, protecting jobs and countering management's hiving-off of production by pointing out that the quality of outsourced production was abysmal. He said that this was a sentiment shared by many workers he knew. The brunt of carrying out of the necessary reworking of defective components fell on the remaining workers of the plant, who were themselves in line for the next round of redundancies. "And what is the quality of

outsourced components? It is a racket you know. We have to do the rework of sub-contracted components." [VDVN April 15 2009]

Mr. VDVN also said many of the problems inherent in inventory management stemmed from outsourcing stores functions and the movement of sub-assemblies to contractors. This illustration is in consonance with his earlier point that permanent employees with their specialised skills, acquired through working in EWS over many years, were invaluable to the company. Mr. SMGN [March 18th 2009] had a dim opinion of contract employees and other temporary employees who he claimed, did not know their work and he also complained that as peripatetic workers they had no lasting interest in the specific jobs to which they were assigned. He alleged that despite knowing their clear skill limitations and their limited motivation, management had gone ahead in hiring contract workers purely to save money, when it must have foreseen the likely consequences. In fact any savings were dissipated by lower productivity and the end for corrections to their work.

As demonstrated earlier workers felt that senior plant management was insensitive to their persistent anxieties and exercised carte blanche in outsourcing, which they believed contradicted its participatory GEMBA rhetoric. An indication of their views on job-reduction and outsourcing were writ large in the pamphlet issued by the MCL trade union grouping, which I gathered on May 24 2009:

'Management claims that the reason for 41 per cent increase in production in the last quarter was possible only through the help of outsourcing. The contribution of contract labour lay in increasing the overall plant production rate by 6.5 per cent. The regular worker's contribution on the other hand was 35.5 per cent in increasing

productivity, with the remaining being in percentile points of managers and senior plant management.'

The pamphlet then turned its attention to its competitor union affiliated to the DMK and alleged that its leader Mr. KS had joined hands with the management to crush the workers and had acquiesced in management's outsourcing plans. Mr. MCL's union felt that the workers' livelihood was being threatened and insisted that management must put an end to outsourcing immediately. In riposte, Mr. KS alleged that it was Mr. MCL who should reflect on his actions as it was he who had represented the workers in the last settlement which had prised open the floodgates by agreeing to the outsourcing of a small number of jobs, which management exploited and then extended considerably.

EWS's trade unions, divided as they were amongst themselves, were reluctant to weaken their positions amongst their constituents. They were opposed to providing representation for contract staff who they perceived as being in direct competition with their established members. The unions believed that if they did try to recruit and organise contract workers, the conflict of interests would come to the surface as their existing flocks deserted them. The indifference trade unions showed towards these outsourced or contract workers by permanent operators, concerned about their own jobs, surfaced when I discussed the issue with Mr. VDVN, who was otherwise a committed trade union activist, conscious of workers' rights. [Mr. VDVN, January 24th 2011].

Furthermore, inexperienced contract workers, such as those in the logistics department, who were turned over very regularly and had no time to develop expertise, bickered both amongst themselves and with the few remaining permanent employees coordinating logistics and poor relations between contract employees and regular EWS employees was a common theme. Attempts by these tenuously bound

employees hired through the labour contractors, to organise themselves would put their employment in jeopardy and the senior plant managers, already had more than their plate full in dealing with a regular trade union. The last thing they were likely to tolerate was to have to deal with yet another union.

7.4.3 Distinctive resources brought in by each trade union to industrial relations in EWS

All the circumstances mentioned above represented new challenges for unions and their struggle to mobilise worker support in EWS. Workers lacked the entire spectrum of information pertaining to technology, automation, job security, wages and immediate future plans which management possessed and therefore they and the trade union have to make reasoned judgments as to management's intentions in seeking to bargain to secure the best settlements when negotiating with plant management. This placed them at a marked disadvantage but they negotiated incessantly utilising what strength they could muster to reach a state where management was prepared to reach an agreement. Yet when an agreement was reached that was seldom the end of the story and in EWS senior plant management continually tried to mitigate the effects of terms it viewed as unfavourable, forced on it by hard collective bargaining. Such was the balance of power in EWS.

I will now turn my attention to the relative strategies deployed by each trade union grouping in EWS. In this I will utilise Batstone et al.'s [1979] archetypes of leaders and populists to demarcate the strategies of Mr. MCL and Mr. KS respectively and compare aspects of the capabilities of the communist and the Dravidian unions respectively. Batsone's 'leader' archetypes were said to frame grievances (and potentially mobilise workers) in terms of trade union principles and

then strike 'strong bargains' with management. Workers tended to follow these leaders and accept whatever they got from the settlements that were negotiated, but there was still scope for argument about the principles their leaders prioritised and whether the bargains they struck were adequate. Batstone et al.'s other archetype was the militant 'populist.' Populists were said to defer to members' immediate concerns, but this meant they rarely articulated trade union principles as a means of mobilising workers, and thus had less leverage in bargaining with management so that their rhetoric and the outcomes they achieved differed widely [Batstone et al., 1979].

Batstone et al. [1979] also point out that a few epochal events are needed to form the collective memory and reputations of trade union leaders and for many workers the events of the 1980s established Mr. MCL as the leader who was most capable of wringing the best deals from plant management, particularly in negotiating wage agreements. His leadership was sufficient to cause workers to agree to otherwise unpalatable clauses and one pamphlet in January 2009 alleged that he was the first trade union leader to give the employers a concession on outsourcing, which they then exploited enthusiastically. MCL's 'leader' reputation remained intact even after he lost an election, [Mr. KNM, 24 January 2011] and workers still seemed to believe that he was the best judge of management's intentions and would bargain hardest to secure the maximum possible monetary gains from plant management. He was perceived by his followers as a steady pair of hands and it was widely perceptible to me that Mr. MCL would have stormed back to power had there not been an inordinate delay in holding the elections due in 2009. Another indication to me that he embodied the leader archetype of Batstone et al. is my observation that I do not recollect seeing Mr. MCL addressing a gathering of workers outside the gatehouse of EWS at any time during my fieldwork. He did not need to because within EWS he was able to rely on his followers to orchestrate trade union activity

and issue his pamphlets, and did not need to come and periodically attest his relevance and abilities, unlike single plant trade union leaders such as Mr. KS and Mr. RK who depended on external political support. This ability to rely on lay activists of course suited MCL's circumstances because he was a busy trade union leader with a wider flock of workers in the Bangalore and Hubli to shepherd.

CompCo was also selective in the information it disseminated to individual trade union leaders and preference was given to the person many workers in EWS widely perceived as senior plant management's preferred trade union leader Mr. KS. In contrast to Mr. MCL, Mr. KS could embody Batstone et al.'s archetype of 'populist'. Mr. KS would first stoke the fires of expectations amongst his constituents by exaggerating his demands, which he knew would remain unmet by management. But by being very vocal and highly critical of CompCo's management in his speeches outside the EWS gatehouse, he raised the expectations of his constituents, all the time with an eye on attracting the prospective new supporters to his union who had assembled outside. In his diatribes against management he continued to promise workers that, come what may, he would ensure that tomorrow for EWS's workers would be better than today's difficult deadlock. Thus, in a recessionary context more than ever, he typifies Batstone et al.'s archetype of a 'populist' trade union leader; however, in my view he did not have the sway with workers enjoyed by Mr. MCL who, from my piecing together of trade union leadership repertories emerged as a Richard the Lionheart leader figure in EWS.

Mr. KS claimed repeatedly to have political clout and unique access to nuggets of advance information of management's constantly changing plans, which other trade union leaders were not privy to. This was a persuasive line because information was what workers, who were desperate to protect their jobs in a

recession, desired most in an uncertain context in which they suspected management had many detailed plans that would have profound impacts on them and their families.

His rival trade union leaders on the other hand, such as Mr. RK, alleged that having seen Mr. KS over the years in EWS, it was virtually certain that he would eventually scale down his demands in accordance with the demands of the emerging situation and agree to a compromise with management. This pattern of raising expectations unrealistically and then not managing to deliver upon them is a characteristic typical of Indian trade unions, and my perception corroborates Teitalbaum's similar observation of trade union leadership strategies within Indian firms mentioned in Chapter 4 [Teitalbaum, 2010: 54].

However, both the Communists and Mr. RK could not be forcibly shoved into the two archetypes identified by Batstone et al. because at the point of time of my field-work they had a stagnant if not declining support base, and senior plant management did not consider their grouping as a whole as salient players, barring a few individuals such as Mr. VDVN whose words might have been listened to. The Communists in EWS relied on a different, less specific strategy of disturbing the worker's state of equanimity and then fighting, not only for resolution of his grievances, but also for wider – and to them more important – ideological objectives. This strategy assumed that workers would have a long-term appetite to endure the negative consequences of a protracted strike against management. The wide-ranging strategy of the Communists thus stood in stark contrast to the tightly concentrated strategy of Mr. MCL who promised his adherents that he had the capability to achieve the best material terms and working conditions in the contract settlement he negotiated with management, and that their interests were his sole concern.

Outside work, Mr. VDVN worked for the party and the cadre based chain of command of the Communist trade union and he was tightly bound to the party's ideology, which demanded unswerving loyalty. At decisive stages of any trade union action Mr. VDVN had always to consult and keep informed his superiors who had general oversight of Mr. VDVN's trade union activities. These superiors reported to others above them in significant positions in the CITU union and in the party's politburo. Although a very modest, quiet and affable man, he would be transformed when he met his comrades by first greeting them enthusiastically as fellow communists, and then using the word comrade frequently in his conversation. My surmising of his enthusiasm for the class struggle is drawn from the fact that I had to endure lengthy periods of waiting as he advised his party comrades and workers from Hubli, who came in and out of his office, to mobilise workers and organise protests against what he saw as oppressive capitalist factory managements in Hubli.

However, these ideals appealed to a decreasing number of subscribers in EWS and as Mr. VDVN himself grudgingly acknowledged to me on 26 January 2011, it was difficult to retain, let alone increase, his activists beyond the ten-fifteen committed, longtime comrades who would never leave the communist dispensation of EWS anyway. He attributed this inability of his trade union grouping to expand its membership to a combination of Mr. KS misleading the workers, Mr. MCL giving them false promises and the modern worker's caprice for more money instead of struggling for the principles that separated his generation from theirs.

Mr. RK's trade union was affiliated to the other Dravidian party, the AIADMK, and played upon workers' linguistic Tamil sentiments, promising them that he could exert enormous amounts of pressure and he used this platform to try to outdo his rival, Mr. KS, who was backed by the Dravidian DMK party and from whom he wanted to recoup lost support. Mr. RK's party was not in power at that

moment and therefore his influence was much reduced and workers failed to see any tactical advantages in backing him. I conjectured after my exit from the field that his support base might have improved in EWS with the coming to power in Tamil Nadu of the AIADMK to which he was affiliated.

This actual or perceived political clout was an important determinant in the survival and tactics of the Dravidian parties whose trade union strategies were very much dependent upon the pleasure of the political sponsors who subsidised the running costs of the trade unions and provided periodic support on political strategies within the unions. trade union support from the Dravidian political parties worked in two ways. In one scenario, pressure from the political party applied by management made it quite possible for them to accept whatever management offered them; conversely, the second scenario could be that when the management is not on good terms with the political party, the union could make its daily life excruciatingly difficult by instigating workers to disrupt work without any worry of pecuniary loss. The first scenario was rumoured by Mr. RK, who was Mr. KS's Dravidian union competitor, to be the case with Mr. KS and senior plant management's relationship. The communists for their part could not convert that perception of sympathy to enlarge their representational block, and even win when the next elections were held.

These Dravidian political parties in EWS relied on the influence of their external backers to engineer results for them rather than on the individual leadership qualities of their officials and the internal mobilisation of workers. Their promise to workers uttered *sotto voce* was that they could influence the institutions of state such as the Labour Commissioner, whether by fair or underhand means, through blackmail, bribery, threats of transfer or some other unpleasant consequence for any honest government official who failed to comply with their wishes. Yet for all its influence, real or imagined, Mr. RK, the leader, was sandwiched in between the other unions

with limited industrial power and could only complain about management policy and the misdemeanours of Mr. MCL and Mr. KS without having an obvious sanction that he could bring to bear.

I will now turn my attention to how persistent inter-union rivalries aggravated their weaknesses in negotiating with management.

7.4.4 Persistent inter-union rivalries but agreement on issues challenging workers

EWS's trade unions had to exaggerate their condescending and unflattering representations of their rivals, with each trying to broaden its support base, all within the same pool of permanent EWS workers. This tactic was critical for the survival and continued relevance of EWS trade unions because it was important to appear strong in front of their supporters to retain their support base and attempt to bring in new recruits both from rival trade unions and from the small proportion of undecided workers in EWS who had no trade union affiliations. Inter-union rivalry was characterised by mutual recriminations and a continuing acrimony between Mr. MCL, Mr. KS, Mr. RK and the communists. As noted in Section 7.3, the succession of different unions gaining majority support at different times from the 1980s to the present, produced marked shifts in trade union leadership which were underscored by the persistent divisions between the groupings who saw the other leaders as the main obstacles to their establishing legitimacy amongst workers. The workers' willingness to change constantly the people in power at each election for the recognised union and the arrangements for regular elections, sponsored by the employers, probably reflects an Indian democratic phenomenon but certainly was disruptive to the development of a countervailing bureaucracy to that of the employers.

This disunity between the trade unions worked to plant management's advantage, so that whilst one constituency of workers perceived Mr. KS as management's sidekick and stooge had enormous confidence in the leadership abilities of Mr. MCL, another might see Mr. KS. as a credible power-broker and Mr. MCL as someone who regularly made them promises he could never deliver.

Nevertheless, as demonstrated earlier, trade union leadership personalities such as Mr. MCL have shaped worker opinion in EWS and, in the climate of mutual acrimony between the unions, Mr. MCL appeared to be the only individual who saw the need to unify workers around a finite number of well-defined grievances that they all shared and focused his demands on pay and working conditions, subjects that united them. He took these demands, interpreted them and then presented them first to the workers and thereafter to management thematically, in terms that all EWS workers could understand and support. Other trade unions were thus forced to follow his lead, including his bitter rival Mr. KS, a retired operator who had already had a represented majority from 1997 to 2001.

But, in the early 2000s it was Mr. RK and then Mr. MCL who gained majority votes, and each new majority coincided with fresh disputes, so Mr. KS seems to have had less influence than he imagined, something alleged by Mr. VDVN who condemned Mr. KS as a despicable lackey of management. For example, Mr. VDVN [24 January 2001] accused management of doing everything to break workers' unity in EWS, including forcing compromises on workers' grievances through agreements with weak trade union leaders like Mr. KS and Mr. RK. In another conversation held in February 2009, an operator in the assembly area, who owed allegiance to Mr. MCL, expressed an abysmal estimation of what they thought of the capability of Mr. RK. Talks were ongoing between management and the recognised union, led by Mr.

KS and affiliated to the DMK, but the operators to whom I spoke alleged opaqueness in management's communication of the detail of the talks and questioned Mr. KS's commitment to negotiating hard for a fair settlement.

One cause of the escalation in bickering amongst all the trade union leaders was the delay in arriving at the labour settlement with senior plant management of EWS. This was corroborated by Mr. MCL's union grouping, in the pamphlet dated 9 October 2008, in which he complained that it had been seventeen months since the last labour settlement had been signed, and he suggested that the operators, irrespective of their union affiliation, were bitter that management was delaying the wage settlement and not paying them in a timely manner. Mr. MCL singled out Mr. KS as being in cahoots with management and not bargaining hard enough with CompCo to secure workers' interests during a recession when they were feeling the effects of what amounted to a pay freeze very acutely. Another smaller section of workers who looked upon Mr. RK as their leader in March 2009, wanted Mr. KS to accelerate the long delayed settlement agreement with management or unequivocally accept failure and quit for having failed to get a reasonable settlement in good time.

