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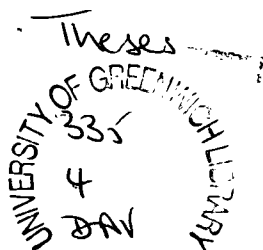
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ECONOMIC STRUCTURE AND INDIVIDUALITY
AN ESSAY ON CONTRADICTION

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ECONOMIC STRUCTURE & INDIVIDUALITY: AN ESSAY ON CONTRADICTION

ABSTRACT

This Project builds upon Lucien Sève's time-based (*biographical*) approach to personality development. The personality is, he contends, composed of three core elements- need; activity; and capacity. In contemporary social conditions, needs are complex and subordinated to the structure of acts and the growth of capacities. The Hypotheses that flow from this prioritisation are critically appraised here, while the theory *in toto* is put to the ultimate test of historical inquiry and verification.

This historical investigation seeks to explore the development of capacities and the structure of activity (*use-time*) in the Advanced Capitalist Countries since the mid-19th Century. *Contra* the deskilling perspective, the interpretation of that history proposed here is a contradictory one: a long term trend to reduced worktimes coupled with secular densification of tasks; a mechanical integration of the collective labourer combining with overt moves to deepen worker segregation; a concomitant polarisation of skills and continuing inequity in access to a growing biographical time fund.

The ultimate indifference of the capitalist mode of production to the biographical interests of its *supporting* individuals prompts, finally, an evaluation of options for a human-centred path of social change for the future (an exploration of *concrete utopias*). In this humanist reappropriation of history, the communist vision has been correctly typed as *under-defined* in crucial ways, including in the field of development of what Marx termed *rich individuality*. The overall assessment of the Marxian project remains, however, a positive one.

ACKNOWLEDGEMENTS

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I would also wish to apologise to all of my friends and to my family for the formidable stress that my obsessive concern with this project has placed on our relationships. Your understanding has sustained me through my all too frequent periods of self-doubt.

I should also like to declare a more private affiliation: to the rich community of thinkers who have communicated to me as to so many others through the written word. While there is truth in the contention that radical thought divorced from practical activity is a shadow of full life, nonetheless, I have found the creations of such as Raymond Williams astonishingly affective and poignant. I simply cannot relay what this intensely private experience has meant to me.

Associatively, I would like to acknowledge a debt to a public treasure: to the three University libraries of Birmingham and to the public libraries and those who staff them. These seem to me to be among our greatest cultural treasures and resource bases for a different future.

As to the product of my work, then I suppose that all of those modest disclaimers customary at this point apply. The limitations of time and space have become more apparent to me as I have progressed. There are at least two further volumes that one might attempt: on the temporality of consumption and of family constitution and reproduction; and on the ideological congealment of concrete individuality.

More broadly, the *solution* of ontology is a millenial preoccupation. I do not seriously contend that this objectively pedestrian piece of work can contribute in any way to the quasi-resolution of these issues: but, like Sartre, in his ultimately bankrupt effort to pierce the enigma of Stalinism, I believe that grasping after the impossible is the ultimate teacher. All of the distinctly *démodé* Promethian images come to the fore here.

Paul Davis

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CONTENTS

<i>INTRODUCTION: WHENCE A MARXIST INDIVIDUALITY?</i>	1
An 'Underworld of marxist theory'	5
The Althusserian 'Theoretical Detour'	7
First Principles	8
Agency	11
The 'Retreat of the Intellectuals'	12
<i>1. ALTHUSSER & THE DECENTRING OF SOCIAL FORMATIONS</i>	19
'Socialist Humanism'	20
Althusser's positions	22
Individuality in Althusser	29
Marx and the Individual	30
The Geometry of a Parallelogram	36
Althusser's 'voluntarism' revisited	40
Closing the Althusserian structure	43
<i>2. FORDISM & THE HISTORICAL FORM OF INDIVIDUALITY</i>	50
The articulated transition to capitalism	51
A 'Vision of Industrial Productivity'	59
Taylorism Promulgated	64
Fordism	65
The 'Fordman' and the 'New Deal'	67
Problems of Taylorism & Fordism	71
Americanism in Europe	75
The Gramscian Model- an Assessment	82
Fordism & the theory of 'epochs'	83
Conclusions	85
Appendix One: Brief Observations on the theory of epochs	86
<i>3. MARXIST TIME ECONOMICS: THE CASE OF LUCIEN SEVE</i>	96
The Determinants of Personal Development	97
The Infrastructure of Personality	101
Relational Concepts in the Personality	107
The Personality Infrastructure- Necessities of Development	116
Psychological Superstructures	123
The Balance-Sheet on Sève	124
Sève's Model assessed	132

4. <i>THE TEMPORALITY OF FORDISM RECONSIDERED</i>	150
'Non-correspondence' revisited	151
The Application of Machines	166
'Americanisation'- the role of ideology	186
Conclusions	192
5. <i>THE MATURING OF MODERN INDUSTRY</i>	202
The Deepening of Fordism	203
'Use It or Lose It'- the utilisation problem	212
Fordism and Temporal Rigidity	215
<i>A: Efficiency, output and labour times</i>	215
<i>B: Densification- ever-harder work</i>	222
<i>C: Collectivisation and hierarchy</i>	223
<i>D: Skill in the Fordist epoch</i>	228
The Distributional Inequity	235
'Japanisation' & Fordism	245
Generalising Systems Integration	261
The Technically Integrated Worker: Provisional Hypotheses	264
Conclusions	271
Appendix Two: Flexible Specialisation- a Yeoman Democracy?	272
6. <i>THE CHILIASM- 'LA REVOLUTION DU TEMPS CHOISI'?</i>	291
The Ubiquity of Inequality	294
Starting the 'Journey of Hope'	301
<i>A: Producer Democracy & Equality</i>	308
<i>B: Universality & Class</i>	310
The Journey Lengthens	311
The Terminus?	331
The 'Journey of Hope' Assessed	335
Final Thoughts	338
<i>REFERENCES</i>	<i>A1</i>
<i>AUTHOR INDEX</i>	<i>A10</i>
<i>SUBJECT INDEX</i>	<i>A12</i>

LIST OF FIGURES

Modes of Surplus Value Extraction I	52
Modes of Surplus Value Extraction II	53
Sève's Four-Quadrant Personality Development Model	119
Structures of Use-Time I: Typology of Psychological Ossification	121
Structures of Use-Time II: Youth	122
Structures of Use-Time III: Student Activity	122
Structures of Use-Time IV: Alienated Labour	122
The Triadic Relation between two Althusserian Sciences	144
Proportion of Overhead Workers in Total Employment	226
Proportion of Women in Paid Labour, United States 1890-1980	236
Temporal Densification arising from Team Working Methods	266

LIST OF TABLES

U.S. Automotives Majors' Profit Performance per annum & per Operating Week 1913-14	70
British Aggregate & per capita labour productivity growth rates for the Industrial Sector (excl. Building) 1847-1913	162
The Historical Trend in Composition of Capital Goods Output	206
Legal & Customary Working Weeks: Major O.E.C.D. Countries	217
Working Week & Year and Holiday Entitlements, Selected A.C.Cs	218
Numbers of Non-manual Workers per 100 Wage-earners	285
Daily Time Allocations to Key Activities by Social Class & Gender	296

Dedication:

For Rose, Parry and Owen and to all who give Compassion to Life.

“All you need is Love”

'The denial of individuality and the repression of personal relationships that we experience in our production apparatus is simply the negative expression of a process which, once transformed, bears the promise of far richer and more intensive human relations than have ever before been offered to the working masses' (Bahro 1978:295).

INTRODUCTION

WHENCE A MARXIST INDIVIDUALITY?

'Only when the process that begins with the metamorphosis of labour-power into a commodity has permeated men through and through... is it possible for life to reproduce itself under the prevailing relations of production. Its consummate organisation demands the co-ordination of people that are dead. The will to live finds itself dependent on the denial of the will to live: self-preservation annuls all life in subjectivity' (Adorno 1978:229).

The deep pessimism of western marxism as to the structure of power in developed capitalism is renowned. That pessimistic thrust reaches out in crucial ways to encompass the development of individuality. The concepts of 'negative dialectics' (Adorno) and 'one-dimensional' humanity (Marcuse) articulate an hypothesis of the total(itarian) *domination of the social form over individuality*. In this reading, individuality is reduced to the status of a social isomorph: the structure of individuality is then defined by the functions required by the capitalist mode of production. As a distinct object of study, theoretically, individuality *disappears*.

Adorno was perhaps the most relentlessly nihilistic in this regard: his work is peppered with references to a vanishing subject. There is little opportunity for redemption in an economic system in which individuals are but 'components in a self-regulating machinery'¹. The subject is also eroding in Marcuse, but the possibility of a (quasi-Freudian) rebirth through the revolutionary recollection of an arcadian past is continually available and stimulated from the periphery of the labour force (Geoghegan 1987:100ff). There are differences of degree in western marxism on this score, but clearly not of substance. This negative reading was based on a particular understanding of contemporary U.S. capitalism as a social formation powerful enough to secure the absolute functional 'submissiveness and renunciation' (Marcuse) of alternatives in its human subjects. The resulting ontological *formlessness* is a condition common to all classes. The totality enforces itself on capitalists and labourers, intellectuals and artists alike, albeit in different ways, to such effect that these stylised individuals *become* it, in a direct correspondence of individuality with social function.

Needless to say, what the Individual was disappearing into was a 'bad totality' (Adorno), a dystopia. Capitalism is viewed as an anti-humanistic social form which- even in its by-products- reduces its human subjects to a state of relative or absolute abjection. Given their social background, there were issues in the trail of these by-products that particularly concerned the western marxists. They were, as is well known, preoccupied with a proclaimed impoverishment of (particular definitions of) 'culture' and the rise of massified cultural industries. There were famous differences between them on precisely this issue, as the early exchanges over jazz-modernism and the artistic 'means of mass production' between Adorno and Benjamin most clearly illustrate.