When the settlement was reached at the end of May 2009 there was widespread discontent amongst trade union conveners such as Mr. VDVN and workers such as Mr. TNS who viewed its unfavourable terms as yet another instance of Mr. KS being management's poodle.

This persistent competitive antipathy between different groupings of workers allied to the different unions was a consistent theme and consequently trade union resistance to the managerial onslaught remained piecemeal and disjointed as the internecine rivalry destroyed the ability of trade unions to speak with even a semblance of unity even though they were all aware of the substantive issues facing the workers. So, even though trade unions in EWS tended to agree on several basic

grievances against a senior plant management that was implementing edicts from above and against corporate management whom they perceived was steadily sawing away the very ground they stood upon, they were virtually powerless to resist. The only winner from the chaotic system of perpetually changing unions was CompCo's management.

7.4.5 Contradictory nature of workers' attitudes and responses

Having pointed out the inability of trade unions to form a substantial oppositional block because of their fragmented nature and their weakened power bases, I will explore certain aspects of the workers' own attitudes and responses that appeared to be contradictory.

The workers in EWS adopted different perspectives depending on their circumstances and I have already explored the differences between different groups based on age, job role and recruitment source. Thus older workers were opposed fundamentally to management who were disturbing the working conditions built up over many years whilst the cooperation of younger workers, who were more mobile within the job market was contingent upon their personal self-interests and likely to be transient. This older generation, like Mr. VN and the union activist Mr. VDVN who had worked in the heat treatment department in EWS, preferred not to be noticed and wanted to "fade" into the background. They were particularly opposed to attempts by plant management to relocate them from the area in which they worked, which would mean them leaving their work-mates, familiar machines and jobs with which they possessed a sense of accomplished familiarity. These older operators, such as Mr. VDVN, had come to constitute their emotional sense of being, or in relation to these machines and the job routines with which they were familiar and the interactions that

their day at work entailed; these formed their world view of work. This vocabulary, the familiar job routines and the relationship of their job routines with their fellow workers provided them with their 'intentionality', in the phenomenological sense of usage of the term, to a pre-aligned perspective on management paradigms.

Corporate management's GEMBA project, envisaging as it did greater flexibility for management when it came to modifying the job routines of workers through kaizening and job rotation, hoped to disrupt that pre-set sense of existential being through constant change and the displacement of the sense of accomplished familiarity that workers perceived and which constituted who they were emotionally.

However, it is important to point out that although the fundamental positions of management and workers were largely irreconcilable, their relationships were much more complex than these fundamental positions would suggest. Despite their grievances and management continually sawing away their sense of certainty, older workers still felt compelled to maintain reasonable relationships with their Section Heads with whom they had in many cases grown up and worked for many years. Their younger counterparts did not generally have these entrenched emotional bonds but nevertheless saw good financial and career reasons why they should cooperate, at least on the surface level. This apparent willingness to break bread with middle managers reflected the contradiction in workers' attitudes and responses which I will explore further below.

Middle managers – especially line managers – and workers lived in a symbiotic relationship and each needed the other for their continued employment and survival. Both operators and trade union leaders could harbour grievances and defy management while (sometimes) still remaining on friendly terms with Section Heads. Friendships and banter between older, established workers and section managers co-existed with continuing worker grievances. Against this contextual background,

different areas of the factory continued to be characterised by distinctive patterns of compromises and negotiated adjustments. Allan Fox [1966: 18-19] argues that the totality of the situation at a given moment of time in the work area and types of productive system have a bearing on the nature of interaction patterns between work groups. The nature of the labour process in EWS, as illustrated in Chapter 5, varied in the assembly and machining areas. Hence different areas of the factory were characterised by distinctive patterns of compromises and negotiated adjustments that had to be arrived at amongst operators and managers, involving such features as lapses in time-keeping, quality reductions under production pressures or workers covering for one another. Older workers and managers, maintained relationships underpinned by shared experiences, friendships, joking and mutual tolerance, even though worker grievances still remained very real.

For instance, trade union leaders such as Mr. VDVN would be on friendly terms with their Section Heads or middle managers but these friendly terms would not impede them from defying management because their grievances centred on corporate management's initiatives and not on the actions of the individual managers with whom they worked and who had little influence over company policies. The degree to which operators got along with different middle managers and Section Heads varied. There would be a lot of casual banter and joking amongst some operators and middle managers, and people like Mr. AK would ridicule and occasionally swear at an operator for being slow in the line, but it would be taken in good spirit even if there were grievances, because in order to work together there had to be mutual tolerance. In this way, whilst some operators took breaks, their colleagues would complete jobs and middle managers and inspectors would 'look the other way'. Also, when work pressures were high senior production managers would overlook attendance or punctuality issues and quality defects because they had known the operators

concerned for many years and needed their cooperation to reach their production targets. Without that cooperation, middle managers would have found themselves behind target and in trouble, and so were ready to abide by the implicit contracts built up over time between themselves and the workers rather than the literal, express contracts that ostensibly governed their working conditions.

These relationships benefited management importantly in another way. The younger workers, who usually did not have these deeper relationships with managers, and who may have been fundamentally less attracted to direct action, were nevertheless easily swayed once there was some disagreement and were then much more likely to react angrily in one form or another. In that context, their older colleagues often acted as mediators to resolve issues and douse the flames of discontent. In that way they lubricated the wheels of production, which made their lives and those of their line managers a lot easier. Concomitantly, even though there was some militancy, these individual networks of relationships were certainly influential and workers' opposition to management manifested itself in more subtle ways than just high profile opposition, as I will explore in the ensuing section.

7.4.6 Spectrum of formal and informal resistance considered

Although militancy was declining and the trade union leadership was fragmented, this did not by extrapolation elide sporadic flash points of worker resistance. Worker resistance in some cases took less obvious forms as different workers adopted different strategies to express their objections to management policy and resisted it. These varied with the age of the workers concerned and the staged they had reached in their careers; I will bring out the spectrum of forms of resistance adopted by workers.

In Section 7.2 I have described the subtle opposition to GEMBA evident in training classes which represented one form of undermining management's project and represented a stubborn obstacle against corporate management's expectant bricolage of present and future managerial strategies. I will now explore other forms of resistance and opposition in EWS that were often independent of any trade union initiative: sit-ins, flash strikes, work to rule and coordinated sickness absences.

The sit-in was where workers occupied the company's premises in defiance of management orders. This was intended to create publicity for the conflict between employer and employees and embarrass the company within its industry, knowing very well that high profile visitors would receive a message that suggested the company was less in control of its destiny than it wished to portray. Sit-ins were one way of placing workers' grievances in sharp focus in the automotive industry in India and striking at CompoCo's soft underbelly, and therefore negating the very image it wanted to project. This is because these forms of protest highlighted a crucial characteristic of modern Indian companies and their paranoia of preserving what they saw as the right image for themselves even if their work areas, the attitudes of their workers and the problems they faced sat uncomfortably with the idealised image that they sought to project to shareholders, customers and the public.

EWS wanted to project an image of a dynamic company always learning and one that was abreast of the latest idioms of management practice and was quite unlike the typical image of a manufacturing unit, with workers having their hands full of grease and work areas smelling of the industrial odour of oil and industrial lubricant spillage. Corporate management at Nellore tried to emulate the 'campus image' assumed by companies like Microsoft and Apple, to whom managers like Mr. VDS and Mr. N looked up approvingly. Its corporate headquarters building was said to be world-class in terms of the comforts, amenities and conference rooms it offered, and

these were thought sure to impress visitors. To complement this the corporate communications unit in Nellore was always careful to exude an image of a company full of cheerful young willing employees ever ready to "engineer the tomorrows" of CompCo's customers and to depict clean, state-of-the-art, work areas in the advertisements it issued periodically in newspapers. Complementing this, Mr. N loved to say, in line with the precepts of GEMBA, that consulting workers and middle managers was integral to hands-on troubleshooting and fulfilling of the N7i goals. Thus the image CompCo sought to portray was of a forward-looking, twenty-first century company in which management and workers were one team with one vision.

These idealised images were challenged one day in late October 2008, when activists of Mr. KS's group washed their clothes and hung them in the GM's office suite, and refused to leave until assurances were given that the pay talks were going to be hastened [Mr. RGPN, 28 December 2008]. This spectacle of workers washing and drying clothes whilst occupying the GM's office was anathema to the company's carefully built image of a progressive, modern company and as a fieldworker, one of the sure ways I could have ensured my immediate expulsion from the plant would have been by citing this example to Mr. N, who strove very hard to maintain his calm and "coach" like image. Yet he had been affected by the sit-in and he could not sometimes disguise his unflattering perceptions of the company's operators. In a market in which new entrants such as Mercedes were seeking to build strong brands and take a market share, image would be all important to CompCo and its management knew that acutely. Visible acts of resistance undermined the company's efforts to strengthen its own brand whilst the less visible forms of resistance would also be damaging if known to CompCo's competitors.

'Flash strikes' were not an uncommon response to specific grievances and often took the form of brief sit-in protests until the Section Head, the Personnel Head

and a representative of the recognised majority union met and resolved the issue. More informal forms of resistance could be as simple as lounging around the lawns of the assembly area, not turning up for work even if it brought disciplinary consequences later, sleeping during the night shift or workers resting during the assembly process while one of their mates completed the job. To reinforce strike threats one form of protest was to organise union meetings in front of the main gate of the plant at the end of a shift, where the union leaders would (much to the chagrin of management) talk loudly about the workers' grievances. As explained earlier, the trade unions would also distribute pamphlets about the contentious issues surrounding the company, and these would also be distributed outside the main gate, to the irritation of managers like Mr. N.

Another, less dramatic but no less effective, response to management was the work to rule. Older operators sometimes orchestrated 'working to rule' and refused to talk to management during shifts. They would also ask questions that both line managers and they knew the answers all too very well or seek obvious instructions, and although the questions were inconsequential, the end result would be damaging delays in production. For example, I observed that operators would deliberately identify parts for particular jobs wrongly from the stocks held on the line and then ask line managers, such as Mr. AK, to confirm their selections before proceeding with their work. The line managers would then have to instruct them to find the correct parts causing exasperation, diverting the line managers from other tasks and slowing down the line.

One other tactic for resisting management's intent was the coordinated sickness absence where I saw that small groups of say five workers would go sick on the same night shift ('throwing a sickie') causing serious disruption. The absences would be arranged to cause the maximum effect with the least effort and workers

would fail to turn up with no prior notice or turn up late so that no substitute staff could easily be found. I saw that the consequence was that management's carefully structured production schedule for the night would have to be revised with a loss of output.

A saying once attributed to Vic Feather, General Secretary of the TUC from 1969 to 1973, was that management could make people work but could not make them work with enthusiasm. Operators were notably unenthusiastic about GEMBA unless they saw some immediate personal advantage in it and hence displayed the exact opposite of enthusiasm, infectious lethargy. This was yet another tactic designed to make the life of tired line managers excruciatingly difficult and was particularly effective when adopted by operators on the night shift in the MDV area. With fewer managers present on the night shift, it was a relatively easy option for resistance, and would further exasperate line managers who found the assembly line operators' episodic pace of work difficult to combat. One worker, usually one of the veteran operators, would begin to work more slowly and then others, sensing safety in numbers, would follow suit, followed by one operator working rapidly to provide 'cover' and the eventually everyone rising like the high note of a concerto piece to catch up at some point in the small hours of the morning, when the line managers were at their wits end. Corporate management's urgent aim of instituting a roadmap and clamping down on opacity by instituting lean job cycles stemmed directly from the above style of opposition that was particular to EWS and WDP4.

7.5 Conclusions

In this chapter I have tried above all to be a witness to and visualise mentally the moving frames of events as I experienced them, in order to identify the causal

aspects that shaped workers' attitudes toward GEMBA, management and their trade unions. I have also sought to give voice to the workers and construct an account of their experiences as they narrated them to me.

Corporate management went ahead with its programme of automation, outsourcing and active consideration of new production sites where it expected easier labour relations. For workers continued job security and better wages were what mattered: for management the imperatives were profitability and corporate survival. These two aims were seldom coterminous and from the attitudes of senior managers of EWS and corporate management towards workers, I am led to conclude that mental conceptions and corresponding representations of change management amongst managers and different workers can never be congruent. This is because plant management are constantly revising how they represent change in response to the factual, material realities that emerge before them.

Workers reacted to change management half-heartedly. The reasons why GEMBA was not successful in convincing a substantial majority of workers to embrace change were partly driven by the historical context of EWS, and partly by pressing, topical concerns such as job security. Whilst management appeared not to expect an overnight transformation in workers, it was nevertheless impatient to see the human aspects of GEMBA realised and needed co-operation and commitment from its workers, particularly older workers and those in its older plants.

Corporate Management was, therefore, reacting to the emergent reality of a range of vectors, both external and internal, and in doing so tried a range of strategems which it hoped would bring success, but which were rarely in the obvious best interest of its workers. This emergent reality serves as the background against which senior managers and workers were conditioned in their responses and behaviour to one another even as they shaped the future course of GEMBA.

Trade union rivalries and their dependence on, external leaders and the charisma of individuals obscured a critical need to understand and produce a coordinated and effective response to the technical nuances of lean manufacturing and management's multidimensional onslaught. Marginalised as they were in recent times as compared to the halcyon days of trade union militancy, they became more or less passive spectators to what transpired and could little more than plead with management to slow down, if not stop its attacks on the job security of their members. The trade unions deflected blame upon their collective and individual failings by blaming their rivals and trying to inflate an illusion of strength in front of their current and prospective members, whilst fighting for the support of an ever-dwindling pool of workers. And the battleground between workers and workers, between unions and their competitors and between workers and management was underlain by a complex texture of relationships between the key-players which remained complex and was often contradictory.

Finally, the individual experiences that shaped their identity of workers were equally complex and varied from one age cohort to another. An older trade union activist's memories of strikes were comparable with an aged elephant's memory of its mahout's ill-treatment of it as a young elephant, and their attitudes contrasted sharply with those of the apolitical, younger workers, who were eager to impress management but still reluctant to lose trade union support and isolate themselves from their peers. Each of their individual experiences created visual representations of words and the linguistic vocabularies that workers used between themselves and in their interactions with managers created a linguistic community that operated within the context of their work place. Within this linguistic community corporate management wanted to introduce uncertainty and substitute extant images and older vocabularies, that were difficult to dislodge, with newer ones. The interaction of this linguistic community of

middle managers, workers and senior management each with its own norms and expectations created an evolving pattern of industrial relations in EWS. This pattern had developed and was continuing to develop in a context that seemed to bear out E.P. Thompson's claim that a working class can never be a monolithic, empirical block of fixed attitudes and predictable behaviours, and was continually evolving and changing. Instead the working class, as demonstrated in EWS, is an evolving construct that is irreducible and indivisible to deterministic economic and linear historical categories and is constantly being made and unmade in the process of management's attempts to extract surplus value from workers. Among EWS workers, consciousness of themselves as workers was continually forming and dissipating, influenced by a collage of internal and external factors; despite that it remained a critical obstacle to the success of GEMBA.

Finally to conclude, I cite from E.P. Thompson's [1968 cited in Thompson, 2001] preface in *The Making of the English Working Class:*

> 'Class consciousness is the way in which these experiences are handled in cultural terms: embodied in traditions, value systems, ideas and institutional forms. If the experience appears as determined, class-consciousness does not. We can see a logic in the responses of similar occupational groups, undergoing similar experiences, but we cannot predicate any law. Consciousness of class arises in the same way in different times and places, but never in just the same way.'