Reciprocally, it was largely from this perceived cultural immiseration that their analysis of a world system under the sway of large capitals issued: western marxists *read* the totality through its cultural fragment. From the 'culture' of fascism to 'socialist realism' to American consumerism, no matter where they fled, the themes of standardisation and brutalisation seemed omnipresent. The theoretical price of this focus is, however, severe. One searches their work in vain for the analysis of those other historical and economic lines in their totality: precisely what processes generated a world system dominated by large capitals; characterised by the interweaving of science and production; a totality 'dominated by quantification'?

The analytical univalence that this supposedly 'dialectical' account inspired contrasts sharply with the more discriminating evaluation of the impact of capitalism as a *contradictory* formation that characterised the marxist corpus. The importance of this principle of contradiction in the founding works of marxism is difficult to overstate. If the issue was tactical, Lenin was arguing the need for Trade Unions and socialist parties to participate in pre-socialist parliamentary forms to build popular support through engagement with a reformism that was in his view ultimately compromised. In the longest of historical time-frames, Engels was analysing the capitalist mode of production as the necessary material foundation for that leap into the 'realm of freedom' that would constitute socialist revolution. In the political economy, Marx was grappling with the contradictory dynamic of profit rates and changing compositions of capital that drove accumulation and crisis. This dualism did not, however, feature large in western marxism.

There are, in short, two negativities in the western marxist perspective on individuality. First, the functional skill required of individuals by the social order diminishes over time, as social relations are supplanted by mechanised administration of things (human capacities start to decline). Second, the structure of creative motivation is undercut by the childlike submersion

of individuality in the totality. Given the historical context to their work, that these witnesses should abstain from voting for a better future is more than understandable. Nonetheless, such projections -if they are accepted- sound the death-knell on progressive social change and utopian ambition, with which at least a part of marxism has been indissolubly wedded since its birth. This is the high political price to be exacted by negative dialectics.

One may of course question, at the empirical level, whether anything of the sort has happened. In terms of such fundamental creative capacities as literacy, the trend in the twentieth century has been markedly upwards, both in absolute numbers and in terms of the proportion of the human population so endowed. For marxism, the empirical evaluation of the trend in capacities is doubly important. These human capacities are an integral component of that audit of the 'resources for a journey of hope' that Raymond Williams began to compile in 1983: they form a part of an anticipatory register to the future.

By definition, the concepts of socialism and even more communism, presuppose a massive expansion in complexity, both material and social. It is still a finite possibility that the inner contradictions of the law of value will drive capitalism as a world-system into a state of anarchy, and that the choice of socialism in the advanced capitalist regions will prove to be a non-choice, a material necessity. Much more likely, however, is the path of conscious collective intervention, in the working through of which the then available capacities of the collectivity will play a vital role. Adler (1990) has controversially but convincingly argued that, in this regard too, the Marx of *Capital* foresaw a contradictorily *progressive* role for capitalism. Marx, was also, in Adler's reading, sensitive to the importance of workforce capacities in guiding social change:

'(capitalist) ...development transforms workers' experience of work and encourages the growth of their capabilities. These capabilities play two key roles. Workers' capabilities represent, first, a resource for political action. Industrial development drives an increase in skill requirements, which in turn leads to an expansion of the educational system and of the intellectual horizon of workers. Furthermore, the experience of large-scale production enhances workers' capacity for organized activity' (Adler1990:787).

To give but one obvious example of where the practice of these capacities is decisive: the degree of authoritarianism, and more important, the *quality* of authority (including the depth and manner of expression of violence) attending the supersession of capitalism will be crucially related to the forms of individuality associated with the preceding mode of production. A population of 'trained gorillas' (Frederick Taylor), brutalised by prolonged exposure to

routinised and repetitive forms of labour, is at least unlikely to be capable of exploring the more subtle means of neutralising inimical class power in the volatile conditions of a social transformation². In short, the duration and character of the transition to socialism must depend, in large part, on the complexity and capacities of the extant population at that time, its degree of general civilisation.

Indeed, the evidence of enduring tyranny in 'actually-existing socialism', where it has not already collapsed back towards capitalism, is indicative of this. The degree of sociability and organic co-operation associated with agrarian/pre-capitalist modes of production just cannot, without the longest and bloodiest of transitions, support the common resource access and multilayered conviviality of a socialist political economy. Thus for marxism, tracing the development of the forms of individuality is fundamental in exploring humanity's future.

The very fact that these obvious statements need to be reiterated is symptomatic of the lack of attention devoted by marxism to the issue of capacities, individuality and political change over the recent past. This is all the more surprising insofar as important elements of capital have been actively promoting the problem of the overall development of skills in the labour force with increasing urgency. Even in Britain, with its élite systems of education and its ramshackle structure of public and private sponsorship of training, the problem of 'Human Resource Development' (as it has recently, amusingly, been re-baptised) has rapidly climbed the ladder of State priorities. Of course, the redefinition of training by no means brings the marxist and mainstream senses of human competences into correspondence, but the thrust of recent developments should certainly have reminded marxism of the strategic importance of the level and distribution of personal capacities in social development.

What is one to make of the second contention of western marxist dystopians in relation to individuality, that advanced capitalism undercuts the structure of creative motivation? The events of 1968 in Europe, the demolition of Fascism in the Iberian peninsula, the continuing large scale experimentation with new forms of sexual and social intercourse: these random examples surely indicate the preposterous nature of this claim. The juxtaposition of a rapidly moving history with the release of texts claiming the totalistic closure of conflict and struggle was at times quite incongruous. Geoghegan highlights the case of the ascent of the New Left in the United States in the late-1960s in relation to Marcuse's work. He notes Marcuse's '...appalling lack of predictive power... in that a society which was said to be almost terminally afflicted with "one dimensionality" in 1964 could display such vigour in 1968' (Geoghegan 1987:108).

Western marxism 'solves' the problem of the relation between society and the individual by collapsing the latter into a morbid embrace with the totality: therewith, the Individual 'disappears' as a theoretical entity. Yet their ontological slip is hardly unique. Perry Anderson has recently cited this problem of the '...nature of the relationships between structure and subject in human history and society' (Anderson 1983:33) as one of the two great aporias of marxist theory as a whole. He recalls, with no claim to novelty, the tensions and vacillations on this score in Marx's own work: the structural and epochal emphases in the 1859 'Introduction' contrasted with the elevation of class conflict and self-determination in for example, the *Class Struggles in France*.

In the Tracks of Historical Materialism focuses on the rise and fall of existentialism and structuralism and their fruitful (but ultimately transitory) encounter with marxism in post-war France. The importance of this fleeting convergence cannot be overstated, for it gave rise in the works respectively of Sartre and Althusser to the last major attempts to construct a synthetic marxism. There was much in the canon of Louis Althusser in particular that may yet prove of significance in wrestling with the formidable problem of structure and agency, of social form and individuality.

An 'underworld' of marxist theory:

It would be erroneous to suppose however, that the history of marxist thought on this issue prior to the rise of Parisian philosophy was a swathe of despair and dystopia. Both Marx and Engels, in distinct ways, were to generate a number of hypotheses over the long span of their writings. Indeed, as the Althusserians most acutely observed, there were significant contradictions between these numerous hypotheses as they developed over time. This proliferation indicates that the legacy of the canonical works is remarkably rich. In the Second International, the momentum of research was sustained. The work of Georgi Plekhanov, the 'Father of Russian marxism', is significantly preoccupied with the context of individual action and the relation of being to consciousness³. Out of the Second International also came the Kantian-inspired analyses of the Austro-Marxists, with the explication of a fundamentally socialised 'transcendental subject'⁴.

From the ranks of the early Third International, Antonio Gramsci's Prison Writings, and particularly those on Fordism, constitute a most profound development. Gramsci's objective was to trace the implications of new American systems production for the formation of personality. His arguments, which have a contemporary resonance, are scrutinised in some detail in Chapter

2 below. At the same time in France, Georges Politzer commenced his idiosyncratic work on a theory of dramatic acts, arriving at a conclusion that was (in retrospect) startlingly analogous to Gramsci's: that a marxist psychology could not be founded on anything but a structured relationship with the political economy. In the 1960s, Politzer's tragically terminated research agenda was recast in the work of Lucien Sève, who also acknowledged a considerable indebtedness to Althusser: thus, one returns to Anderson and the condition of contemporary marxism.

This schematic indicates that marxism has amassed a considerable body of intellectual achievement in this field, over and above that most famously associated with western marxism and existentialism. Yet an overall impression is gained that little forward motion has occurred, that no quickening of the pace of research is in hand. Certainly, the rate of production of new work has remained significantly flat over recent years. Why might this be?

There is of course the obvious fact that this legacy has been highly sporadic and scattered: widely separated chronologically and geographically, but also diverging in its individual conditions of production (Gramsci's enforced isolation; Politzer's political mobilisation and premature death; Althusser's philosophical involution). Partly as a result of this, each contribution has been (and remained) an isolated, exasperated event.

This peculiar quality of isolation is reflected at a number of levels. There is for example, no sustained engagement between the major thinkers, not even, in most cases, any cross-referencing at all. Furthermore, their contributions are notably absent in turn from the bibliographies of the small number of sympathetic reviews undertaken in recent years.