Chapter 8 Conclusions

8.0 Introduction

The overarching aim of this thesis has been to understand the process of change management within an automotive firm, CompCo, what this reveals about the objectives of the senior managers who planned the strategy, its implications for the middle managers and workers who were responsible for implementing it, and what this tells us about how an old Indian firm like CompCo – and the people who work there – are responding to the opportunities and constraints that face them. Most of my data came through observing, interviewing about, and to a small extent participating in the GEMBA change management programme in CompCo's EWS plant, located in Hubli, India, during ten months in 20082009, together with a further ten-day visit in January 2011.

My overall conclusion supports the findings of other ethnographies, such as Milkman [1997] and Huxley et al. [1997], that the implementation and outcome of change programmes like GEMBA are often quite contrary to the early, prescriptive management literature extolling the virtues of lean manufacturing, such as Womack's and Woos' *Lean Thinking* [2003]. GEMBA followed a non-linear path and was influenced by a panoply of external vectors beyond the control of CompCo. The introduction of GEMBA was highly selective and piecemeal. GEMBA was never deeply instituted but rather remained an overlay over existing managerial structures and practices, and was never organically integrated into CompCo's organisational structure or production areas. To some extent some senior managers, many middle managers and experienced plant operatives preferred the chaos and contingency to which they were used because it gave them greater flexibility to meet their targets at

the last minute when required. Moreover, there was a clear conflict between the ambition to introduce some measure of participatory responsibility among workers and the disparaging attitude of some managers to workers. Later the atmosphere in the plant was dominated by short-time working owing to the drop in demand following the recession from 2008 and the apprehension of labour force cuts. This exacerbated existing worries that were linked to the extent of contract-working in the plant, rather than direct employment. These difficulties at CompCo, whilst also found in studies elsewhere, were closely connected to the existence of diverse subjectivities among managers, which were related to their careers in the firm and the value of their long-term career capital in post-liberalisation India and to the history of trade union activity at EWS.

In this chapter I will look in detail first at the limitations of the GEMBA strategy, then at how middle managers' responses might contribute to our understanding of managerial roles in India. I then consider workers' responses, and, finally, contextualise this analysis within changes in Indian political economy. Finally, I make some suggestions for future research.

8.1 The Limitations of GEMBA

My main questions concerned, first of all, the overall strategies adopted by senior managers and their relation to methods of worker management and how these strategies were communicated by corporate management to other managers and to workers. My review of the literature on change management and related issues suggests that the implementation of lean manufacturing has varied greatly within and across automotive plants because of their different market position, their ability to manipulate or even control the factors of production, the extent of trade union

organisation, and other factors. These shape the strategies adopted, the extent to which they are successfully implemented, and the effects for workers, and their relative acceptance or resistance, which in turn guides the manner in which corporate management designs its change-management strategy.

I found that at CompCo's EWS plant the difficulties of implementing a paradigm shift went much further than simply the inertia of settled ways of doing things in an old firm on a brownfield site. The inconsistent and piecemeal application of 'change management' can be seen in every area of corporate management's strategy, which sought increased productivity, increased self-initiative among middle managers and workers, and continuous cost reduction. Corporate management wanted change but also wanted plant management to manage through sometimes chaotic production to get through the production schedule. This thesis highlights the tension that lies between corporate management's plans and plant management's limitations arising out of a number of contextual factors, in realising corporate management's agenda.

8.1.1 Increasing productivity

Attempts to increase productivity, including measures associated with lean manufacturing, involve measures for managing what management theorist Michael Porter terms the "productivity frontier" by which he implies "the maximum value a company can deliver at a given cost, given the best available technology, skills, and management techniques – shifts outward, lowering costs and improving value at the same time" [Porter, 2011: 3].

Some of these measures and their consequences have often been studied in terms of the tension between 'responsible autonomy' and direct control [Friedman

1977]. The paradigm shift touted by GEMBA sought to increase workers' sense of involvement and increase in self-initiative among middle managers and workers by moving from a bureaucratic style of management that was prevalent in Indian firms to a more informal style. This participative style of engaging managers and workers to facilitate greater productivity is purportedly well established in the IT industry, and many management consultancy firms in post-liberalisation India and, according to the GM Mr. SDN [24January 2011], many management consultants recommend its adoption to corporate managements across the automotive manufacturing industry. CompCo was no exception.

The empowerment of workers to stimulate their self-initiative is often a cornerstone of lean management programmes, and as Chapter 5 demonstrates, GEMBA made much of its empowerment programme. As headed by Mr. N it sought to facilitate self-initiative among workers through the GEMBA rewards programme and Empower festivals. However, the impact of such programmes were partial in securing the whole-hearted participation and acceptance of middle managers and workers, and in the context of the worsening recession and workers' feelings of job insecurity, came to have very little purchase on workers' attitudes.

The efforts to encourage participation did not go very deep. It was the senior managerial team that decided on the GEMBA project goals, and did the 'deep dives' which comprised senior production managers such as the R& D head of CompCo (Engines), with a cross functional team from either the same plant or in conjunction with other plants, of senior middle managers across departments. The objective of these deep dives was: to undertake a detailed study of production processes, to identify present plant layouts and reorganise them in line with lean manufacturing requirements, to recommend comprehensive major machinery changes and far reaching line reorganisation if required. These deep dives were held either in

response to a recurrent production related malaise, or comprehensive overhaul and redesigning of the shop floor. If required the services of external managerial consultants would be requested to help in this senior managerial effort. The results of this extensive study of production processes, job routines and machinery would be studied by corporate management and in turn implemented across CompCo's plants. Higher-level managers who headed plants or departments in EWS could already consult line managers whenever they wanted their opinion in any case. Not only was GEMBA essentially a top-down project, senior management in actual fact did not think very highly of the abilities of line managers and workers.

In fact the attempts at empowerment were so shallow that I came to see them as a 'language game' of the kind that Wittgenstein [Monk, 2005: 74] analyses. His insights can be used productively to highlight that a change programme like GEMBA has to be understood at least partly in terms of competing languages which are linked to power. CompCo's GEMBA programme consisted not only of reorganisations of machinery and labour, but it also tried to institutionalize a new vocabulary whose rhetorical handmaidens were 'participation' and 'self-initiative' where all needed to work together to make CompCo compete and thrive in the automotive industry. This can be seen particularly in the ways that CompCo's change management team tried to mimic the atmosphere of informality of the Indian IT industry, the centre of which is located not far from Hubli, but within a hierarchical organisation. Ironically, however, the operation of the participative vocabulary depended on the hierarchical organisation of the firm. The proponents of GEMBA used their senior positions to try to displace the older, more authoritarian and often derogatory language adopted by Section Heads and line managers, with words and slogans such as 'team-work', 'troubleshooting', 'Together We Can', and 'Engineering the Customer's Tomorrows' being used with optimistic fervour.

However, acceptance of this vocabulary was rather superficial. When the pressure of production met up against managerial GEMBA activity it was GEMBA that lost out in the face of the immediate priorities of Section Heads and line managers, in terms of reaching their targets and protecting their sphere of influence. When this happened, an older but more rigid and blunt form of communication emerged, with its abrasive words, said and unsaid, well understood by line managers. Production managers had no other choice but to take the place of slave drivers to push production. Hence Mr. N's and Mr. AB's apparent informality was both supported by the bureaucratic organisational structure of EWS, which made it appear that a friendlier participative atmosphere was being created, but it was ignored whenever necessary, and supplanted by more obvious and direct forms of control.

As Delbridge [1998] found, responsible autonomy programmes and other lean manufacturing measures also seek to reorganise production to make it possible to respond more flexibly to changes in production models. Success depends on the resources the firm has and its ability to control the factors of production. At CompCo the firm lacked the resources, or was unwilling to spend the money, to transform production at EWS in the way that lean manufacturing demands. As is discussed later, it also faced opposition from trades unionists and workers.

CompCo wanted to be more flexible in getting value from the factors of production, but faced limitations owing to the ageing and unevenness of plant machinery and production methods between different sections. The full implementation of lean manufacturing across all the shops of EWS, other than the model areas, required comprehensive redesign of job routines and tightly timed production cycles integrated to suppliers JIT delivery to the lines, vendor supermarkets and rigorous fault analysis by workers themselves, instead of their waiting for others to it for them (some of these measures were already in place in

engine assembly areas such as Shop Five). These would have necessitated changes in plant layout and reorganisation of machinery that in turn called for massive investments. However, CompCo was unable to make the large financial investments at EWS that the ageing plant required. This was especially the case because CompCo was developing other, more modern plants elsewhere in India and, as I discovered in 2011, had been undecided about the future of the EWS plant in its overall role in its future product portfolio and strategy. Getting Nissan in would accentuate the implementation or even improve upon GEMBA by getting first hand inputs from a leading Japanese exponent in engine assembly. As the commercial vehicle industry was moving towards Euro 5 emission norms, Euro 4 and 3 compliant engines may no longer be relevant to the commercial vehicles manufactured. Newer engines required comprehensive reorganisation and rationalisation of lines as opposed to duplication of products and greater investment in technology. Bringing in Nissan would enable certain lines to be amongst the best in CompCo and a testing board for the latest lean innovations, while it gave the rest of the plant a chance to catch up with these new lines. At the time of my visit reorganisation work of the engine, testing facility and Shop Five was in progress to enable them to match Nissan's standards. However, the prevalence of older and less flexible production machinery at EWS meant that management was selective and pragmatic in its implementation of job redesign. CompCo mirrors Delbridge's [1998] ValleyCo, where these changes envisaged by high-profile corporate managers, such as Mr. VDS, never really took hold, because, like ValleyCo, EWS had "different structures and systems being run concurrently on the shop floor" [Delbridge, 1998: 65]. This lack of integration across the plant meant that its attainment of tightly controlled production targets was only ever met through what Delbridge terms "negotiated order and preference for chaos" [Delbridge,1998: 29]. Like ValleyCo, Section Heads' and line managers' production targets were met

in much of the plant only by workers pulling together, eventually getting to the production target which was based on the production schedule. This production schedule was given to line managers by their Section Head who, in turn, received it from the deputy heads and further above the Production Head who prepared the forecast based on quantity and product mix warranted by the marketing department in CompCo.

However, EWS senior management in charge of GEMBA paid more attention to production areas, such as assembly shops, that were more amenable to the work organisation of lean manufacturing even while neglecting others, especially machining areas, where it was more expedient to continue with older machining and cheaper, labour-intensive processes. Hence the assembly areas, and in particular Shop Five, resembled Delbridge's NipponCo, where job routines were tightly coupled, something which depended on minimising uncertainty in the supply of components. At EWS some areas, such as Shop Five, were at the frontline of implementing innovations such as kanban, cellular production and the core principles of lean manufacturing. However, these areas in EWS were still vulnerable to disruption of the tightly coupled production chain by a miscellany of factors, such as delays in supply of components by suppliers, which in turn had a knock-on effect on the kanban bins where stocks were replenished just in time. However, we can say that the GEMBA paradigm never really spread across EWS as a whole. It was cheaper for senior management to retain labour-intensive machinery in comparison to more expensive automation.

Moreover, senior plant management developed cold feet about the application of the planned new procedural job routines in the slump and crisis that followed the recession of 2008, when supplies were in short supply and arrived spasmodically. They instead continued with tried and tested ways of responding to contingency

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through organised chaos and the "milking" [Jackall, 1988] of old machining areas to the limit for maximum output through extraction of maximum effort from line managers and workers to meet production surges. This was especially apparent when the plant needed to meet surges that would come during year-end periods. Sometimes targets of the day's production plan were met by transferring the reworking of items to the quality control section.

8.1.3 Cost control and reduction

As explained in Chapter 6, cost reductions through an improved and more precise and up to date system of inventory control and recording was a key component of the GEMBA programme. It sought to reduce accumulating inventory, especially in a recessionary context, because vehicles were accumulating in its production facility, parts were lying unused, there was an upper limit its dealers could hold and there were mounting supplier bills. Apart from acutely corporate image conscious managers such as Mr. N, this sight of heaps of unused machinery, groups of suppliers circling the work office to get paid and commercial chassis lying unsold was an eyesore and negated the carefully nurtured image of a company in tune with the latest production practices which they were carefully trying to nurture. It also wanted to match supplies more closely to new models; better inventory control also would have an impact on productivity.

The attempt to revamp inventory exposed the vulnerability of buffers and brought out the tensions between different systems of inventory management prevalent in CompCo and the challenges and conflicts between senior and middle management. It proved impossible to insist on the system being followed. For instance, senior plant management turned a blind eye when middle managers

continued to adapt to contingencies through actions such as bypassing the steps in inventory flow, as described in Chapter 6, for instance by grabbing components as soon as they arrived from the supplier – outside the proper recording and distribution systems – or rummaging for them in the Medium Duty Vehicle store area.

An important problem here, as in planned increases or scaling down in productivity, was CompCo's lack of control over bigger suppliers because they preferred to deliver in lots rather than in batches in order to achieve economies of scale. They also had a monopoly over critical components of particular specifications wherein alternatives could not be thought for substitution. There were limits to CompCo's efforts to antagonise such suppliers such as the German multinational firm Robert Bosch and ask them either to supply or to withdraw supply at the last minute, akin to the manner in which CompCo could do to the individually owned or smaller ancillary industries whose survival was critically dependent upon CompCo..

8.1.5 Inconsistency in support

Perhaps the most striking aspect of GEMBA, and what I believe underwrote its very partial integration into EWS management style and operations, was the inconsistent support it received, even from managers. Although CompCo's corporate management may have been motivated primarily by the need for CompCo to achieve efficiency and profitability, for managers below them the end was likely to be more important than the means.

Their sceptical attitude had several roots: long experience of changing market conditions, fluctuating consumer demand from the provincial government transport corporations, individual truck owners of varying requirements ranging from heavy multi-axle vehicles to light commercial vehicles to private bus owners (whose

operations were increasingly becoming very competitive) who formed much of the customer base of CompCo. The other discernible reason for their sceptical attitude was the changing polices of their superiors made them cautious about innovative measures that they suspected might be short-lived fads. Their focus was on the here-and-now and the commercial reality that products or services need to be produced and distributed. For them, the fact that production and distribution is going to be achieved is likely to be less important than how it was done. The CEO who led the initiative from corporate management and the GEMBA team failed to create a motivating atmosphere for middle managers and workers who remained sceptical about GEMBA and its potential to benefit them personally, and they came to see it as yet another burde to their existing workload.

All the managers except the GEMBA team were always faced by competing priorities. In fact, the fulfilment of their obligations within EWS was often at the cost of GEMBA. The day-to-day survival of the plant managers, Section Heads and line managers or team leaders precluded their honouring the transformative evangelical agenda of GEMBA, pushed through by corporate management. This was partly because their promotion depended on a favourable review by their immediate superior, and he was always more concerned about their ability to meet production targets than GEMBA record keeping or monitoring. Corporate management, while demanding that plant managers achieved GEMBA targets, took them to task if they were failing in their production targets. Their saying that they were busy implementing lean initiatives – which took time to be perfected, learnt and synergised by operators and line managers – was not an acceptable excuse.

It seems, therefore, that while corporate management perceived GEMBA as an integral transformational agenda, it did not integrate it into the mind-set of production managers and allow them to innovate and give them time to find their way around.

GEMBA strategising and analysis was very much a senior management activity and middle managers were only consulted and not taken aboard when warranted. It was a side activity that was not fused into the production system, but superimposed and ran in parallel with the production of the plant where, as in Delbridge's [1998] ValleyCo, the line managers such as Mr. AK, and others such as the senior engine stores managers Mr. RGPN, believed in the end everything will be fine.