Another aspect to this isolated pattern of progression is that each successive contribution, when it arrives, is regarded as a radical innovation. The response in marxism to Althusser's emphatic 'anti-humanism' (which is a misreading but one which Althusser's linguistic ambiguities only encouraged) typifies this: for some, the shock and then the adulation of the new; for others, an ill-considered vituperation. Yet from a retrospective vantage-point, some at least of Althusser's theses can be seen to connect quite readily with long-established and fundamental perspectives on structure and individuality. The generally uncritical reaction to the contemporary 'school' of Analytical Marxism, which amounts, for all its mathematical elegance, to an highly qualified species of classical individualism, is further evidence of this lack of historical perspective on the corpus of marxism in this field. The net effect of this isolation has been that the critical mass of activity that alone permits sustained scientific progress has remained unattainable.

Yet, it is a central hypothesis of this Essay that the essential methodological prerequisites for a theory of personality are practically within reach of marxism. The great importance of these methodological conditions cannot be overstated. It is hardly necessary to observe that the issue of structure:agency has a millennial philosophical lineage, and there is no sign that the problem is capable of resolution in its received terms. Again, the response of western marxism is typical: when faced with this duality, they simply collapsed one (unique) form into the other. This other 'stream' (Bloch) of marxism purports to offer a means of reformulating these ancient questions of ontology and gnoseology through major theoretical surgery.

The Althusserian 'Theoretical Detour':

This theoretical suspension, essentially Althusser's creation, works by systematically splitting the two sides of the relation structure:subject such that each becomes the centre of different epistemologies (or, as Althusser would say, the object of different 'sciences'). In this sundering, which is eminently theoretically defensible, the *differentia specifica* of each element and the laws of motion of the totalities to which each element is assigned, can be more rigorously defined. Only on the basis of such a lower level understanding can the philosophically much more difficult study of the structural relations between these sciences be sensibly approached: the analysis of each (internally complex) element is a theoretical *prius* to any understanding of their modes of coupling and dominance. On this redefined terrain, marxism can return to and engage more rigorously with the ancient conundrum of agency.

Sève's work, for all his protestations to the contrary, follows an analogous logic to Althusser's. The results indicate (but only indicate) that this framework can form an adequate foundation for a coherent marxist theory of personality proper. Sève's 'hypotheses' will be considered at length in Chapter 3. It is indicative of the inherent difficulties in this area of work, however, that his exegesis of the materialist theory of personality does not begin until well nigh the end of this mammoth book. The rest is methodology...

On reflection then, Althusser's insistence on the need for such an extended theoretical detour seems incontestably right⁵. It is a truism that the temporal determinants of personality and the development of social formations are each totally unique processes, even while they are also causally related. Theory is absolutely required to capture this uniqueness (though not necessarily to mirror the actual formative *modus operandi*). The notion of two assigned sciences, which is what Althusser and others called for, is likely to serve analysis better than any attempt to elide these two scientific objects into a singular framework (the cul-de-sac of western marxism).

This sundering has an additional benefit: in throwing the structures of determination of each element into sharp relief, it poses with renewed discipline the question of the *relations of dominance*. Another conventional response to the relationship between the Individual and the social system is to proclaim their mutual reciprocity, with each element simultaneously determining and determined. This compatibilism, so typical of contemporary work on identity and ontology, customarily degenerates into a never-ending calculus of 'influences' in which the issue of determinism is ultimately completely lost. Conversely, Althusserianism was emphatically concerned with the internal and external (dominance) relations between the identified scientific objects: Althusser's approach practically *demand*s that such questions be met head-on.

First Principles:

What Althusser has to say about the relation between (his reading of) historical materialism and individuality builds on a number of orthodox marxian hypotheses, a brief resumption of which would perhaps be helpful.

First, labour (whether production or reproduction) is accorded a decisive importance in the development of personalities. There is the general materialist thrust here on the creation and maintenance of the means of subsistence from a natural environment that is increasingly reshaped by generations of social labour, but which remains in many ways beyond human understanding and control. This is a world view that in many respects, predates Marx's own work. Out of this relationship comes a perception of labour (as a practical activity) as a reflexive process that changes the fabricator as much as the fabricated. Work ramifies on the structure of human needs by building capacities and consciousness of this material integument: this understanding alters in turn the structure of activity that then impacts back on needs.

This whole process is, in all established social orders, unplanned. More precisely, it is through the contradictions in the forces of production, in which labour power remains the enduring source of instability and challenge, that the key social relations in capitalism are developed. The level and turnover time of those same productive forces also sets parameters on attainable individual development. The postulation of this causal flow, from the economic order to personal development (as a residual function) is not one that is unique to historical materialism. The accentuation in the importance of the *productive forces* in that process most certainly is.

There is, of course, significant dispute within marxism as to how this priority should be interpreted. In the spectrum of radical debate as a whole, the criticisms levelled by the 'new social movements' have been particularly severe. Much of that criticism, about gender and household labour, about nationalism and ethnicity, remains as valid and useful corrective. What was never sensible in the original proposition, was the mechanistic practice of reducing all significant social development (including that of individuality) to epiphenomena around this then reified core.

Yet, the essential kernel of truth in the *prioritisation* of the means and relations of production over other individual-group environments also retains an overall cogency. It is a proposition that is empirically verifiable in a range of circumstances- including in the field of personal development. The evidence (schematic as it is) on the implosion of motivation and erosion of capacities in individuals who have been expelled from the labour force- the psychological equivalent of rapid devalorisation- provides a telling example of the pivotal importance of workplace in personality development.

It will be noted that the onus here is on the *forces*, not simply the *relations* of production alone. This is a very important line to draw: a reading of the early Marx, still then working through the Hegelian legacy, would elevate the relations of production, and the labour process, to a position of absolute theoretical pre-eminence in historical materialism. The result, as Joseph McCarney has recently, approvingly, put it, is a 'philosophy of history grounded in the teleology of human labour'⁶. The basic problem with this, to be addressed throughout this work, is that capitalism has unleashed the 'sorcerer's apprentice' that materially vitiates humanism: the machine economy possesses a dynamic that is, in particular ways, autonomous of the historically given structure of human capacities. The tool is somehow turned on the maker. It then follows (a contention that humanism could never accept) that the historical development of capitalism is relatively indifferent to the psychological interests of its members. There are grounds for believing that- to date- that development has enhanced individual capabilities: but this remains a highly provisional hypothesis that certainly does not have its roots in any transhistorical demiurge.

An explanation of *capitalist* economic development that is anthropologically based (humanist) is unsatisfactory insofar as it does not recognise this fundamental and very recent break with all preceding human productive systems. This is one reason why Marx devoted so much attention to the contradictions in the forces of production in *Capital*. If the matter were as simple as humanism(s) would suggest, reducible to but one of the terms in the binomial of the relations/ means of production, then Marx could be seen in retrospect to have wasted a great deal of his time. These issues will be addressed in the analysis of Althusser's work set out in Chapter 1.

It is also striking, recalling the attention that has been given over recent years in marxism to the functional role of the educational system in the reproduction of the capital relation, that capitalists continue to accord much greater importance (as reflected in the flow of resources) to work-based ('on-the-job') learning than to either initial educational attainment or to continuing formal education while in employment, at least for all but the most synthetic (managerial) skills. They at least, it would seem, believe that the workplace is the key incubator of appropriate labour force skills (Training Agency 1989).

This thesis, of the overriding importance of the workplace in the development of appropriate qualities of labour power, constitutes an important datum, the first identified relation of dominance, in the map of the personality. Yet it is one- as argued above- of limited utility until:

** the constitutive elements of this social-individual discourse have been identified (what information is being transmitted across scientific objects, what intermediate 'carriers' permit this information to be relayed?).*

** the ensuing psychological implications for the Individual have been properly audited. It is then a question of establishing the significance of this social discourse for the actions and capacities of the Individual. This task presupposes therefore, the development of a theoretical model of the personality.*

A related emphasis in marxism prioritises *adult* activity and potential as against the customary attention devoted to developments in youth in virtually all major strands of western psychology and psychoanalysis (including those of a radical inclination). There is in this marxist priority an implicit and politically necessary generosity arguing for lifelong plasticity of human development.

The hypothesis of a high level of adult plasticity is classically summarised in the proposition, no more than an ontological shorthand but useful for that, that 'being determines consciousness'. As Burkitt suggests:

'...human being is always social being, for the individual- their nature and consciousness- can only be understood in the context of the social heritage that has been handed down to them through social relations as they unfold in the historical process' (Burkitt 1991:114).

The complexity of materialist positions on this issue, many of which predate Marx's own work, needs no restatement here: the recent contributions of Timpanaro (1975) and Williams (1978;1980;1981), and much of the ensuing debate, sets out the central positions of materialists and the controversies that continue to attend them. Suffice it to say, as Edward Thompson would have it, that the 'jury is still out'.

The emphasis on adult potentialities is seemingly at variance with much of western psychology, as Burkitt observes. Clearly, psychoanalysis is founded on effecting the clinical renovation of individuals and neither its practical importance or its fundamental humanist sympathy are to be underestimated⁷. Yet its common assumption that the arrestation of adult personality is generally or decisively associated with the nexus of internal psychological relations, or, more particularly, early paternal (Freud) or maternal (Klein) interpersonal exchange, must be rigorously examined. It is pure obfuscation to proffer psychological recovery to those large numbers who, childhood fortune aside, struggle within a psychologically inimical material universe that is centred on externally regulated labour. The problem for those seeking to offer therapies to troubled personalities is that these sources of malaise lie some distance beyond both their professional sphere of influence and professional understanding.

These adult realms of production and reproduction are essentially characterised by extended networks of (enforced or popular) co-operation and conviviality. The structures of volition and intention that are associated with these environments are of ultimate social complexity. In short, the adult world of work (nuanced towards valorised activities) bears within itself all '...higher forms of human motivation' (Sève 1978:321). This is the basic rationale, in summary form, for beginning a distinct study of personality with the world of production.

Agency:

It has been one of the great criticisms of Althusser's work that its emphasis on structures of determination displaces class conflict and struggle from the record of history: certainly, Althusser's response to this problem was woefully inadequate, threatening to undermine the entire Althusserian edifice in the form of its answer.

It is obviously a test of the efficacy of a marxist theory of personality, even perhaps the decisive one, that it should be capable of explaining the bases and limits of individual and collective resistance (and very occasionally, of insurrection). The construction of a consistent theoretical system that can embrace a legitimate quantum of determinacy (the unity of parts in a

customarily functioning social order) while also permitting various definable levels of challenge is a supremely difficult task. The epistemological terrain is deeply trodden here and the paths are well signposted too. To make progress in this area, one needs to consider, at a minimum, three central issues: in the relation of the theoretical object to the real object, the levels of logic and analysis that differentially encompass determinism and contingency; then the relations of synchrony and diachrony, with differing attendant conceptions of time; and finally, the composition of classes conceived first *in-themselves* and then *for-themselves*.

To repeat however, within the constellation of available and projected class responses, the competence and sophistication of motivation of individuals as 'agents' form essential components. In this subordinate reciprocal determination the question of individuality assumes dramatic political dimensions. This is, as has already been observed, the central social concern that qualifies the analysis of individuality in marxism as being of signal importance beyond its intrinsic intellectual merits.

The 'Retreat of the Intellectuals':

Finally, it would, perhaps, be useful to situate this Work in the wider context of the intellectual tendencies and substantive developments of the 1980s. This Essay was written over a period when the prospects for socialism have ebbed to what, in recent times, constitutes a new low watermark. The *retreat of the Intellectuals*⁸ from any coherent or progressive vision of the capacities for willed social change has, in the last instance, but paralleled this broader social-political retrenchment, while adding some noteworthy emphases of its own. The 'post-modern' epistemological relativism of the recent period (the discursive annihilation of 'reality' [Lyotard]), coupled with a Derridean celebration of 'difference' enacted in the 'hyperreal' spectacular, negates all empirical checks on knowledge. In a broader sweep, these hypotheses bring the very concept of *epistemes* into question. As has been noted in a variety of quarters, the outcome of much of this work is to enforce a return to 'end of ideology' vacuities, now daringly extended to include the 'end of history' itself (Francis Fukuyama).

This post-structuralist irrationalism then denies anything other than internal validation to all knowledge-systems, including its own. Given that there is no single (non-discursive) reality to engage with, the most that can be said for post-structuralism is that it *endorses* what it defines as the only enduring characteristic of contemporary capitalism, its apparently radically uncentred proliferation of forms, signs and spectacles. The only historical parallel that can be drawn in marxism to this nihilism is, ironically, with the selfsame western marxists with which

this Chapter opened. The irony lies, of course, in the totalistic thrust of Horkheimer and Adorno, which is located at the other end of a long philosophical line from the anarchic relativism of post-structuralism.

Where did the Frankfurt School end up, however? In New York they found a form of capitalist production that embraced new standards of calibration and scientificity operating hand in glove with a mass culture founded on the most conspicuous and frenetic consumption of artefacts which seemed to them of dubious use-value and permanence.

‘Central to Adorno and Horkheimer’s understanding of this new world was their belief that there exists within capitalism a fateful dialectic binding rationality to irrationality, the one inexplicably transmuting into its other. This necessarily throws into confusion fixed distinctions between rationalism and irrationalism’ (Schwarz 1990:145).

It is precisely this occlusion of the ‘reality principle’ at the theoretical level that permits, several decades later, the hollow celebrations of post-structuralism.

The materialist and rationalist underpinning to the approach adopted here is founded on the conceptual distinction between a complex ‘real object’ and its appropriation as ‘object in thought’: this duality requires explicit and complex procedures of abstraction and reconstitution, issues which occupy much space in the following pages. These emphases run diametrically against the ascendant post-structuralist tendencies. Similarly, the focus on structures of containment of *agency*, with the ubiquitous and continuing material constraints on individuality that this suggests, cuts against the celebration of proliferating new identities that characterises this post-modern ‘consumer’. Again, the reassertion of the social importance of production (with all the formidable definitional problems that this concept presents) appears in this wider context as at best a charmless anachronism.

Validation forms a final check on the theoreticist extremes of post-modernism. It is hardly surprising, within such self-referential knowledge systems, that an historic tendency to slight the importance of the physical sciences, and more particularly, of its verificatory norms, has recently deepened under this nefarious influence. This dismissive attitude, coupled with the various forms of obloquy⁹ in relation to marxism, generates a degree of cynicism towards the overweening claims of its advocates. Althusser’s dismissive attitude towards historiography connects obliquely with this tendency, and must therefore be summarily jettisoned.

The study of individuality has a specific counter-hegemonic significance in this post-structural context. The shattering of the post-1945 centrist consensus and the return of new Right governments has been more than matched in the intellectual field. In many ways, the path back towards cultural hegemony for the Right was prepared, ironically, by this increasingly nihilistic post-structural definition of contemporary radicalism. The recasting from the Left of the collective institutions of social democracy in the Advanced Capitalist bloc as historically obsolete barriers to a post-modern modernisation undoubtedly did do significant damage to the interests of the working collectivity. In so preparing the ground for the Right turn, such theories represented a self-defeating extremism. A renewed vulgar individualism, with vicious practical social effects, has accompanied and ably supported this recent *coup d'état*.

The rise of *Rational Choice* (Analytical) Marxism in the Anglophone academy emphatically symbolises this more general hegemony of liberal individualism, as Ellen Meiksins Wood observes.

‘If one were simply to list the principal features of the (Rational Choice Marxism) ...model, the result would be something very like a caricature of Anglo-American liberalism’ (Meiksins Wood 1989:84).

She identifies among these, its ‘methodological individualism,... ahistoricism’ and “‘economic” model of human nature’. In this recent revivification of high individualism, marxism has been critically disabled by its lack of a systematic theoretical alternative to *homo economicus*¹⁰.

It is finally then, in two ways that the strategic importance of constituting an alternative vision of personality development becomes apparent. Both as an element in the process of reconstituting a wider line of defence against the hegemonic intellectual nihilism and as a constitutive dimension in that audit of social resources that Raymond Williams proposed, the case for a radical alternative to liberal-individualist philosophies of self is abundantly and urgently made.

NOTES TO INTRODUCTION

1. *It is difficult to convey the apocalyptic quality of Adorno's hypotheses without also slipping into the poetic, almost mystical vernacular of Minima Moralia itself. In this instance, form and substance are truly indissoluble: there is simply nothing comparable to the original text! For example:*

'(t)he mindless tasks imposed by authoritarian culture on the subject classes can be performed only at the cost of permanent regression. Their formlessness is, precisely, the product of social form' (Adorno 1978:182).

Alternatively, with irony:

'to think that the individual is being liquidated without trace is over-optimistic... (i)n the midst of standardized, organised human units the individual persists... But he is in reality no more than the mere function of his own uniqueness, an exhibition piece' (ibidem:135).

*There are very occasional gestures in **Minima Moralia** to a different future, one in which individuality might be progressively reconstituted in a new relationship to a changed economic order. Yet, the possibilities for change are ringed with dialectical caveats that register more than anything else the Author's loss of hope and proportion. Thus on the choices facing intellectuals:*

'(w)hile the individual has... fallen behind the state of technology and become historically obsolete, he becomes the custodian of truth, as the condemned against the victor... Those who neither give themselves up wholly to the individualism of intellectual production nor... the collectivism of egalitarian interchangeability, with its inherent contempt for man, must fall back on free collaboration and solidarity, with shared responsibility' (ibidem:129).

2. *This essentially **prefigurative** stance on revolutionary violence has been roundly criticised by Norman Geras on the grounds that it does not guide practical activity, is 'indeterminate' and therefore 'unhelpful'. He then makes a telling observation on the 'double determination' of legitimate violent acts:*

'means... are doubly determined; not only by what they are intended to achieve, the putative goal, but by that situation which is their starting point as well. It is in the nature of... revolution that this starting point has ugly features, including the mobilization of violence on its behalf' (Geras 1989:188).

*This seems incontestable. Yet it is curious that Geras' 'starting point' emphasises only the negative features in a revolutionary moment. By the same token, surely, those original material and social conditions (including the wealth of individuality) also open up new forms of collective resistance and collaborative activity. This development, which refines the very conception of the term **violence**, also increasingly rules out barbaric acts. It is then striking that Geras' discussion centres on physical*

violence, which would form but one aspect to a revolutionary contest of classes in the advanced societies.

The prefigurative argument cannot anyway be so lightly dismissed: the bloody acts of the Bolshevik forces during the Civil War were, of course, mightily provoked by the anti-semitic terror of the Whites. In that sense, they were 'measured'. Yet as Kagarlitsky notes:

*'(t)he programme of eradicating barbarism by barbarous methods was objectively engendered by Russian conditions. But this programme concealed within itself an unresolved contradiction, for means always possess this dangerous property: that they may alter the ends pursued. In their fight against barbarism by such methods the Bolshevik Party increasingly degenerated, and barbarism, Asiaticism and anti-democratism entered more and more into their ideology' (Boris Kagarlitsky *The Thinking Reed: Intellectuals and the Soviet State, 1917 to the Present* Verso).*

The recognition of differential development of revolutionary resources across different cultures militates against ahistorical, judgemental tendencies (such as those advanced in this regard by humanists).

It is not appropriate here to consider what an advanced (revolutionary) morality might look like. What is striking from Geras' article is the paucity of his pragmatic alternative, which reduces to just war doctrine and agreed rules of warfare itself. This comes down in turn essentially to two propositions a definition of 'those who are legitimate targets of attack'; and a delimitation of 'how or in what circumstances they may be killed' (Geras 1989:197).