Ironically, even the GM of EWS seems to have been somewhat sceptical about GEMBA, at least in hindsight, which suggests that GEMBA had never had whole-hearted support even among senior managers. When I interviewed the GM on my return to CompCo in 2011, he talked about the then recent outbreak of industrial militancy in the Korean-owned firm Hyundai, and argued that lean manufacturing is dependent upon local cultural contexts and needs to take them into account. He said that transplanting lean manufacturing to a labour-intensive market, such as India, whose factors of production were far from developed, was fraught with difficulties for Indian managers who tried to follow the edicts of their Korean superiors. He said that he himself advocated a pragmatic policy of crossing the bridges as they came and not relying on GEMBA as the only means of realising efficiency and reducing cost. In the context of the Hyundai industrial strife, this perhaps suggests that he recognises potential worker resistance as a key consideration.

In sum, strong support for CompCo's GEMBA initiative was confined to relatively few individuals, and their attempt to force through a new language game of lean manufacturing was not accepted by their subordinates. The position and outlook of senior management themselves contributed to the partial and unsuccessful nature of GEMBA because the interpretation of GEMBA's objectives and implementation was reduced to the personalities and egos of a few individuals.

The CEO of CompCo in Nellore, Mr. VDS's transformational agenda of GEMBA, implemented by Mr. N and his deputy Mr. AB, was felt by line managers and workers and senior management within EWS as an imposition from above and corporate management implemented it without going out of the way to ensure its success. At EWS the head of GEMBA was Mr. N, who always thought he knew much about contemporary management practices. His strong personality and manner led middle managers to mime his lean vocabulary and try to produce an array of statistical data, minutely monitoring production parameters. However, they had no inclination to explain why GEMBA was having a limited impact in the manner in which they worked, preferring simply to ignore what they could. Mr. N's deputy, Mr. AB, a highly-qualified engineering professional was recruited to ensure that GEMBA was well co-ordinated and implemented across the organisational hierarchy in order to facilitate what Mr. AB pointed out the much warranted "mind-set change".

8.2 Middle Managers' Orientations and Strategies

Although I had not originally planned to concentrate on the situations or motivations of middle managers, I was told by the GEMBA Head to help them better understand the implementation of GEMBA and suggest recommendations to facilitate course correction. Initially he put me into the CompCo Hubli plant further along the same road. Not long after, Mr. N relocated me to EWS because, as EWS was an older plant, my services would be of greater use to the change management team to enable what he called "course correction and learning by doing" by EWS managers and operators. He felt that the requirement to facilitate the right attitudes amongst front-line managers in an older plant such as EWS, in order to permeate GEMBA

successfully across every manufacturing shop within the plant, was far more immediate compared to WAP4.

Thus in the course of time I came to know the GEMBA team well and to sit in on their meetings with department heads and other line managers, so I was able to observe the interactions between middle managers at close quarters, and became aware of how much the change programme depended on obtaining their compliance. My question became how different categories of middle managers understood change management and how the ways they interpreted corporate management policies affected the process and outcome of GEMBA, and I began to explore some of the literature on middle management's crosscutting interests [Nichols and Beynon, 1977] as between capital and labour and other interpretations of their roles. As a result, this thesis is one of the few ethnographic studies to contribute towards a sociological understanding of the relative importance of first-hand accounts of middle managers' day-to-day decision-making in India, where the studies of manufacturing sector are generic and usually focus on workers and trade union patterns [Ramaswamy, 1977; Bhatacharjee and Ackers, 2010; Teiltelbaum, 2011; Hensman, 2011].

So far, I have concentrated on how the managers' attitude to GEMBA goals and procedures stemmed from their role in the overall production process, especially the competing priorities of meeting production targets and engaging with GEMBA data recording and analysis. Middle managers in EWS were caught between demanding senior management above, and workers who they cannot buy off below. However, I gradually realised that managers' relative interest in engaging with GEMBA also reflected underlying divisions among managers based on their age, experience and the upward mobility their career pathways could offer them.

As this case study of CompCo suggests that organizations can be seen in reality as being comprised of multiple managerial constituencies, that will not

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immediately be evident, and which bear little resemblance to the formal organizational charts that imply logical interactions and clear separations of responsibility and power. Whilst CompCo's corporate management might commit itself to one strategy, it will be surrounded by other groups of managers and workers who themselves have their own expectations and experiences and who will pursue strategies that align with those interests and experiences and are inimical to the intentions of top management. Different layers of an organisation within CompCo pursued many, multiple organisational goals rather than one tightly-packed set of complementary objectives laid down by its leaders. As described in Chapter 6, at EWS there were two main groups of managers, who ranged from plant managers, managers in charge of particular functions – such as materials – and the middle managers who had more direct contact with operators.

Across this large group, however, the key division when it came to GEMBA was less their positions in the firm's formal managerial structure, than their age and generation. For both groups, self-preservation rather than the pursuit of the latest managerial theories, with which they may have only limited sympathy, is likely to be the imperative. However, both groups had no other choice than to undertake the verbal 'performative acts' of using identical 'lean parlance' to mirror Mr. N's vocabulary as a way of acknowledging his power and showing deference.

The larger group consisted of 'survivors' aged about forty to fifty-five who were mainly interested in practices and accustomed routines of the production line which they felt they could cope with until they retired; they feared their jobs were threatened by the new vocabularies and methods of control. These survivors within EWS craved limited stability that allowed their careers to progress whilst meeting short-term organisational objectives, such as production targets, and reaching accommodations with the policies of their superiors. They were used to the

management vocabulary and priorities which had developed in the more bureaucratised system that had prevailed, with its higher job security, and where competition with other firms was less of an issue. Some had also developed significant philanthropic interests outside the plant, such as Mr. RGPN's involvement in a local orphanage and life in EWS was a component, not the *raison d'être* of their lives. They complained about GEMBA and avoided it when possible, partly based on their belief that making do through last minute alterations and chaos was in any case inevitable. However, EWS (and its senior management) were dependent on them to keep the plant running, irrespective of how much senior management complained about their hidebound ways.

The other group was a much younger, aspiring cohort in their twenties and thirties, often recruited from engineering colleges, some of whom had business education degrees. These trainee managers were eager to progress their careers in the more competitive environment of post-liberalisation India that promises upward mobility to the talented, a development also pointed out by Gurucharan Das [2012]. The firm saw them as its future and invested considerable resources in their training, seeing them as its future. However, it knew very well that the continuance of these managers within the same firm was not guaranteed, and that there were better opportunities especially in a less physically taxing environment – such as the services sector – which presented them with higher positions and better pay. The survivors were insecure with this group and were worried that his group would threaten their career paths and eventually their jobs by rising much faster than them, in spite of having been there for the company when it needed them most, in rain or shine.

These younger managers tried their best to adhere to the vocabulary and deadlines of GEMBA. However, they did not necessarily have the same attachment to

CompCo. The epitome of this group was Mr. AB, the GEMBA leader under Mr. N, who was more committed to GEMBA and the values it represented than to CompCo (in fact he left the firm some months after my field-work ended).

The younger managers cohort in EWS were opportunistic and did not have the fealty or loyalty towards the company partly because they believed that they ought to change jobs if a better opportunity presented themselves as opposed to 'company men' who believed in rising up the ladder and being rewarded for their services within the same firm. These younger managers' opportunism for employment within other firms for career mobility and their consumption patterns, in cities such as Bangalore, were closely connected to shifts in the wider political economy, and the demands it makes of managers. I suspect that it is also connected to ongoing transformations in the class structure in India, especially the growth of a new middle class, including a new managerial class faction, with its interests in consumption and what is less talked about – its relative insecurity in employment [Fernandes, 2000]. However, owing to lack of further specific investigation on data on the class backgrounds of my informants, I am unable to develop this point further. My finding that attitudes to GEMBA and interpretations of their work more generally were underlain by differences in personal priorities, work histories, and career ambitions suggests that Watson's [1994] emphasis on the importance of individual and variable subjectivities of managers as an explanation of their decisions and loyalties is as important to their interpretation of events and their actions as their structural position in the drama of capital-labour relations, as portrayed by Marxist analyses, nor are they trapped within a Foucualdian panopticon which gives them no room to manoeuvre.

8.3 Workers' Responses to GEMBA

As Chapter 7 documented, GEMBA did not appeal to workers and they did not react positively to the vocabulary of participation and troubleshooting. This was because they were much more apprehensive about losing job security and angry about the constraints on wage growth, because of both the long postponement of a new contract and later the cessations of production during the recession. However, owing to the antipathy to the trade unions of Nr. N, who nominated himself as my mentor, I was unable to have as much time with workers or trade union activists within EWS as I had hoped.

Different groups of workers were affected by GEMBA quite differently. Permanent workers' employment was relatively secure owing to the continued protection still offered by labour laws, but they still did not want to stick their neck out because of fears of going too far and showing management a way to reduce their headcount through kaizening. They were particularly worried by what they saw as management's systematic onslaught on the incremental component of their wages through scrapping the piece rate system and linking their incremental pay to kaizening and the attempt to tighten cycle times. Outsourcing and off-shoring and the steady increase of contract workers on site compounded their fears about job security and made them distrustful and even aggressive towards contract workers.

Contract workers are especially vulnerable because they were itinerant employees and were under the mercy of the labour contractors and had no organised trade union support or representation. They bore the brunt of managerial ad-hocism especially when priorities of cost reduction overtook senior plant managers. One obvious area where plant management could show results to CompCo's finance department was to reduce the headcount of contract employees, and thereby save on

the wage bill. Even otherwise, contract workers were caught between the CompCo employees, who blamed contract workers for quality defects and lapses in the production and inventory management, and the ire of line managers who had to ensure shop-floor coordination to deliver production targets.

Trade unions in CompCo failed to respond to a multi-levelled onslaught on their constituents' job security and managerial intention of moving away from collective, bargaining-determined aspects of workers' pay and job routines. Being affiliated and subsidised by political parties was a multiplier in their strength to negotiate with management as an added source of pressure (especially if the party by whom they were backed was in power) but was also their Achilles heel. Considering the party-led union organisational structure of Indian trade unions and within CompCo, party unions persuaded by management could force the local union conveners to cede to their demands. Moreover, both the plant level trade union leaders and external political leaders needed greater understanding of the finer technical details of lean manufacturing whose implementation was being progressively scaled up and multiple and often contradictory managerial strategies which CompCo management was pursuing which had direct implications for workers' livelihoods. Bickering amongst each other, a large portion of trade union leaders' time went into managing workers' perceptions and expanding their support base, which meant that they could not mount a coherent response towards management. In summary, trade unions within CompCo were already operating in a context that those more favourable to management were unable to resist or mount a coherent response to managerial strategy.

8.4 The Importance of the Wider Context

As can already be seen in my discussion of middle managers and workers, the GEMBA programme and its limitations cannot be understood outside the wider, macro context of Indian manufacturing industry at the time of my fieldwork. There is a complicated historico-political and economic context under which managerial policy operated. I will briefly recollect changes and continuities regarding these macro variables and link them to changing Indian managerial policy which affected the outcome of change management in CompCo.

Changes in the manufacturing environment include first the relation between manufacturing industry and the state. India had a licence permit economic system based on import substitution, in which the state in its various forms placed large orders with manufacturers and where consumers of all types had limited choice. Thus manufacturers enjoyed stability of demand and predictability of profit within a protected bubble that insulated management from the cold winds that were blowing through other economies. This was also true of CompCo, since at one time its buses would have been purchased by state-owned transportation corporations. Those employers were unable to impose the working systems that were regarded as best practice in other, more developed, economies. This environment was sustained by employment laws and political dynamics that emphasised the primacy of job security and encouraged labour market inflexibility by making litigation and prolonged legal complexity a norm, as explained in Chapter 7. The organisational structures of Indian manufacturers reflected this relative security, and emphasised the importance of time-serving over performance where promotion was concerned, which had produced strong company cultures and loyalties so that it was common for workers and managers to spend their entire lives with the same company.

Nowadays India is in the throes of transition from this economic system and the liberalisation that was taking place during my field-work (and since) has led to a harsher environment for firms like CompCo. What some call "crony capitalism" [Timmons, 2010] by which she implies "a small group of powerful conglomerates [which] scramble to fight for resources or project mining rights, land, infrastructure projects". The dependence of economic life on close ties between corporate business and the state had been facilitated by state controls over the economy and has changed in character after liberalisation with increasing involvement of corporations, both Indian and overseas, in bribe-giving and fixing deals with bureaucrats and politicians – often to the detriment of the poor who are cheated [Sainath, 2011]. But it continues, co-existing with increased market competition from new market players, changing consumer demand and a globalised marketplace for goods and raw materials. This is also true in the bus and lorry market, where purchasers now are private companies with diverse demands.

In this much more unstable environment, manufacturers like CompCo are forced to develop diversified product portfolios to meet changing consumer demands and competition from new multi-national players, who even at the time of my field-work had already become acclimatised to more hostile market conditions and were clawing away market share. They had gone through the full, lean learning curve already, and were ready to compete in the most difficult of markets.

Despite this, CompCo had some offsetting advantages in that it had a very strong market position and brand, and had become inured to local conditions and problems such as unreliable supply chains. CompCo also understood the domestic market better than most of its competitors. In short, it was astute and in every sense 'battle-hardened'. But these advantages also of course limited managers' and workers' incentives to accept and strengthen GEMBA. Economic liberalisation has

also meant change for workers. Competition has meant that workers at CompCo can no longer take their jobs for granted and could be, and were often, replaced by contract workers who enjoyed limited job security and less-eligible terms and conditions.

In any case, however much circumstances may have changed many older conditions continued to shape managerial responses during my field-work. Much of India's labour law structure remained essentially intact and intractable, as CompCo's difficult industrial relations history testified. Moreover, the firm's ability to create new, more flexible production systems is hampered by inefficient roads and transportation systems, supply chain weaknesses, aged machinery and low levels of capital investment encouraged by a large pool of relatively-low cost labour that provided an attractive alternative to automation.

Moreover, the firm's interaction with its workers and managers continued to be authoritarian and bureaucratic and, as Chapter 5 showed, relied upon long-standing 'survivors' to keep the show running. So, the industrial ecosystem within CompCo, on to which lean manufacturing and GEMBA were superimposed, was complex and multi-textured and the organisational structure within CompCo had evolved, adapted and matured on its own terms over time and would not easily be changed. This did not augur well for GEMBA's success. For instance, supply chains were unreliable because larger suppliers of critical components could dictate terms to CompCo, because other larger purchasers had greater sway with suppliers and because of inefficiencies on the part of suppliers who could not be relied upon to supply components as specified and on time. Additionally, limited competition meant that suppliers were under only limited pressure to innovate, meet customer demand and operate efficiently.

8.5 Impetus for Future Research

In thinking about these findings, potential pathways for future study can be identified. First, it is important to undertake other case studies in Indian manufacturing firms of their attempts to institute or improve lean management programmes, to see what their priorities are, and how they are accepted by managers and workers, and why. In particular it would be interesting to see whether other firms too are characterised by such strong generational divisions among managers, or whether this is characteristic only of firms of a certain size and age. In a future study I would try to get more information from managers (and workers) about their social backgrounds and aspirations, to enable me to explore the relationship between internal company divisions and the wider class structure. It would of course also be useful to be able to return to CompCo and to see whether the older generation of managers has been eased out, or, as I suspect, it is the younger generation which is going elsewhere to meet its aspirations, as Mr. AB has done.