3. In a recent article, Ernest Mandel pays tribute to Plekhanov's (1976) work as '...a remarkably subtle and up-to-date analysis'. Mandel's study of the significance of individuals in the progression of World War Two '...provides ample illustrations of the perspicacity of Plekhanov's theses' (Mandel 1986:67).

Such an accolade from this important figure confirms the value of a close scrutiny of the record of marxism on this score. Regrettably though, this was not the task that he set himself. Mandel does not provide an indication of the wider theoretical framework in which his analysis proceeds.

4. 'The critical philosophy... starts, and must start, from individual consciousness, but demonstrates in this consciousness a supra-individual, transcendental-social, a priori, socialised character' (Max Adler, quoted in Callinicos 1983:67).

5. *The image of Althusserianism as a long theoretical 'detour' was deployed by Gregory Elliot (1987) in his excellent eponymous account of the legacy of Louis Althusser.*

6. *Joseph McCarney, 'The true realm of freedom: marxist philosophy after communism' New Left Review 189 1991.*

7. *Two examples well illustrate the humanist sympathies of radical psychoanalysts. First, Michael Rustin, in a favourable review of the work of the 'object-relations' school, declares:*

'...socialists must address themselves not only to material deprivation and its redress, but also to the quality and intensity of social relationships as prime criteria of value... The object-relations tradition in psychoanalysis offers a theorized view of (the) ...preconditions for human development, based on its particular understanding of infancy' (Michael Rustin 'A socialist consideration of Kleinian psychoanalysis' New Left Review 131 1982).

Bernard Doray's (1988) labour process study was founded on his experience as a practitioner of psychoanalysis, as Schwarz notes.

'His scholarly interest in the labour process arose from treating workers driven to psychic disorder by their experiences of work. There exists an entire branch of psychology devoted to such problems- spawned by managements... Such psychology accepts the simple rationale that it is the job of the psychologist to equip the worker with the emotional means to oversee the machine. Doray's psychiatry is far removed from this instrumentalism' (Schwarz 1990:147).

In the case of object-relations theory, the emphasis on childhood socialisation and family activity is of course, paramount. This is reflected in the language of 'primary socialisation' ('in the family and elsewhere') as against 'secondary socialisation' ('in the worlds of education and work for example'), a language inferring much more than a temporal biographical movement.

These progressive elements in psychoanalysis are, in broad terms, exceptional. That there are strong reactionary themes in for example, Freudianism, is now indisputable. This political stance explains the often hostile position adopted towards psychoanalytic theory in much marxist work. Isaac Deutscher's response is not untypical.

*'In fighting against social inequality and oppression we fight also for the mitigation of those blows that nature inflicts on us. I think that Marxism has tried and is trying to tackle from the right end the tasks confronting our society. The Freudians have concentrated on sex and ignored or belittled man's social problems. And what is the result? For all the theoretical importance of psychoanalysis, the practical benefits of the therapy are in our society available only to a tiny privileged minority' (Isaac Deutscher 'On socialist man' in *Marxism, Wars and Revolutions: Essays from Four Decades* 1984 Verso).*

8. *The title and subject-matter of the collection of Essays in the 1990 volume of the **Socialist Register**.*

9. *See Norman Geras' tendential, terse contribution to Miliband R. & Panitch (eds) (1990).*

10. *The ahistoricism that typifies Analytical Marxism recalls more than anything the post-structural hypostatisation of the present. As Meiksins Wood concludes:*

'(w)e may now be observing a curious convergence between two apparently antithetical tendencies, the super-rationalism of Rational Choice Marxism and post-structuralist irrationalism... Both are impelled toward a politics detached from the anchor of history, as game-theoretic choices join post-modern contingency in a contradictory amalgam of political voluntarism, where rhetoric and discourse are the agencies of social change, and a cynical defeatism, where every radical programme of change is doomed to failure' (Meiksins Wood 1989:88).

This seems absolutely accurate.

CHAPTER ONE

ALTHUSSER AND THE 'DECENTRING' OF THE SOCIAL FORMATION

While some subjectivists, out to endow the "individual" with the greatest possible role in history, have refused to recognise mankind's historical development as a law-governed process, some of their more recent opponents ...have evidently been prepared to forget that history is made by people and that the activities of individuals cannot therefore but be significant in history. They have declared the individual une quantité négligeable' (Plekhanov 1976:293).

There could not be a more prescient anticipation across seventy years to the exchanges generated by the 'anti-humanist' theses in Louis Althusser's *Reading Capital*. Althusser's work represents in many ways the most sustained attempt in 20th century marxism to argue a resolution of the theoretical contradiction between structure and subject decisively in favour of the former. Later caveats notwithstanding, no other author has put the argument for a humanism so forcefully, with such powerful (if fleeting) influence, or with such philosophical erudition as did Louis Althusser in the 1960s.

The expiry of his project, the last major attempt at a synthetic marxism, left a number of fundamental questions suspended in the ensuing 'crisis of marxism'. It is argued here that some of the central propositions of structuralist marxism remain of relevance to the project of founding a marxist theory of the personality of the adult individual.

The co-ordinates of Althusser's project are now well documented (see *inter alia*, Anderson [1980]; Callinicos [1982]; Elliott [1987]; Rée [1980]). There were two key priorities: first, there was a need to rectify the increasingly revisionist ('Garaudyste') lines in the French Communist Party (P.C.F.), where this drift was, for Althusser, founded on a fundamental ignorance of marxist philosophy. Second, there was a pressing need to reverse the more general 'humanist' (reformist) flight underway in international marxism in response to the shocks of destalinisation.

It has been widely noted that Althusser's response to these political challenges, at least until his 1978 polemics in *Le Monde*, was formulated in closely guarded theoretical terms. This has been contrasted with the direct political interventions for example of Colletti in Italy or of E.P. Thompson in 1956. In contrast, Althusser chose to engage with the deleterious consequences of particular theoretical tendencies, and (just) preserved his Party card by leaving others to make the direct political connections. The reasons for this reticence are well known: Althusser saw the P.C.F. as possessing unique revolutionary potential in the French political formation, even if that power was then neutralised by Stalinist dogma. He also believed that marxist philosophy could renovate the Party, by allowing its cadres to come to grips scientifically with the contemporary practices that were blocking the P.C.F. from fulfilling its historic task. Prior to that renovation, any more direct political intervention would certainly have provoked a quasi-stalinist bureaucracy to sever precisely that connection *via* the Party card that, Althusser believed, tied him into the only serious revolutionary force in France.

In the world of theory then, Althusser turned his critique first on those who sought to rework Marx along Hegelian lines, to upgrade the theory of the 'young Marx' at the expense of (centrally) *Capital*. These 'socialist humanists' had certainly steered a difficult course; veering towards relativism (Sartre's dialectic as the praxis of the proletariat) only to turn to a mysticism of the collective worker (Lukacs' universal proletarian subject) or despair (Adorno and Marcuse). Althusser's project counterposed a stringent rationalism derived from French classical materialism (Thierry; Mignet; ultimately, Comte) and Spinoza's objectivist epistemology (the problem of the production of knowledge from the real data, reflected in Althusser's 'object of knowledge'/ 'real object' couplet)¹.

In his rationalist ambitions, Althusser moved sharply in opposition to the dominant subjectivist currents of western marxism. Regardless of his claims to fealty to (the 'mature') Marx, his work in actuality represented a profound break with the dominant interpretations in marxist theory.

'Socialist humanism':

As Elliott has noted, Althusser's conception of the form of this humanist adversary was bizarrely composited. It was an artifice constructed from the broadest theoretical tendencies assimilated across eras, from Hegel to Lukacs to Sartre². In terms of Althusser's contemporaries, its foremost exponents were the likes of Fromm, Goldmann, Marcuse, M. Rubel and Schaff. Althusser felt quite able, however, to identify a common position among this disparate group, and it was this composite that Althusser sought to attack in his major works.

There is no need, fortunately, to reconstruct Althusser's perspective from the scattered references in *For Marx* and elsewhere. The essentials of his position have been presented in characteristically Althusserian starkness by Victor Molina, in terms of five key basic propositions:

**crucially, the imbrication of a 'philosophy of man' (sic.) at the centre of marxism and its associated reorganisation along anthropological lines (Fromm's projection of humanity as the 'theme of history').*

**the allied thesis of the theoretical continuity between Marx and the utopian ('humanist') socialists, Proudhon and Saint-Simon (Rubel).*

**the deployment of a linear, teleological conception of history, such that the past is seen as a process of self-realisation, a groping towards a trans-historical (communist-utopian) human essence the achievement of which signals the commencement of real history. This conceptualisation permits the criticism of the present ('Critical Theory') from the standpoint of a naturally and eternally appropriate vision of the future.*

**a reworking of fundamental Marxian postulates and their criticism in the light of these hypotheses. Goldmann recasts the proposition of relative pauperisation of the proletariat in absolute terms, thereby establishing a reasonable basis for its rebuttal and the rejection of the proletariat as a revolutionary force. For Fromm, Marx perceived capitalism as the most alienated mode of production in history with the proletariat as its most alienated class. This was the real terrain of suffering upon which the transformative agency of the proletariat was to be built. Marx was however, in error on this: other social groups experienced similar, even perhaps, greater levels of angst than the manual worker. Fromm could thus elevate Willy Loman and the petit bourgeoisie as a whole to the vanguard of history.*

**a depiction of communism as the marriage of the 'values of Western Humanism' (constituting the finest historic achievement of capitalism's middle classes [Goldmann]) with the extension of economic 'democracy', giving real content to what was then but a formal enfranchisement (Molina 1977: 245ff).*

Molina's characterisation, a most contentious 'reading', cuts to the heart of Althusser's own estimation of humanism, as reflected in the numerous assaults in *For Marx* and *Reading Capital*.

As though this were not large enough a target, Althusser also sought to combat the fundamental culturalist orientation of humanism. This bias, which caused western marxism to shun issues of the political economy, was founded on the aesthetic vocations of its leading protagonists. (By any objective index, as Anderson has noted, these works were quite outstanding in their own terms. Such internal validation was not, however, what Althusser was about.) Rather, marxism was concerned with understanding the structure of societies, with conceiving and interpreting historical social development and with how to intervene to change history. If aesthetics featured at all in this, it did so at the margins. As Althusser recognised, this endeavour, of returning marxism to its core concerns, required the greatest care. There were profound difficulties implicit in an attempt to reinstate the importance of what he was to label the 'economic instance'. The dangers of descent into the economism that he associated particularly with the Second International, or of reconstructing the productivist dogmas of Stalinism were etched in his mind.

It is difficult, therefore, to overstate Althusser's ambition: to remove high subjectivism from marxist theory; to demolish teleological historiography and to re-establish the uniqueness of the historical record; to posit a new sovereignty for the base that would not pull down the superstructure into a mechanical reduction; and to do all of this under the great arch of scientific rigour. These were the main issues on Althusser's agenda: what were his answers?

Althusser's positions:

The sheer complexity and scale of Althusser's work presents severe problems of interpretation, which are compounded in *Reading Capital*, by an often confusing structuralist terminology. The general lines of his argument are now reasonably established, but a closer reading demands circumspection: a continuing provisionality attaches to conclusions on the work of Louis Althusser. It is his analysis of historical materialism that is pertinent here. His major themes can be summarised under five heads:

1. The real object of historical materialism is the 'social formation', a given complex of material and ideological practices unique in space and time. This object decomposes into relatively autonomous *instances* (economic; political; ideological; and theoretical) and the positing of their systematic interactions in a scientific manner such that real history may be recomposed in thought. Epistemological verification of the 'scientific' procedures of historical materialism, and thus of the epochal nature of Marx's mature work, can be provided by a dialectical materialism reshaped on the lines of modern philosophy of science. This proclamation of scientific status was among the most hazardous of Althusser's assertions.

2. The social formation is constructed as a 'structure in dominance', '...a specific hierarchical organisation of the social practices... such that one of them plays the dominant role (Callinicos 1983:91). It is the economic instance that ultimately determines the dominant position, allocating the functions of the other instances and of itself in relation to the needs of social reproduction. Since reproduction is conditional upon the extraction of surplus labour, dominance is allocated to the instance which contains within itself the (in class societies, coercive) mechanism of surplus labour extraction. Theoretically therefore, any practice may assume the dominant role in the social formation. In feudalism for example, this coercive mechanism is fundamentally political: therefore, the political instance occupies the dominant position. In capitalism, surplus labour is extracted in value form simultaneously with the labour process; it occurs at the heart of the economic instance. Consequently, the determining instance also functions as the dominant instance (Althusser and Balibar).

The mechanics of economic determination is never immediately visible and never acts in isolation ('the lonely hour of the last instance never comes'). At the limit of material reproduction though, the functional demand of the economy for permissive structures determines the possible forms of the relations of civil society, including the dominant instance and the ideological representation of the whole³.

Within this structural determination, Althusser was at pains to stress that the 'instances' each have relatively autonomous histories and limited causal efficacy (*specific effectivity*). The totality of instances is ordinarily, *decentred* and the whole is famously, *overdetermined*. An overdetermined system has by definition a proclivity towards contradiction and these contradictions may generate crisis. Such tendencies will be more pronounced than those generated in expressive (Hegelian/Lukacsian) totalities. In Althusser, the evident fact of the regular expanded reproduction of capitalist formations again becomes conditional and demands explanation.

3. The tendentious nature of expanded reproduction in Althusser's decentred structure is exacerbated by the problem of the distinct chronologies ('times') that attach to the development of and between the instances. Anderson traces this notion of differential temporality to the pioneering work of the French historians Braudel and Labrousse. In accrediting their work through this notion, Althusser made one of his only too rare positive gestures towards historiography and the need for empirical research.

As has often been observed, *Reading Capital* is unjustifiably dismissive of the need for external validation and/or correction⁴. It is somewhat ironic then, that Thompson (1978), who slated more

than anything else just such theoreticism, should launch such a polemic against this potentially quite practical notion of differential temporality. Anderson's dismissal of Thompson's substantive objections to the notion as such is exemplary: so too is his subsequent endorsement of Thompson's charge that Althusser failed to '...stress the necessity of reconvening... (these different tempos) within a plenary societal time' (Anderson 1980:75). Certainly, Althusser had failed (in his most polemical anti-Hegelian sequences) to retain proper contact with calendar time. Nonetheless, the registration at the centre of marxism of this necessary complexity in the historical record must be viewed as a signal advance.

The problem of different development tempos is ubiquitous and Anderson has made some suggestive comments as to the key dimensions within which differential temporality might operate. These can be amalgamated into a threefold classification:

** first, there are times that inhere within the development of a particular instance, the tensions between which propel the instance forward (henceforth 'DT1'). Anderson cites Labrousse's study of the superimposition of different price-waves in the 18th-century French agrarian economy. More generally, within the economic instance, the fundamental hypothesis of productive relations acting on occasion as fetters to the development of the capitalist forces of production relates the time of class conflict and struggle to the stop-watch of modern industry. This is a disjuncture between the different times of development of elements residing in a relation within the same instance.*

**second, there is a dynamic of times of development of different instances ('DT2'). This is one of the key mechanisms through which the effects of the metaphor of the base and superstructure and Trotsky's associated conception of combined and uneven development are transmitted. Examples are legion if far from unproblematic. From the continuing dispute over the role of the aristocracy and the structure of the State (the 'political' instance) in the history of the British capitalist revolution to the bloody wrangle over the relation between Soviet economic and political revolutions and the role of the peasantry, this has been a leitmotif of marxism in the twentieth century. So much of this is, at a subterranean level, about the differential temporality of the instances of a social formation considered in their totality. The political implications of such a perspective are only too evident in for example, the perceptual gulf separating *The State & Revolution* from the *New Economic Policy*.*

**third, contradictions are generated when different scientific objects obeying distinct temporal laws of development collide ('DT3'). At no point does Althusser formally deal with this mechanism. This is curious, since it is inferred in the more expansive sections of Reading Capital: for example, in his famous tectonic metaphor of colliding continents of knowledge.*

Again, it is hardly difficult to identify pertinent examples of this third form. Balibar highlights a spatial dimension to DT3, when he reflects on the 'event' of imperial conquest over a pre-colonial nation as a rupture in the latter's tempo of internal development. This heralds the imposition of a new mode of production in the colony, with a distinct new reproductive time.

DT3 can also be fruitfully applied to the pressing contemporary problem of the collision of the times of the social formation and the ecology, again to good effect. Here, Fernand Braudel's concept of *la longue durée*, which specifically refers to the differential temporality of humanity and nature, is particularly useful.

The dynamism of the capitalist mode of production, and the territorial spread of industrial capability connote, in a famous triumphalism, increasing human subjugation of nature⁵. It is now widely recognised that such imperial notions are materially and socially unsustainable. One of their major costs is, of course, unpredicted ecological change. Climatological models indicate serious lags in the evident effects of given levels of pollution on the total habitat. Furthermore, these effects as they materialise, may prove to be quantum. In other words, there is a cycle of absorption and synergy that operates to quite fundamental physical laws and which may lend an irreversible momentum to cumulative historical changes in the structure of the environment: there is a determinate ecological *time*⁶.

This ecological tempo is quite different to the temporality that governs current social relations, which are essentially commanded by the forces of competition on an international, regional and local scale. Such competition (as opposed to 'industrialism' *per se*) induces a general telescoping of time-spans, a *structural* indifference to phenomena whose material effects are not immediately apparent in the productive forces (a logic of reactive adaptation). As these two cycles are materially brought together, the problems issuing from their differential temporality will become more apparent. One can envisage a number of scenarios. It could be that a period of rapid transformation in regional climates, with accelerating corresponding changes in the biosphere, will force a severe pace of adjustment in the economic instance. In this scenario, the two tempos cannot be articulated without the discipline of massive social devalorisation.

There are also identifiable connections between the development of the productive forces and the historical form of individuality, though these have been little explored to date. For example, the movement from what Marx termed machinofacture to modern industry (which represented an increase in the reproductive tempo of the social formation) betokened profound changes in the 'time economy' (the temporal expenditure and quality of human labour) of the collective and individual labourer. Reproduction of industrial *and* individual capacity was uniformly compressed, but the form that this compression took was different in each case: so too, were the reproductive effects of such compaction.

DT3 has a further implication. It serves to highlight the ultimate direction of causality between the identified scientific 'continents'. In the last instance, the reproduction of the social formation presupposes at least a sustainable ecological base. Similarly, the forms of individuality must always be at least consonant with the long run requirements of the capital relation- otherwise it would not have, precisely, a long run. There is then a meta-structure of relations between the scientific continents: capitalist reproduction is subordinate to the ecological substructure, while it is superordinate over the forms of individuality.

Chapter 3 deals at greater length with this central issue of the relations between individuality and economy: but it is already clear that the concepts of differential temporality must form an important part of that endeavour.

In the linked propositions (2) and (3), Althusser sought to provide the beginnings of an acceptable restatement of the 'base/superstructure' metaphor.

4. The internal development of the economic level is driven by the contradiction between the forces and relations of production which together comprise the economic base. The periodicity of the base is grounded in the theory of modes of production, the essentials of which were expounded by Marx in the *Grundrisse* and (for the capitalist mode of production itself) *Capital*. Since modes provide the conditions of development of the forces and relations (but do not have themselves any history, being synchronic), they also indirectly shape the social formation as a whole. As Anderson has noted (Anderson 1980:64-66), the concept of *modes of production* had received no extended conceptual clarification in marxism up to Althusserianism.