It would also be useful, with this thesis in mind, to do further research on workers and trade union responses and strategies in the manufacturing industries at the present time, especially in the light of Bhattacharjee's and Acker's [2010] landmark paper tracing the challenges and dominant features of trade union mobilisation and evolution of Indian industrial relations after 1947, and recently Teitelbaum's [2011] work on collective mobilisation. At the time of my fieldwork the trade unions active in EWS were relatively quiescent, and reduced to communicating with workers through pamphlets abhorred by management. In view of the recent upsurge in worker militancy elsewhere in India, for instance Suzuki and Maruti [Workers Education 2012], it would be interesting to see what is happening at EWS and CompCo.

These are examples of what I see as the need for more ethnographic studies in Indian manufacturing firms. So much research on work and employment in India now focuses on call centres and the software industry, so that we know less about how manufacturing firms are adapting to liberalisation. In a study of change management, this thesis looks particularly at the role of different categorisations of middle managers and the way they mediate and stymie middle managers. It does it in the context of structuring and restructuring of management careers. How widespread are these conflicts in India? Sociological studies of these responses are potentially valuable for other plants as well because, more specifically, there is little if any sociological study on what guides corporate management and senior middle management's decision-making within India. I also think that there has not been enough effort to investigate how the experiences of different categories of employees, and their reactions to employer policies, differ. I would also like to see sociological studies which first excavate different dimensions of labour process. Doing so will illuminate more fully its implications for all the actors involved and carefully specify the multiplicity of causal vectors that mould management strategies and industrial relations and integrate the analysis with the theoretical rigour with which writers like Durand go about their stand. Influenced by Critical Realism, I believe that within future studies the writer's ideological proclivity can subsequently be brought to bear on the data, for instance drawing on the writings of Lenin, communism and Mao, or conversely whole-hearted subscription of mainstream management literature rhetoric, which has been more the trend in the past, after comprehensive description and analysis.

As it is, an ethnographic study by a sociologist such as E. A. Ramaswamy's [1995] research on the dynamics of industrial relations in the Ryon Industry is now over eight years old and Holmstrom's 1984 study of industrial workers in and around Bangalore is even older. It made tentative attempts to work on a 'behavioural'

understanding of trade union leadership and follower behaviour, but has not been subsequently followed up by ethnographic plant-level sociological studies. More recently Hensman's [2011] research has identified workers' difficult prospects in an environment that has become more favourable to management under neo-liberal capitalism. But it is hard to get past her ideological commitments and attention on the Marxist luminaries of the past, such as Lenin and Rosa Luxemburg, towards a specific understanding of either changes in the labour process and how different categories of workers particularly industrial workers were affected by the continuing onslaught of capitalism.

8.6 Conclusions

In sum, this thesis has provided one of the few ethnographies of a modern production plant in India, one which shows managers grappling with 'change management', and workers' reactions and resistance to lean manufacturing because of the pressure lean manufacturing puts on them by virtue of its fragile nature and potential labour reductions through kaizening. This thesis has also demonstrated that lean manufacturing takes place very unevenly, even within a single plant.

As Hyman [1987] points out, managerial strategies are always inherently contradictory and are inevitable routes to partial failure. But the implementation of lean manufacturing's precepts through GEMBA is also specific to its time and place. Here it could be seen to have taken place in an industrial context that was sub-optimal. As an old established plant, EWS was relatively successful by dint of a continual management of contingencies and related management and staff compromises. It was efficient enough to meet production demands and survive for the day and but was never good enough to benchmark itself against India's

exemplars of lean techniques in manufacturing. It was its strengths, therefore, as well as its internal divisions, which inhibited the acceptance and embedding of the GEMBA programme.

Appendices

Appendix 1 CompCo Corporate Management Organisational Structure
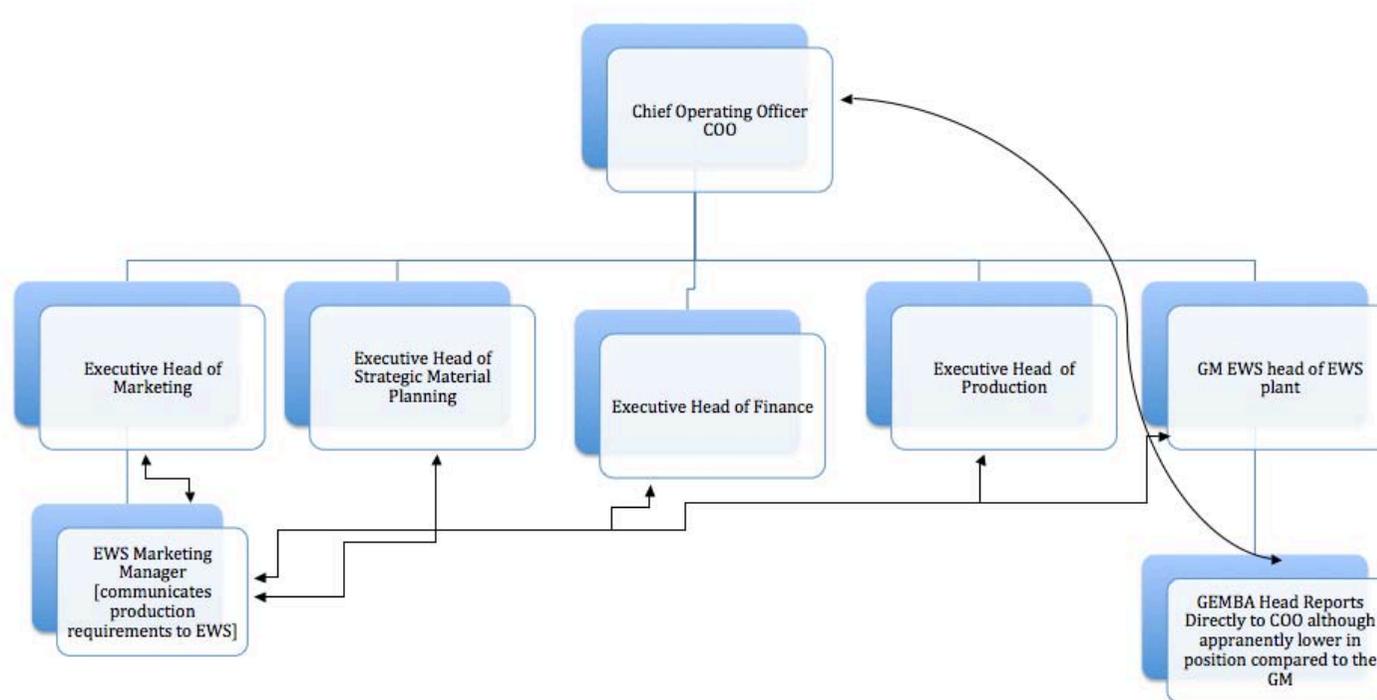
The bi-directional arrows indicate that the GM reports to the COO but is also answerable and lower in organisational position compared to the executive heads. The GEMBA head directly reports to the COO without having to report or have the executive heads as his superior. The EWS marketing manager is answerable both to material planning and the executive head of CompCo's marketing department, and communicates the product mix to be made to the Executive Head of Finance, Executive Head of Production and the GM EWS, head of EWS plant.

Appendix 2 EWS Senior Management Organisational Chart
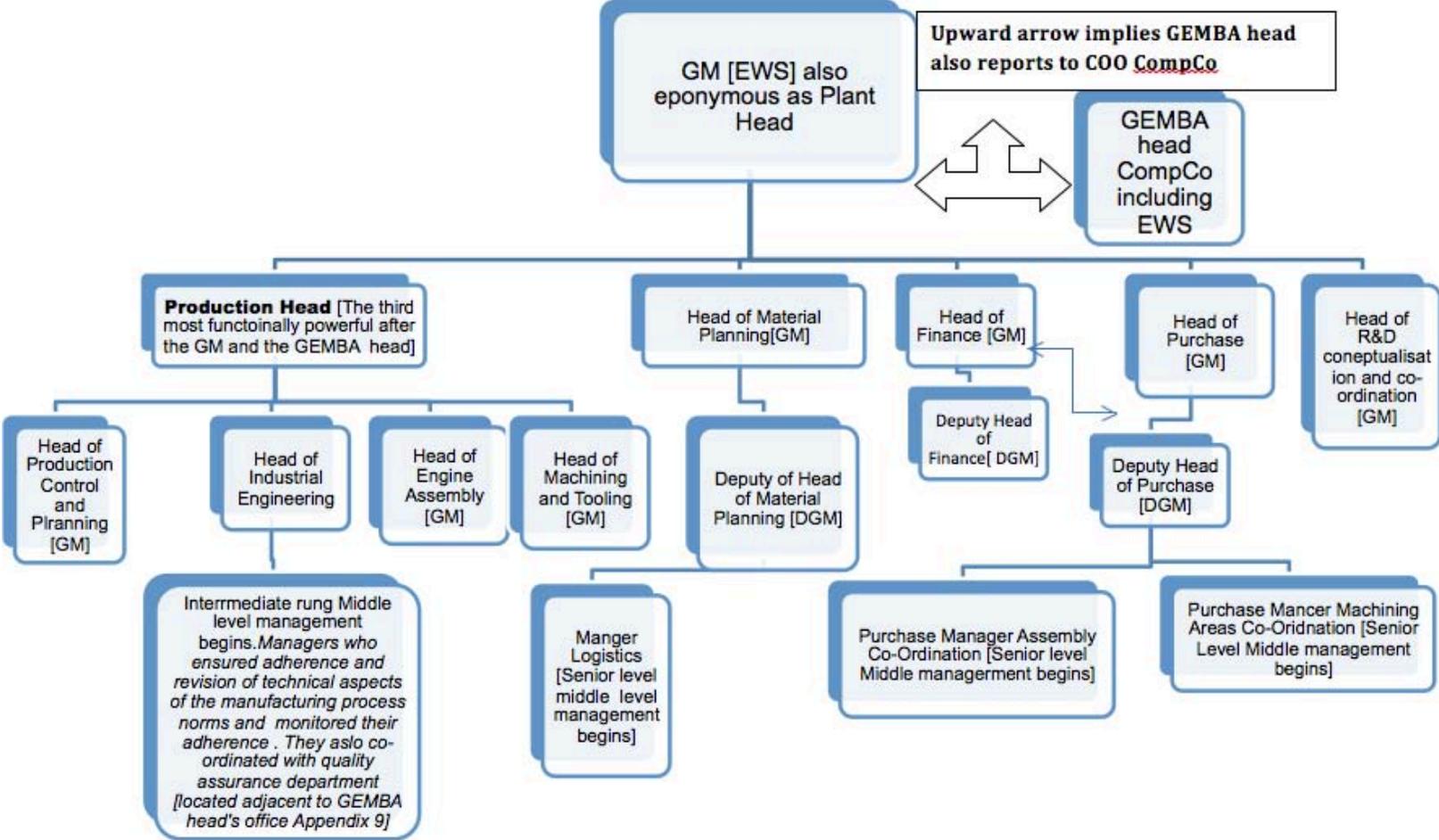
Appendix 3 EWS Production Hierarchy Organizational Chart.

The R&D Head Engines, also Reports to Head Manufacturing, Corporate Headquarters [GM]

ComCo Head Engine R&D Design and Co-ordination works under Production Head [GM]

Production Head EWS

Manager of End Product Quality Assurance heads the department assisted by a number of Middle managers and Quality Inspectors

Manager of Engine Subassembly quality and MDV quality

Head of Engine Machining and Tooling Shops[GM]

Head of Industrial Engineering

Head of EWS Assembly Shops Engine and MDV lines[GM]

Head Engine R&D Prototype Centre

Deputy Head of Machining and Tooling [DGM]

Head of Production Control[GM]

Manager of Engine Machining and Tooling Quality Assurance

Deputy Head of Production Control [DGM]

Deputy Head of Shops 3,6; MDV and Axle Assembly Shops[DGM]

Head of Machine Shop 7

Head of Engine Assembly Shop 3

Head of Axle Assembly Shop

Head of Shop 2 and Heat Treatment and casting

Head of Machine Shop 5

Head of MDV Shop

Head of Shop 6

Section head of Assembly lines

Section head of Assembly lines

Head of Maching shop 4

Section heads 4 in number

Section Head of MDV Shop

Section Heads of Assembly Lines

Section Heads 5 in Number

Section heads of Shop2 and Heat treatment respectively

Section Heads [4 in number] Shop4

Mid-level Middle managers Ranks begin 8-9 in number

Section Head of Assembly Lines

Section Head Heads of Assembly Lines

Section Head of Assembly Liness

Line Mangers - minimally at least 10 each for each line [variable] who supervise operators and monitor production

In the Diagram single bi-directional arrows indicate that the managers mentioned in the chart report to two superiors of simultaneously. For instance the quality heads report both the head quality assurance and to individual assembly and machining heads respectively. Below each Section head lie about 4-5 middle managers for each shop and below them the bottommost level in the production hierarchy lie the line managers who supervise the lines. *This line manager and middle managers' hierarchy relationship to the section head, shown for shop 5 in the chart applies to all other assembly and machining shops in the diagram as well.*

Appendix 4 Overview of CompCo GEMBA Organizational Hierarchy.

GEMBA Head

Deputy Head of GEMBA

Plant level shop Production heads who are patrons of Ongoing GEMBA initiatives and assume overall responsiblity for GEMBA implementation in their shops:- GEMBA Initiative Leaders GILS

Core Team Vertical Vertical Inventory

Core Team Vertical Engineering Production Processes

Core Team Vertical Critical Machines Initiative

Core Team Vertical Effective Ergonomics

Individual GEMBA correspondents and co-ordiantors among machining and assembly shops respectively

Bidirectional Arrows indicate that the Production Heads [GILS] are organisationally in the same rank as the deputy head of GEMBA but in practice, the latter is much junior to them in rank. These individual production heads of shops oversee GEMBA initiatives their respective plants. They also report to the GEMBA Head. The plant level GEMBA Correspondent coordinates weekly GEMBA meetings within each plant and also monitors' attendance. The GEMBA Unit leaders are line managers who report to the section heads of their plants who in-turn appraise, their superior of progress in GEMBA initiatives who report these to the production heads.