In his contribution to *Reading Capital*, Etienne Balibar cautiously speculated as to the invariant 'elements' and 'connections' that may then be articulated according to a '...principle of the *variation* of these combinations' to produce the Marxian theory of the possible modes

of production. (The elements comprised labour; non-labour; and means of production: these were 'connected' through property rights and the 'real appropriation connection'-the marshalled productive forces.) The typography of modes of production that resulted formed an important stage in the elaboration of Althusserian theory.

How has this novel venture fared? In relation to pre-capitalist modes of production, the general assessment is highly critical: as André Glucksmann scathingly noted, Balibar was able to distinguish the capitalist from pre-capitalist modes, in a 'rigorous' scientific manner. He was then at a loss however, in distinguishing Asiatic, feudal, tributary, or any other of the posited pre-capitalist modes one from the other, with the same methodology. The reasons for this block are well recorded and have been adequately resumed by Elliott (1987:164-5): suffice it to say that a cavalier anti-empiricism features large.

In grappling with the problems that his hypotheses gave rise to, Balibar produced a now well registered but still noteworthy result: that a mode of production may furnish as a necessary component of its functioning the condition for a dislocation to arise between the base and its 'own' superstructure. This disjuncture (a moment of potential collapse) sets problems for the continuance of the given mode of production and may induce the reorientation of the base towards a new mode. Two conclusions were presented: that a totality may contain more than one mode of production within it, where these are hierarchically ordered and where the economic instance is assimilated to but one leading mode; and that within a totality, elements in the superstructure may find their determination in a subsidiary mode of production (Elliott 1987:162-171).

5. Althusser followed Marx in emphasising the unique indifference of the capitalist mode to the question of which concrete individuals occupy which functions in the social division of labour at any point in time, up to a threshold of dysfunctionality. This structural indifference is held to be an important source of its ideologies of contractual freedom and natural justice.

Labour is distributed by the relations of production which thus determine, in a classic formulation:

'...the *places* and *functions* occupied and adopted by the agents of production, who are never anything more than the occupants of these places, insofar as they are "supports" (Träger) of these functions' (Althusser & Balibar 1979:180)⁷.

Whereas everything in Stalinism had been declared to be 'for man', whereas 'man' was the theme of history in (humanist) marxism, Althusser calmly asserted that the individual in the

theory of the capitalist mode of production was merely a support in the processes of reproduction, in no sense the 'subject' of history. Althusser later suggested that this theoretical displacement had immediate correspondence in the real, in the reduction of concrete individuals to epiphenomena in capitalist social relations (Elliott 1987:180).

Can the 'relations of production' then be considered, in a definitional extension, to be the hidden 'subject' of the Althusserian system, belying its decentred claims? This is one conjecture made by John Mepham, on the basis of a (certainly ambiguous) passage from *Reading Capital* (Mepham 1985:41-42). Yet in this extract, Althusser twice carefully apostrophes the term 'subject' before declaring that the relations '...cannot be thought within the category *subject*', with all equivocation categorically removed (Althusser & Balibar 1979:180)! Mepham's reading stands at variance to the highly negative treatment that notions of extended subjectivity receive more generally in Althusser's work.

Althusser's much-criticised reconceptualisation of the relations of production is constructed, moreover, precisely as a barrier to such interpretations. Whereas in '...the union of humanism and historicism', the relations of production had been held to be '...mere *human relations*', Althusser ventured on behalf of Marx a wider definition: that the 'relations of production' be viewed as 'specific modes of combination' connecting in restricted ways (chiefly by the specification of socially adequate property rights), the '...different groups of agents of production and the objects and instruments of production' (Althusser & Balibar 1979:176). The relations therefore necessarily imply '...a certain *political* configuration' of the superstructure that enables the 'material appropriation connection' (Balibar) in the productive forces to be made. In short, the relations of production now encompass far more than mere human relations. Thus:

'...Marx shows in the greatest depth that the *relations* of production ...are irreducible to any anthropological inter-subjectivity' (Althusser & Balibar 1979:180).

More precisely:

'...the *social relations of production* are on no account reducible to mere relations between men, to relations which only involve men, and therefore ...to inter-subjectivity. For Marx, the social relations of production do not bring *men alone* onto the stage, but the *agents* of the production process and the *material conditions* of the production process, in specific "combinations"' (Althusser & Balibar 1979:174)⁸.

Althusser's ambition here is evident: to block recourse to Lukacsian themes of collective subjectivity and to give a final objectivism to the theory of social formations.

This very substantial redefinition is however, quite out of proportion to the problem that it was designed to address. Not only did it project a fusing of key elements of the base diachrony together; it also drew elemental superstructure (that 'political combination') into a massively unstable plasma: whence structure now? The sheer scale and scope of difficulties that these theses presented virtually overwhelmed Althusser in subsequent work. Herein lay the rationale for his preoccupation with the question of the role of ideology, which represented, for all its particular innovations, a massive diminution in the ambition of *For Marx* and *Reading Capital*.

Individuality in Althusser:

The problematical nature of the Althusserian adventure at a number of points is now so widely recognised that it does not bear detailed examination. There is one consensus however, relating to Althusser's critique of humanism, which must be considered a serious misapprehension. A cursory reading of Althusser conflates the well-known thesis that history is a 'process without a subject' with the notion that Althusserianism is therefore *in toto irreducibly transindividual*⁹. This is however, a totally unwarranted elision between two quite distinct inferences. It is indeed the case that his theory of *historical materialism* is trenchantly 'anti-humanist'; but can the same thesis be defended in terms of the Althusserian project as a whole? This is much less tenable. Three keynote statements make the logical progression of the Althusserian scheme apparent.

'Strictly in respect to theory ... (i) it is impossible to *know* anything about man except on the absolute precondition that the philosophical (theoretical) myth of man is reduced to ashes. So any thought that appeals to Marx for any kind of restoration of a theoretical anthropology or humanism is no more than ashes, *theoretically*' (Althusser 1969:229-30).

This is the oppositional charter to the humanist compatibilism of individuality and society: then there is Balibar's extension of Althusser's fifth proposition:

'Marx formulated the very concept of the dependence of the forms of individuality with respect to the "mode" of production ... Men do not appear in the theory except in the form of supports for the connexions implied by the structure, and the forms of their individuality as determinate effects of the structure ... these "men", in their theoretical status, are not *the concrete men* (who) ... make history ... they are the different forms

of individuality which can be defined on the basis of the combination structure (of the mode of production)' (Althusser & Balibar 1970:252);

...and finally, there is an unambiguous statement of Althusserian intent that categorically belies a claim to inherent transindividuality:

'I should like to signal that th(e) false problem of the "role of the individual in history" is nevertheless an index to a true problem ...the problem of the concept of *the historical forms of existence of individuality*. Of course, even here, the mode of historical existence of individuality in a given mode of production is not legible ...in "history"; its concept, too, must therefore be constructed' (Althusser & Balibar 1970:111-12).

The overall intent is now clear: to cut the future development of historical materialism away from the clearly distinct problem of a marxist study of individuality. Althusser is quite emphatic on the need to produce an account (beyond the 'science of history') of the historical forms of existence of individuality. Indeed, certain principles can be established in historical materialism that may set the co-ordinates of such a project. (For example, Balibar warns of the non-correspondence between the structure of practices in the social formation and the historical form of individuality, noting that a strict isomorphism would reproduce in concrete individuals a simulacrum of that formation. Thus could the social formation be reconstructed on the basis of a 'practical intersubjectivity', as the sum of individual members: here, society simply does not exist.) The concrete development of materialist individuality theory forms no part of the research programme of historical materialism proper, though: it requires a distinct theoretical apparatus of its own.

It is therefore an error to see Althusser's rejection of anthropological explanations of social-historical change as a rejection of a marxist approach to the study of the historical development of individuality *tout court*¹⁰. As Althusser himself suggests, his interpretation of marxism considered as a whole may more accurately be characterised as *ahumanistic*.

Marx & the Individual:

The above extract from Balibar insists that this interpretation of individuality and the social formation was founded on Marx's mature thought. This was, as is well known, a claim common to the Althusserian oeuvre as a whole, predicated on that pseudo-Freudian 'symptomatic reading' of the founding fathers. Molina (1977) and Mephram (1985) have attempted to explore and substantiate this claim of verité to Marx.

Molina contends that, from the *German Ideology* on, Marx had adopted a position in relation to the study of society that was to all intents and purposes, transindividual; that, when the concept of 'the individual' appeared then and thenceforth, it no longer designated an isolable human entity but rather, a relational theoretical construct. Following Althusser, Molina reads Marx's later works as a '...theoretical account of social relations'. Society itself is redefined out of individualism as the set of these relations. Now, from the *German Ideology* onward:

'(t)he category of "individual" is ...completely subordinated to the theorisation about ...the relations of production' (Molina 1977:231).

An individual 'as such' is not class-delimited. In an extended division of labour, however, the concrete individual must enter the field of general social relations. In class society this means the assignation of a position in terms of access to the means of production. The individual 'as such' is then recomposed in the mould of class society.

Marx continues very carefully to distinguish at a fundamental level between a class individual and the individual 'as such'; this differentiation is however, subject to revealing development over time. Molina characterises the elaboration of this duality as:

- * in the *German Ideology*, the distinction between the *personal/class individual*, where personal relations are temporally and ontologically prime, and social relations are 'accidental', being 'grafted on' to extant personality but being for this nonetheless of determinate significance.
- * in the *Grundrisse*, the formula of *personal dependency relations* versus objective dependency relations, indicating with this notion a crucial new theoretical subjugation of the individual to general intersubjectivity.
- * in *Capital*, the decisive formulation of the difference between individuals 'as individuals' and as '...personifications of economic categories, embodiments of particular class-relations and class-interests'¹¹ (Marx 1983:21).