Appendix 5 Map of Hubli

Appendix 6 EWS Map

Map Key

1 Medium Duty Vehicle Assembly Area
2 Production Planning & Control
3 Purchasing Department
4 Material Planning
5 Mothballed Machining Shop
6 Plant Engineering & Maintenance
7 Axle Assembly Area
8 GEMBA Head's Office
9 GEMBA Rewards Adjudication Centre
10 Manufacturing Process Quality Department
11 EWS IT Systems Centre
12 Pre Delivery Inspection Area
13 Scrap Head
14 Shop 4
15 Shop 3
16 Shop 5
17 Unsold Accumulating Vehices
18 Shop 7
19 Shop 6
20 GEMBA Centre
21 R&D Centre

Appendix 7 Map of EWS Entrances
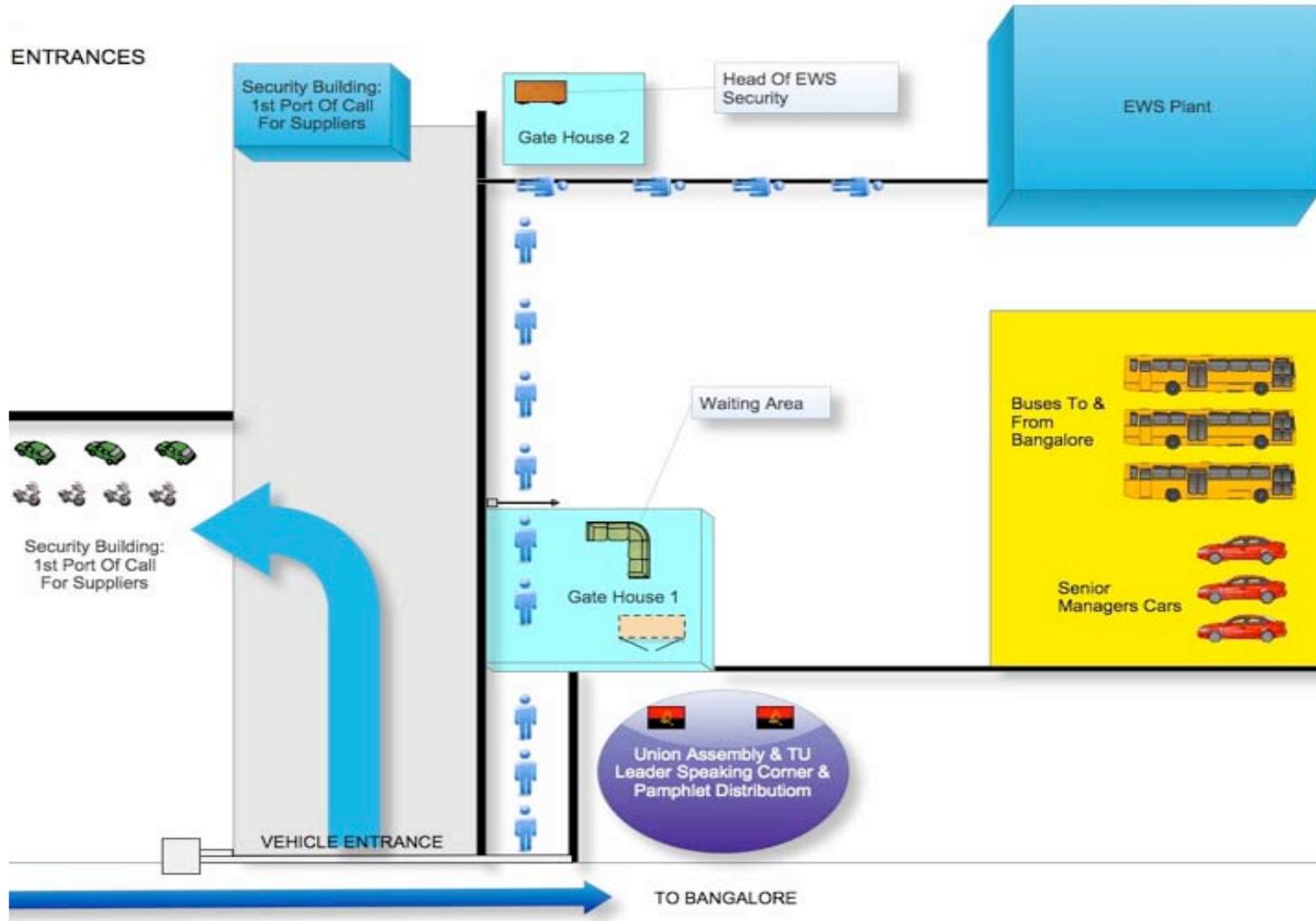
Appendix 8 Administrative Areas, Including Human Resource Development (HRD) Centre
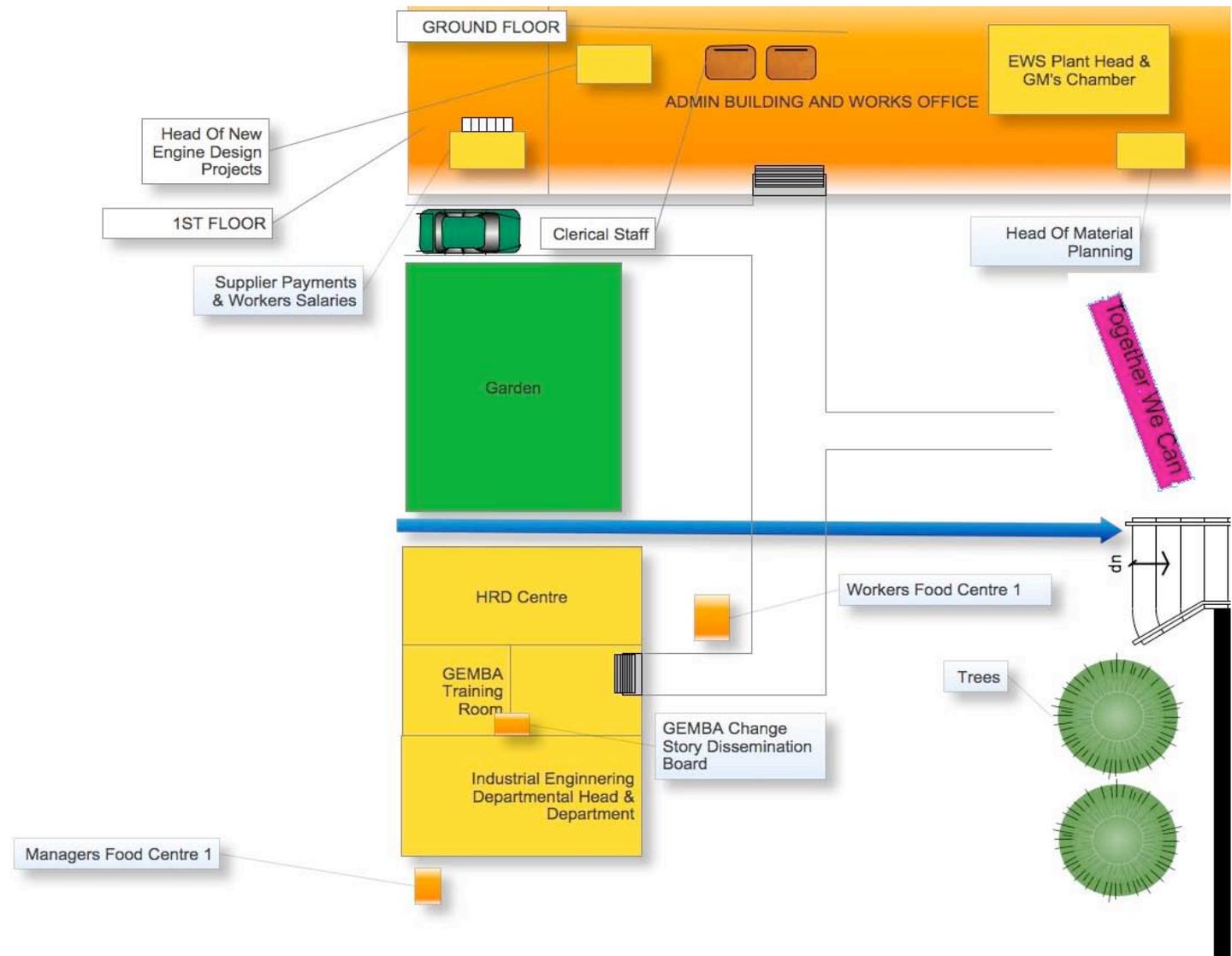
Appendix 9 Map of Functional Departments and Production Areas
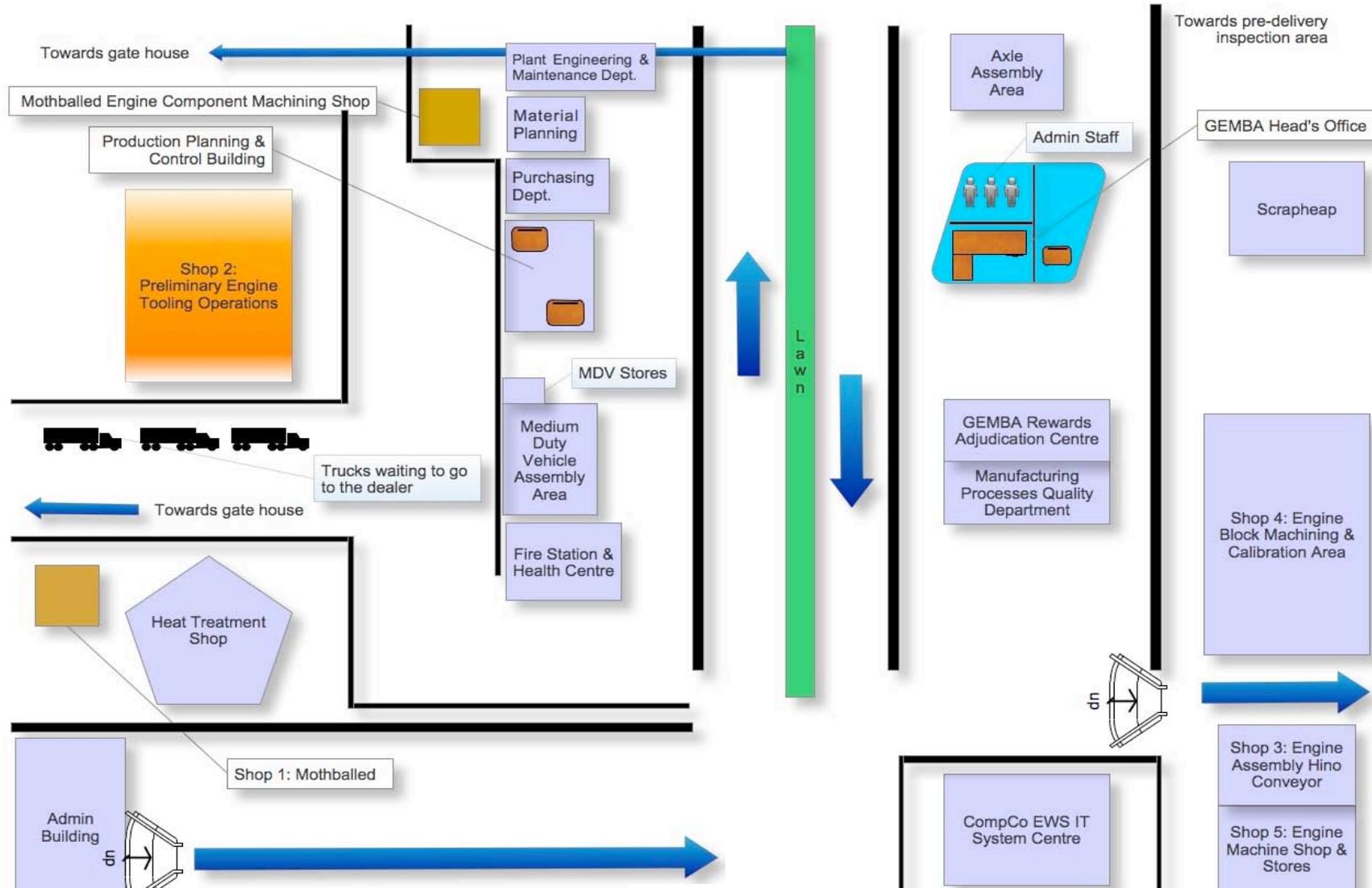
Appendix 10 Map of EWS Assembly Area, Including GEMBA Centre, Engine Assembly and Connecting Rod Machining

Final Pre Delivery Inspection Area

Workers Food Centre 2

Managers Food Centre 2

Computerised Data Anaylsis

CompCo R and D Centre & Office of the Head of Research R and D

Assembled Engine Stores

Shop 6: Engine Assembly Lean Showcase Area

Suppliers And Milk Run For Kanban Road Route

GEMBA Centre

Unsold, Accumilating Commercial Vehicle Inventory

Shop 7: Connecting Rod Line & Engine Fly Wheel Machining

EWS Head Of Engine Production

From Shop 4 & 5

up

Appendix 11 Career Pathways of Varying Cohorts of Managers
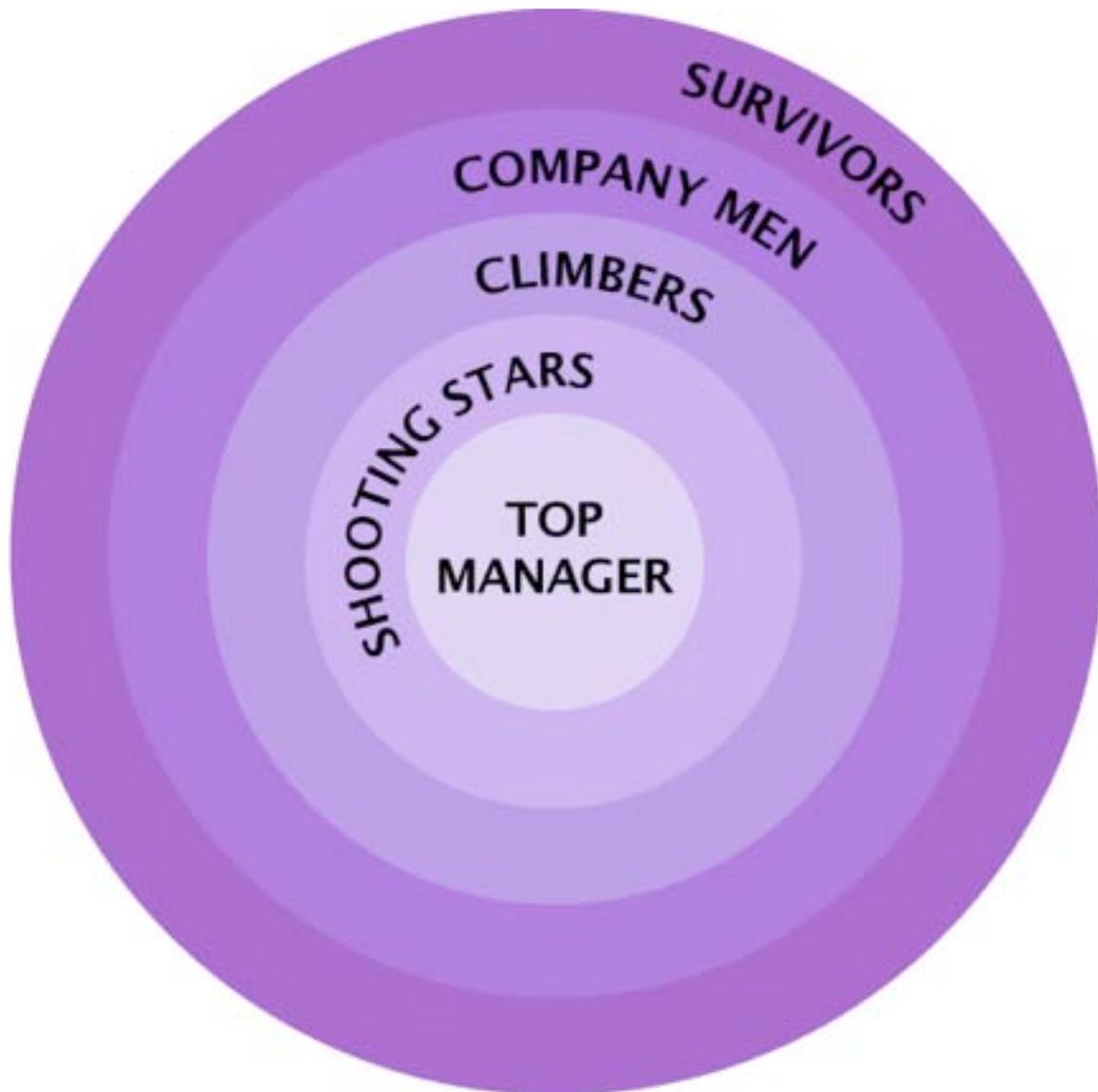
Appendix 12 GIRAP An Example GEMBA Level Inventory Reduction – Action Plan

Appendix 12
GIRAP

Appendix 12 GIRAP AN EXAMPLE GEMBA LEVEL INVENTORY REDUCTION - ACTION PLAN (Frequency - Weekly)

N7i

Gemba =	Perfect Gemba	
Gemba COP / day (Lac) =	171	
Baseline (lacs) =	301.7	
Baseline (Days) =		
RPD (Sets / day) =	30	

Current Value	261	Lakhs
Current Inv in days	1.5	days (Current value / COP per day)
Aspiration	1	days (Asp value / COP per day)
Action plan for	0.5	days reduction

| TOTAL | 0.43 | WILL REDUCE TO | 0.07 |

(INVENTORY HOLDING DAYS)

19.11.08

Perfect Gemba so far Reduction		
Plan =	61.0	Actual =	0.00
	23%		0%

S.No	Part_No	Part_desc	Rate (R)	Qty (Q)	Total Value (descending order as per sfcq012) V = R*Q	Max Off take (F)	Current Inventory holding days (= V / COP per day)	Component inventory reduction IDEA	Idea - required inventory nos (N)	Proposed Idea Impact (Inventory holding days redn) I = ((Q-N)*R) / COP per day	Resp	Dept	TDC	Effective saving Plan in Lakhs	Effective saving Completion in Lakhs
1	F3800610	WH.DISC-10WB-CT009	3187.42	695	2215256.90	7	0.130	At any point of time wip qty should not exceed 250 nos - Issue list & PTS of vehs closely monitor	250	0.083	EID/MKP	PC/STR	29/11/2008	14.18	
2	F8295200	BATTERY-150AH-MHD1500	3996.212	93	371647.72	2	0.022	At any point of time wip qty should not exceed 60 nos - Issue list & PTS of vehs closely monitor	60	0.008	EID/MKP	PC/STR	29/11/2008	1.32	
3	B5508901	FES-GM3-DAY-PENDANT-TIPPER	26240	9	236160.00	1	0.014	At any point of time wip qty should not exceed 3 nos - Issue list & PTS of vehs closely monitor	3	0.009	EID/MKP	PC/STR	29/11/2008	1.57	
4	A2529300	ALFA60/3-FRT.AXLE-12M GDS	50671.3295	4	202685.32	1	0.012	At any point of time wip qty should not exceed 2 nos - Issue list & PTS of vehs closely monitor	2	0.006	EID/MKP	PC/STR	29/11/2008	1.01	
5	F8191900	MAIN WIRING HARNESS-G45MK3	963.0695	141	135792.80	1	0.008	At any point of time wip qty should not exceed 40 nos - Issue list & PTS of vehs closely monitor	40	0.006	EID/MKP	PC/STR	29/11/2008	0.97	
5	B8844345	S/A.INST.CLUSTR WO HWS&HM-1.21	2111.05	58	122440.90	1	0.007	SRN to be made	0	0.007	EID/ PVM	PC/PROD	25/11/2008	1.22	
5	B7400802	S/A OF RUPD	1497	61	91317.00	1	0.005	SRN to be made	0	0.005	EID/ PVM	PC/PROD	25/11/2008	0.91	
5	B8844360	S/A.INST.CLUSTR WT HWS&HM-1.35	2160.4493	40	86417.97	1	0.005	SRN to be made	0	0.005	EID/ PVM	PC/PROD	25/11/2008	0.86	
5	X7810100	DR.SEAT-ESO623	4552.8077	7	31869.65	1	0.002	SRN to be made	0	0.002	EID/ PVM	PC/PROD	25/11/2008	0.32	
5	F8213100	BATTERY-MF70Z-12V-80AH-EXIDE	2551.8261	10	25518.26	2	0.001	SRN to be made	0	0.001	EID/ PVM	PC/PROD	25/11/2008	0.26	
	V4149040	ESO632-193VKG-RHD-ALVEP635	446281	3	1338843.00	1	0.078	To be passed on or before 25/11/2008	0	0.078	ARB/MRV/mk	PC/PROD/QC	26/11/2008	13.39	
	V4153466	ESO622A1-210VKG-6E-VEP655	600000	2	1200000.00	1	0.070	To be passed on or before 25/11/2008	0	0.070	ARB/MRV/mk	PC/PROD/QC	26/11/2008	12.00	
	V4561002	12M GOODS-ALVEG739-RPS	650000	1	650000.00	1	0.038	To be passed on or before 25/11/2008	0	0.038	ARB/MRV/mk	PC/PROD/QC	26/11/2008	6.50	
	V4161015	12M BUS-6ETI-RP-KSRTC-ALVEP763	650000	1	650000.00	1	0.038	To be passed on or before 25/11/2008	0	0.038	ARB/MRV/mk	PC/PROD/QC	26/11/2008	6.50	
					TOTAL		0.43	WILL REDUCE BY		0.36				61.03	0.00

Key TDC-- Targeted Date that line managers are expected to deliver kazinenning ideas and subtantivi

Appendix 13

"Impending settlement notification for 480 minutes of working time per worker per day piece rate increment and pointing reducing headcount in CompCo" by the Communists Trade Union.

480 நிமிட வேலை முறை:
லேலாண்டு தொழிலாளர்களை கொத்தடிமையாக்க குசேலன் + நிர்வாகம் தீட்டும் அடிமை சாசனம்!
ஓசூர் தொழிலாளர்களை கொத்தடிமையாக்க வழிக்காட்டும் குசேலன் கும்பலை விரட்டியடிப்போம்!

லேலாண்டு-1
ஆலை வாயிலில் **கண்டன ஆர்ப்பாட்டம்** 01-04-09 மாலை 4 மணி

அன்பார்ந்த தொழிலாளர்களே!

நமது ஆலையில் தற்போது ஒப்பந்த பேச்சுவார்த்தை நடக்கும் சூழல் என்று கடந்த ஒன்னரை ஆண்டுகளாக நிர்வாகத்தின் விசுவாசியான குசேலன் கும்பல் சொல்லிக்கொண்டு நாடகமாடி வருகிறது. இந்த நாடகத்தின் மூலம் தொழிலாளர்களுக்கு எதிரான சதித்திட்டங்களை தீட்டி, அதனை நிறைவேற்ற துடித்துக் கொண்டிருக்கிறது. ஏற்கெனவே நாங்கள் எச்சரித்தபடியே, நிரந்தர தொழிலாளர்களை ஒழித்துக்கட்டுவது என்ற நிர்வாகத்தின் நோக்கத்திற்கு ஏற்ற சூழல் வரவேண்டி காத்திருந்த குசேலன் கும்பல் "சரியான சூழல்" என்று இன்றைய நிலைமையை தேர்ந்தெடுத்து ஒப்பந்த பேச்சுவார்த்தை என்ற பெயரில் தனது துரோகத்தை நிறைவேற்ற துடிக்கிறது.

பொருளாதார மந்தம் – ஒரு பொய் காரணம்!

நமது ஊதிய உயர்வு ஒப்பந்த பேச்சுவார்த்தையை இழுத்தடிப்பதற்கு நிர்வாகமும், குசேலனும் சொல்விவரும் காரணம் பொருளாதார மந்தம். இந்த பொருளாதார மந்தநிலையைக் காரணம் காட்டி, இந்திய வரலாற்றிலேயே லேலாண்டு நிர்வாகம் மற்ற தொழிற்சாலைகளுக்கு வழிக்காட்டும் வகையில் லே-ஆப் முறையை கொண்டுவந்தது. அப்போதே சொன்னோம், இதெல்லாம் தொழிலாளர்களை ஒடுக்கும் சதித்திட்டம் என்றோம். ஆனால், பல அப்பாவிகள் நம்பவில்லை.

அசோக் லேலாண்டு ஆலையின் 1994ம் ஆண்டு உற்பத்தி சில ஆயிரம் வண்டிகள்தான். தொழிலாளர் எண்ணிக்கையோ 12,000க்கும் அதிகம். 2008ம் ஆண்டு இலக்கு 1 லட்சம் வண்டிகள். தொழிலாளர் எண்ணிக்கையோ 8000க்கும் கீழ் சென்றுவிட்டது. இதிலிருந்து ஒரு உண்மை என்னவெனில் 1. ஆலையின் உற்பத்தி அதிகரிக்க அதிகரிக்க தொழிலாளர் எண்ணிக்கை குறைகிறது. 2. உற்பத்தி அதிகரிக்க அதிகரிக்க நவீன எந்திரங்கள் புகுத்தப்படுகிறது. 3. உற்பத்தி அதிகரிக்க அதிகரிக்க தொழிலாளர் வேலைமுறை கடுமையானதாக, அடிப்படை வசதிகளும் உரிமைகளும் பறிக்கப்படுவதாக மாற்றப்படுகிறது.

மொத்தத்தில், நிரந்தர தொழிலாளர்கள் ஒழித்துக்கட்டப்பட்டு ஒப்பந்த தொழிலாளர்கள் புகுத்தப்படுகின்றனர். நிரந்தர உற்பத்தி அவுட் சோர்ஸ்-ஆக மாற்றப்படுகிறது. நிரந்தர தொழிலாளிக்கான உரிமைகள் பறிக்கப்படுவதால் அவர்களுக்கு ஒப்பந்த தொழிலாளர்களுக்குமான வேறுபாடு குறைந்து நிரந்தர தொழிலாளர்களே நவீனக் கொத்தடிமைகளாகப் படுகின்றனர்.

ஆக 15 ஆண்டுகள் நமது ஆலையின் வளர்ச்சிப் போக்கு இதுதான். இது வளர்ந்து கொண்டே சென்றால் தொழிலாளர்கள் அடிமையாகும் நிலை மேலும் மேலும் அதிகரிக்கும். அதனால், ஒப்பந்தத்தை நிறைவேற்றாமல் இருக்கவும், லே-ஆப் கொடுப்பதற்கும் நிர்வாகம் சொல்லும் பொருளாதார மந்தம் என்பது ஒரு பொய் காரணம் என்பதை தொழிலாளர்கள் புரிந்து கொள்ள வேண்டும்.

லே-ஆப் அல்ல... அவுட்சோர்சை நிறுத்துவது தான் சரியான தீர்வு!

இவ்வாறு நாங்கள் சொன்னால், துதிபாடிகள் கூட்டமும், சில அப்பாவி தொழிலாளர்களும் சர்வதேச அளவில் ஏற்பட்டு இருக்கும் பொருளாதார மந்தத்திற்கு நமது ஆலை மட்டும் என்ன விதிவிலக்கா? எல்லா நாடுகளிலும், எல்லா ஆலைகளிலும் லே-ஆப், லாக்-அவுட் வந்துவிட்ட சூழலில் நமது முதலாளி மட்டும் என்ன செய்வான் என்று கேட்கிறார்கள். பாவம் இந்த அப்பாவிகள்! இப்படி தொழிலாளர்கள் அப்பாவிகளாக இருப்பதால்தான் குசேலன் தொழிலாளர்களை திட்டிக்கொண்டே துரோகம் செய்து வருகிறார்.

பொருளாதார மந்தம் வருவதற்கு முன்பே, நமது ஆலையில் 2007ம் ஆண்டு உற்பத்தி 83,400 வண்டிகள் முழுமையாக விற்று தீர்க்கப்படவில்லை. ஏறக்குறைய 14 ஆயிரம் வண்டிகள் தேக்கம் ஏற்பட்டு 2008 ஆம் ஆண்டில் தான் விற்று முடிக்கப்பட்டது. இப்படி ஏற்க்கும் சூழலில் தான் 2008ம் ஆண்டில் ஒரு லட்சம் வண்டிகள் உற்பத்தி இலக்கு தீர்மானிக்கப்பட்டது. இதன்படி பார்த்தால் 2008ம் ஆண்டு தேக்கம் இன்னும் அதிகரித்திருக்கும். இதனைத் தடுக்க பொருளாதார மந்தம் இல்லையென்றாலும் லேலாண்டு நிர்வாகம் லே-ஆப் கொடுத்திருக்கும். இது தொழிலாளர்கள் மத்தியில் அவுட்-சோர்ஸ், கான்ட்ராக்ட் முறைக்கு எதிரான போராட்டம் செய்து வளர்த்திருக்கும்.

இன்னும் செய்தித் தாள்களில் நமது ஆலையின் விற்பனை, இலாபம் குறையவில்லை என்று தொடர்ந்து செய்திகள் வருவதை நாம் பார்க்கிறோம். இப்படி இருக்க பொருளாதார மந்தம் எனும் பெயரில் லே-ஆப் விடுவது என்பது, "காக்கை உட்கார பனம்பழம் விழுந்த கதையாகிவிட்டது". தொழிலாளர்களை உட்ச்சுரண்டியது, அவுட்-சோர்ஸ் கொண்டுவந்தது, ஒப்பந்த தொழிலாளர்களை புகுத்தியது போன்ற தொழிலாளர் விரோத நடவடிக்கைகளால் தான் லே-ஆப் ஏற்பட்டு தொழிலாளர்கள் மத்தியில் அம்பலப்பட்டு இருக்க வேண்டிய லேலாண்டு நிர்வாகம், 'வாராது வந்த மாமணி போல்' வந்த இந்த பொருளாதார நெருக்கடியைக் காரணம் காட்டி விட்டது.

ஊதிய உயர்வு பேச்சுவார்த்தை தள்ளிப்போவது:
பொருளாதார மந்தம் காரணமாம்!

இந்த கூத்து ஒருபுறம் இருக்க ஊதிய உயர்வு பேச்சுவார்த்தையை முடிக்காமல் இருப்பதற்கும் காரணம் பொருளாதார மந்தம். ஆலை நிர்வாகம் லாக்-அவுட் செய்யாமல் இருப்பதே பெரிய விசயம். இப்படி சொல்பவர் இந்த கருங்காலி குசேலன் தான்.

நமது ஒரு தொழிற்பேட்டையில் உள்ள தொழிற்சாலைகள், கார்போரண்டோ, ஏ.டி.ஏ.சி, ரிபேபா ரூல்ஸ் போன்ற ஆலைகளில் ஏற்பட்டுள்ள பிரச்சனை ஒப்பந்த பேச்சுவார்த்தை நிறைவேற்றாமல் இருப்பதுதான். இதே போன்ற ஹிந்துஸ்தான் மோட்டார்ஸ், டி.டி.கே. போன்ற ஆலைகளில் ஏற்பட்ட பிரச்சனையும் ஊதிய பேச்சுவார்த்தை நிறைவேற்றாமல் இருந்ததுதான். நிரந்தர தொழிலாளர்கள் உரிமைகளைப் பறித்து அவர்களை ஒழிக்குக்கட்டும் நடவடிக்கையை ஒரு அங்கமாக, இந்திய அளவில் தொழிலாளர்கள் மீது தொடுக்கப்படும் தாக்குதலின் ஒரு பகுதியாக ஊதிய உயர்வு பேச்சுவார்த்தைகளை முதலாளிகள் நிறைவேற்றாமல் இழுத்தடிக்கின்றனர். குறிப்பாக ஒன்றை கவனித்தால், மேற்படி ஆலைகள் தற்போது கூட நல்ல வளர்ச்சியிலும், உற்பத்தி அதிகரித்துக் கொண்டும் இருக்கின்ற ஆலைகள்.

இது ஒருபுறமிருக்க ஏற்கெனவே ஊதிய பேச்சுவார்த்தை என்பது தொழிலாளர்களுக்கான உரிமை என்பதை மாற்றி தொழிலாளர்கள் மீது முதலாளிகள் புதிய வடிவிலான சுரண்டலை திணிக்க கொடுக்கப்படும் வாய்ப்பாக ஆக்கிவிட்டனர் குசேலன் மாதிரியான தொழிற்சங்க தாதாக்கள்.

மேற்கண்ட காரணங்களால்தான் ஊதிய உயர்வு, ஒப்பந்தத்தை நிறைவேற்றாமலேயே, ஏடிசி தொழிலாளர்கள் அளவிற்குகூட குறைந்தபட்ச எதிர்ப்பு காட்டப்படாமலேயே, ஒன்னரை ஆண்டுகளாக தரியாக கம்பெனி நடந்து கொண்டிருக்கிறது. நிர்வாகத்திற்கு இழப்பு ஏற்படாமல் தடுக்க, தொழிலாளர்கள் போராட்டத்தில் இறங்காமல் தடுக்கும் ஆயுதமாக, மீறி இறங்கினால் முதலாளிகளைக் காக்கும் கேடயமாக குசேலன் செயல்படுகிறார்.

480 நிமிட வேலைமுறை ஏற்கப்பட்டால்...
நிரந்தர தொழிலாளருக்கும்
சங்கத்துக்கும், உரிமை முழக்கத்திற்கும்
இவ்வளவு ஏன் குசேலனுக்கே இனி வேலையில்லை!

தொழிலாளர்களிடம் உற்பத்தியை உயர்த்து உயர்த்து என்று தொடர்ச்சியாக சதவீத அடிப்படையில் கேட்டு 100 சதவீத உற்பத்தி அடைந்த பின் இதற்கு மேல் உற்பத்தியை உறிஞ்ச பி.ஐ.முறையை நிர்வாகம் கொண்டு வந்தது. இப்போது திடீரென பி.ஐ.முறையை நிறுத்திவிட்டு, நிமிட அடிப்படையில் பேசி முடித்து காண்ட்ராக்ட் தொழிலாளி மாதிரியே தொடர்ச்சியாக வேலைவாங்கிக் கொள்ள வேண்டும் என்று சிந்திக்கிறது. இதனை அப்படியே தொழிலாளர்களிடம் போய் சொல்லாதே, அதற்கு ஒரு பெயர் கொடுத்து இது ஒரு புதிய வேலைமுறை என்பது போல பாய்லா காட்டச்சொல்லி வழிக்காட்டுகிறார் குசேலன். இது தான் 480 நிமிட வேலைமுறை.

நன்கு சிந்தித்துப் பாருங்கள்! 480 நிமிட வேலைமுறை நடைமுறைக்கு வந்தால், நீ ஒன்னுக்கு அடிக்க போனால் கூட விடுவனா? ஊதிய உயர்வு என்று நீ கேட்க முடியுமா? நீ சங்கமாவது வைத்துக் கொள்ள முடியுமா? எதுவும் கிடையாது. சங்கும், உரிமை என எதுவும் பேச முடியாது. இந்த நிலைமையை உருவாக்க முன்கூட்டியே யோசித்துதான் குசேலன் பெடரேசனை உருவாக்கியுள்ளார். சங்கத்துக்கு இனி வேலையே இல்லை. எல்லாம் சென்னையில் உட்கார்ந்து பேசி முடிவுசெய்துவிடுவார்.

இனி குசேலனுக்கு வேலையே இல்லை. மொத்தமாக ஒரு தொகையை பேசி முடித்துக்கொண்டு அதன் பிறகு தனது தொழிற்சங்க புரோக்கர் தொழிலே போனாலும் அவருக்கு நட்டமில்லை. லெலாண்டு முதலாளிக்கு செய்யவேண்டிய வரலாற்றுக் கடமை நிறைவேறிவிடும். தொழிலாளர்களுக்கு மரண அடி கொடுக்கப்பட்டுவிடும். இதற்கு பிறகு குசேலனுக்கு என்ன வேலை?

பொருளாதார மந்தம் என்பது மோசடி:
இன்னும் ஓர் உதாரணம் 480 நிமிட வேலைமுறை!

அடப்பாவி! ஏற்கெனவே உற்பத்தியை உயர்த்தி உயர்த்தி ஒரு லட்சம் வண்டிகள் இலக்கு வைத்தாய். இருப்பது விற்க முடியாமல் சென்ற வருட இலக்கான ஒருலட்சம் வண்டிகளை உற்பத்தி செய்யாமலேயே லே-ஆப் கொடுத்துவிட்டாய். வெளிநாட்டு விற்பனை மந்தம், சர்வதேச பொருளாதார நெருக்கடி காரண்ம் என்றாய். பிறகு எதற்கு நிமிட உற்பத்தி முறையை கொண்டு வருகிறாய்?

நிமிட உற்பத்தி முறை என்பது உற்பத்தியை உயர்த்துவதற்குதான். உற்பத்தியை உயர்த்துவது என்பது மேலும் தொழிலாளர்களை ஆலையைவிட்டு வெளியேற்றவும் ஒடுக்கவும்தான். இதனால்தான் சொல்கிறோம், தற்போதைய பேச்சுவார்த்தை இழுத்தடிப்புக்குக் காரணம் சர்வதேச பொருளாதார நெருக்கடி என்பது சுத்த பொய், மோசடி என்கிறோம்.

அடிமையாக வாழாதே! உரிமைக்காக போராடு!

நமது ஆலையில் தொழிலாளர்களை எப்படியெல்லாம் ஒடுக்க வேண்டும் என்ற தனது திட்டத்தை நிர்வாகம் பகிரங்கமாக அறிவித்துவிட்டது. இதற்கு எதிராக குசேலன் என்ன செய்யப் போகிறார் என்பதை மட்டும் தொழிலாளர்கள் தெரிந்து கொள்ளமுடியாத அவல நிலை நீடிக்கிறது. தனது சங்கம் தலைவனிடம் மண்டியிட்டு வணங்கிக்கிடக்கும் நிலைக்கு சென்றுவிட்டது. தலைவர் என்ன முடிவெடுப்பார் என்று தொழிலாளர்களுக்கு தெரியாமலும் தலைவரிடம் பேசுவதற்கே பயப்படும் நிலையில் சங்க நிர்வாகிகளும் ஒரு அடிமைகள் போலாக்கப்பட்டு விட்டனர். தேர்தலே இல்லாமல் நிர்வாகிகள் ஆக்கிவிட்டார்! சங்கம் முற்றிலும் செயலிழந்த போய்விட்டது! குசேலன் ஒரு சர்வாதிகாரியாக தனது நிர்வாகத்தின் சார்பாக தொழிலாளர்களை அடிமையாக நடத்துகிறார்.

இதுவும் தற்செயலாக நடந்து முடிந்த விசயமல்ல. சங்கத்தை ஒழித்துக்கட்ட நிர்வாகம் தொழிலாளர்களுக்கு தொடர்ந்து மூளைச் சலவை செய்து வந்தது. வகுப்புகள் நடத்தியது. வாழ்க வளமுடன், ஈசா யோகா, நித்தியானந்தா என சிந்தனை சலவை செய்தது. "சலுகைகள் பெற வேண்டுமென்றால் சங்கம் தேவையில்லை" என்று சலுகைகளைக் காட்டி உரிமையை கைவிடச்சொன்னது. இதனைத் தான் குசேலன் தொழிலாளர் தரப்பில் நின்றுகொண்டு பெடரேசன் என்ற பெயரிலும் தனது சர்வாதிகார நடவடிக்கைகள் மூலமும் நிறைவேற்றியுள்ளார்.

இன்றைய மொத்த நிலைமையை மாற்ற வேண்டுமென்றால் நாம் சங்கத்தை மீட்க வேண்டும். குசேலனை விரட்டியடிக்க வேண்டும். அப்போதுதான் 480 நிமிட வேலைமுறை என்ற புதிய தாக்குதலை தடுப்பதும், ஊதிய ஒப்பந்தத்தை நிறைவேற்றுவதையும் சாதிக்க முடியும். இதற்கு அடிமையாய் சிந்திப்பதை கைவிட்டு தொழிலாளர் வர்க்க உணர்வுடன் ஒன்று சேரவேண்டும். முன்னணி+சி.ஐ.டி.யு. போன்ற அட்டைக் கத்திகளை ஒதுக்கித் தள்ள வேண்டும். இவற்றை வைத்துக் கொண்டு காப்பகறி கூட நறுக்க முடியாது.

லே-ஆப் முறையை லெலாண்டு நிர்வாகம் நடைமுறைக்கு கொண்டு வந்தபின் இதனை முன்மாதிரியாகக் கொண்டு பிற ஆலை முதலாளிகளும் லே-ஆப் கொடுத்தனர். இன்று நிமிட வேலைமுறையை லெலாண்டு நடைமுறைப்படுத்தினால் இதுவும் பிற ஆலை முதலாளிகளால் பின்பற்றப்படும். அதனால், நிமிட உற்பத்தி முறைக்கு எதிரான போராட்டம் என்பது ஒருர் தொழிலாளர்கள் மீது திணிக்கப்பட இருக்கும் புதிய தாக்குதல்களுக்கு எதிரான போராட்டம்! ஆக, நமது ஆலையில் ஊதிய உயர்வு பேச்சுவார்த்தையை நிறைவேற்றவும், சங்கத்தை மீட்கவும், நிமிட வேலைமுறையை தடுக்கவும் நாம் மேற்கொள்ளும் போராட்டம் ஒருர் தொழிலாளர்களுக்கு முன்னுதாரணமாக அமைய வேண்டும். அந்த வகையில் தொழிலாளர் ஒற்றுமையைக் கட்டியமைப்போம்!தேவையற்ற அச்சத்தை தூக்கியெறிந்துவிட்டு பு.ஐ.தொ.மு.அணியில் இணைந்து போராடுவோம்!

பு.ஐ.தொ.மு. அணி, லேலாண்டு-1, ஓசூர்.

Appendix 14 Glossary of Terms

CompCo's Plants Listed

EWS: Pseudonym for CompCo's plant located in the town assigned the pseudonym Hubli (a: fictitious name) started operations in January 1980. It produces Engines and Medium Duty Vehicles.

WAP4: Larger plant than Hubli producing light commercial vehicles, custom-made long haul buses, chassis and heavy tonnage trucks..

WDM3: Press Shop catering primarily for EWS and WAP4.

WDP4: Pseudonym for CompCo's plant located assigned the pseudonym Nellore (a fictitious name) near Madras. Also shares some of the production schedule of EWS in making engines and produces an identical commercial vehicle range with WAP4.

WDP1: Foundry unit specialising in manufacturing engine blocks, owned by CompCo situated in the peripheral industrial hub Nellore near Madras.

Plants WAM4: CompCo plant located near Nagpur in central India, produces commercial vehicles for central India.,

WDG3: CompCo plant near Jaipur in North India to cater to the Northern Market, YDM4: Pseudonym for CompCo's recent state of the art lean plant built to start operations in 2011.

Glossary Of Abbreviations Used

GUL: GEMBA Unit Leader

GIL: GEMBA Initiative leader

GCC: GEMBA Communication Centre

CMI: Cost Minimisation Iniative

5S: Sort (Seiri in Japanese), Set in Order (Seiton), Store (Seasur),

Standardise (Seiketsu), Sustain (shitsuki)

HRD: Human Resource Department (formerly the Personnel Department of EWS)

MDV: Medium Duty Vehicle Assembly Shops

EEI: Efficiency Ergonomics Index.

WIP: Work in Process

KRA: Key Result Area

BOM: Bill Of Materials

IOH: Inventory On Hand

PDI: Pre Delivery Inspection

PTS: Passed to Sales

Other Salient Terms

CNC: Computer Numerically Controlled Machines-Multi-Axis, implying they can perform multiple operations in one job cycle.

DMG: Gildemeister Deckel Maho – multinational firm which is occupies a niche position in the CNC machining market around the world.

Bharat Forge: Engine Crank Shaft Manufacturer – Primary supplier to CompCo who sometimes manufacture them in their own shop.

Bosch: Robert Bosch GmbH – critical components, spark plug suppliers.

Andon lights: Japanese signal board indicators that are used on assembly lines to alert a line that a problem has arisen.

GEMBA: A Japanese terminology used to identify the root cause at their source and resolve problems proactively and preemptively at the point of their origin in the workplace.

Kaizen: Japanese terms for small daily incremental improvements in production practices which accumulate daily and are implemented as participative activities at work sites of Japanese companies [Bird, 2002: 260].

Kanban: Implies a card or written indicator to control production and inventory of components. Kanban cards on their returnable bins indicate information on parts, process and number of parts in the bin and are replenished as soon as they get over [Bird, 2002: 261].

Just in Time (JIT): Production system seeking to eliminate excessive stocks and inventory required to all but what is absolutely necessary. It relies on the kanban system and advocate usage and storage of components that are only absolutely necessary and follows a pull system and uses kanban-marked bins which can be replenished only when they are fully empty [Bird, 2002: 259].

Appendix 15 Glossary of Individuals' Names Mentioned in the Thesis

1. *CompCo Corporate management in Nellore and EWS Senior management*

Mr. D: Executive Head Manufacturing CompCo, Nellore

Mr. N: GEMBA Head CompCo who operated out of EWS

Mr. SDN: General Manager and Overall Head Of EWS

Mr. TRN: Production Head, EWS

Mr. TMS: Head of Material Planning in EWS

Mr. VDS: Chief Operating Officer (COO) of CompCo Nellore

2. *Senior Level Middle Managers in EWS*

Mr. AB: The Staff Specialist and Deputy Head of GEMBA

Mr. Akb: Head Personnel Management of EWS

Mr. Ar: Head of End Product Quality Subassemblies

Mr. Mercury: Section Head (Production Control Office)

Mr. Mrl: Deputy of Mr. Akb. Personnel Manager of EWS

Mr. RGN Head CompCo Quality Assurance

Mr. RN: Senior Middle manager Manager-Supplier-Coordination and Delivery Material Planning.

Mr. SVM: CTV engineering GEMBA

Mr. T: Manager Engine Machining Quality

Mr. V: Manager-Material procurement-Purchase department

Mr. VS: The injured Departmental Head in EWS in the 1980s

3. Lower level and middle tier Middle Managers in EWS

Mr. ABK: Graduate Engineering Trainee who was stationed then in Production Planning and Control

Mr. AK: Line manager (Production Planning and Control)

Mr. ISC: Line Manager (Production Planning and Control)

Mr. RGPN: Engine Stores (Tools and Consumables) Shop

Mr. RN: Deputy manager of the finished engines section stores of shop

Mr. RV: Senior middle manager Material- Planning supplier delivery coordination

Mr.SGM: Experienced Manager Pre Delivery Inspection, had begun his career as an operator

Mr. SK: Clerical manager who had started out as a worker and worked in the Financial Audit Department

Mr. SMU: Line Manager (Production)

Mr. SMGN: Mobile End Product Quality Audit Inspector [who had moved over to the "other side" from the worker's whose job role, was to inspect finished commercial vehicles and was on tour for over 25 days in the month all around CompCo's plants in India

Mr. TJN: Manager GEMBA rewards administration

4. Workers' Mentioned in the Thesis

Mr. A: An Experienced Operator in EWS (Engine Machining Shop 5)

Mr. TNS: Operator Heat Treatment shop, Erstwhile Communist Trade Union Activist

Mr. VN: Operator (Engine Stores)

Mr. KGN: Operator Engine, Assembly

Mr. KNM: Operator (Engine assembly) who applies pneumatic torque to engine cylinder head-bolts

Mr. VDVN: Operator and EWS Trade Union Convener CompCo EWS Employees Union (Communist)

5. External Trade Unionists

Mr. MCL: External Trade Unionist who had considerable Influence over EWS workers, Head of CompCo EWS Workers Union [MCL]

Mr. RK: Trade Union Leader – Head of CompCo Workers Union (AIADMK)

Mr. RS: Senior Operator Retired, Trade Union Leader (DMK Party) – Head of CompCo EWS Workers Union (DMK)

6. Retired Managers and Outsiders from EWS who became

key informants

Mr.NNK: Manager Purchase and Supplier co-ordination WAP4 plant, Hubli

Mr. RC: Retired GM [Exports] CompCo Corporate Headquarters Nellore, who helped me gain access into CompCo and also a key informant.

Mr. SGN: Erstwhile colleague of Mr. SVM now works as a production manager in Cummins Pune India

Mr. SRV: Automotive Industry Expert and the head of Cummins India Pune

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