This last hypothesis, of the individual as personification, is a deliberate reduction, corresponding in theory to features in the real structure of the capitalist mode of production. Capitalism annihilates, at the level of its general functioning, any specificity of powers and potentialities in the individual 'as individual' through an equality of *indifference* in the operation of the law of value.

Marx was careful here to address the obvious charges of ‘subjectivists’, eager to point to the role of exceptional individual capacities and to reassert the importance of the ‘individual factor’ in the making of history. From the perspective of critical political economy, the fall of a capitalist from, or the rise of a worker to the exploiting class, is of no consequence to the reproduction of the totality. The *relations* embodied in personifications are not altered by the distribution of particular individuals between classes.

This personal indifference in the relations of production is founded on what is in historical terms, a quite new level of impersonal (structural) inexorability, an inexorability that encompasses even the personifications of the ruling class. Thus, ‘personified capital’ is subjected, on pain of bankruptcy (expulsion from the class), to the forces of competition ‘as external and coercive laws’ (Marx) of accumulation. As Mepham notes, this is precisely one of the senses in which Marx used the concept of ‘Träger’. The same necessity governs the reproduction of the other ‘places’ in the division of labour. Mepham observes, moreover, that the structures ‘...continually develop in what “they” demand of their occupants’ (Mepham 1985:151). To anticipate, one key aspect of these changing demands is the successive decomposition and recomposition of the labour process and the wage relation in the transition from primitive accumulation to modern industry. The essential quality of workers as producers of surplus value is, though, unaltered by these changes, being a structural condition of the mode of production.

Mepham also suggests a second interpretation of the concept of ‘Träger’ in *Capital*, one which connects social necessity directly with the ‘subjectivity of the individual “bearer”, to his consciousness and his will’ (Mepham 1985:152). The interpretation is founded on an important statement in *Capital*, which bears reproduction here:

‘(a)s the conscious representative of (the circulation of capital and the expansion of value) ...the possessor of money becomes a capitalist ...The expansion of value, which is the objective basis or main-spring of the circulation M-C-M, becomes his subjective aim... The restless never-ending process of profit-making alone is what he aims at’ (Marx 1983:151).

For Mepham, it is in this sense that Althusser’s project of a study of the historical forms of individuality should be understood: as an analysis of the ways in which the necessities of social reproduction are inserted into the personification structures of the capitalist mode of production.

Yet the quality of personal indifference displayed in capitalism is not confined solely to productive relations: Molina also cites the historically unprecedented level of mutual indifference to class origin in the sphere of exchange. The only criterion of access to commodities here is the availability of purchasing power: for the vendor, all personal idiosyncrasy disappears (therewith, the individual 'as individual') in the transaction of commodities¹². This logic extends to a relative indifference in the capital relation to the varieties of concrete labour in the quest for valorisation; to the abstract character of commoditised labour; and to money as universal exchange value reducible only to itself.

In short, the capitalist mode eliminates all '...fixed *personal* (historic) relations of dependence in production' (Marx 1973:156) and exchange. Marx's polemic is here directed at the Proudhonists. The particularity of crafted labours, and the dense inter-personal networks characteristic of settled (agrarian) communities (the rural 'idiocy', of the *Communist Manifesto* [Adler 1990:799]) are historically irrecoverable: neither, for Marx, are they essentially desirable.

This heightened indifference is, then, a key element in the modernising and socialising historical role of capitalism¹³. To posit a study of the historical forms of individuality founded solely on its productive necessities, as Mephram suggests, is to effect an unnecessary conceptual limitation, for the concept of personification also has important implications in the sphere of circulation.

Molina draws two conclusions for a theory of individuality from his reading of Marx: first, whereas the concrete individual is decidedly a '...complex of "social" and "natural" determinations', from the perspective of the theory of capitalism (or, more exactly, that of individuals as personifications), social relations 'stand as the very structural "ensemble" which *constitutes* individuality itself. Individuality is precisely a *product* of the ensemble of social relations' (Molina 1977:235).

Marx postulates individuality solely in respect of its economic conditions of existence (but it is to be recalled that his major discoveries flow precisely from this conceptual limitation). It follows that Marx's personifications, the expression of *social* necessity on individuals as bearers of the relations, can in no sense be regarded as even the constitutive elements in a theory of individuality, nor is there even an homology with real individuals: 'personifications' are in fact, violent abstractions, even if that violence is commensurate with the actual abstractions practised daily in capitalist reality.

Second, the hypothesis of 'personification' suggests a necessary degree of sociality in the theory of the capitalist economy. This necessity, of 'indispensible relations' (1859 Preface), renders nonsensical the idol of the '..."isolated individual" of the Robinsonades who appears as an individual without *social* connectedness' (Molina 1977:235). Citing the *Grundrisse*, Molina notes that the independence of the 'isolated individual' is founded on the detachment from natural bonds (the destruction of natural peasant ties and growing urbanism, for example) that is a hallmark of capitalist expansion. Yet this forced liberation, the progressive aspect to modernisation, is then decisively superseded by an explosion in *social* relations, which take on dismally coercive forms in the early stages of the new mode of production. Freed from natural ties, the individual is entwined anew in comparably strong social bonds.

It may also be noted, on the basis of the methodologies of *Reading Capital* itself, that personifications so defined are twice removed from constituting an acceptable datum for a materialist theory of biography. First, insofar as they pertain only to the economic existence of individuality, they only register the effects of the economic instance. The effects of the totality of determinations of the social formation, which relate to the demands of all of the instances taken together, do not feature in this definition. In consequence, personifications of the economic base cannot indicate how the combined effects of the totality are expressed in determinations of individuality. (Balibar's conjecture of non-correspondence indicates precisely that the combined effects of the mechanics of the social formation on individuality are not symmetrical with the structure of the social formation itself: different social practices have different implications for a theory of materialist individuality). Mepham, following Balibar's analysis of the transition between modes of production, fleetingly discusses the importance of the political instance in transitional conjunctures. Yet the problems of these other instances, their internal non-correspondence and their asymmetrical relation to personality, are quite fundamental.

The other difficulty with personifications is that they are, by definition, static conceptions, read off from the combinations in the (synchronic) mode of production. At some level, which Althusser does not discuss, these personifications must give ground to diachronic phenomena, in a manner analogous to the relationship between the theories of modes of production and of social formations. The problems of contradiction, overdetermination and differential temporality which characterise the theory of social formation are certain to find their equivalents in the 'object of knowledge' of a science of individuality, if it is ever to capture the singular tensions of individual biographies.

Is the periodisation of personifications which Althusser called the ‘theory of historical forms of individuality’ unproblematically compatible with the structures that, at least conjecturally, might be expected to characterise a materialist theory of individuality? There is an epistemological problem here, of the dynamics and mediations between two Althusserian sciences. This kind of problem is constantly emphasised by Althusser himself, so it is all the more surprising that neither Molina or Mepham even broach it. The difficulties that Balibar faced in making any systematic connection between modes of production and social formations (see Chapter 2 below) would indicate that the move from synchrony to diachrony is itself immensely difficult. The further issue, of exploring the diachronic connections of elements that traverse Althusserian sciences, was not even attempted.

Molina’s overall conclusion, that there are clearly identifiable parallels between Althusser’s anti-humanist science of history and Marx’s mature historical materialism, is relatively unsurprising, given the partialities of the Author. That Althusser’s reading of Marx is defensible is beyond question, though so too are a number of others, including ‘humanist’ readings (Rée 1981:87-88). The proposition that it is isomorphic with Marx’s development of the theme of individuality in his later years is more contentious. In the final instance however, the key question is whether Althusser’s interpretation can form the basis for a robust research programme which stands in some (attenuated) relation to scientific procedures of validation: and it is precisely at this point, promising much, that the Althusserian development comes historically, to an abrupt stop.

Althusser had delegated the vitally necessary processes of elaboration of the ‘theses’ of *Reading Capital* to his own increasingly uncertain future (along with a growing number of other key research projects) or to his collaborators. His progressive mental disintegration truncated these ambitions however, and foreshadowed the darkness that was to fall on French marxism more generally from the 1970s. The propositions of *For Marx* and *Reading Capital* marked Althusser’s zenith. This is not to say that Althusserianism left no traces. Anderson’s overall judgement, that ‘...Althusserianism has proved remarkably *productive- generating an impressively wide range of works dealing with the real world, both past and present*’ (Anderson 1980:126), is closer to the truth. In this promulgation, though, the original synthetic intent of his work, so deeply connected with the epistemological and ontological emphasis on *structure*, has been traded (in its own terms, quite legitimately) for more conventional specialisms. In this process, Althusser’s heresies, particularly his speculations on individuality, have been forced to the margins.

Thus in what may be loosely termed neo-Althusserianism, there have indeed been developments which address aspects of the individuality ‘problematic’; but in these cases, it has been very much

en passant, by authors heading off to other termini. The only systematic attempt to establish the basis of a materialist theory of the individual has been undertaken by Lucien Sève, from a position that is problematical in relation to the Althusserians. A full inventory of these contributions is the task of subsequent chapters.

In terms of assessing Althusser's hypotheses on individuality, it is now appropriate to turn to the major responses that they evoked. In the first instance, it is curious that these seemed to focus on a particular issue that was of only peripheral *immediate* significance to Althusser himself in his published work; and this concerns the classical philosophical conundrum of 'free will'. To pursue this, it is necessary to move across the Channel to England, and to the reception accorded in Worcester to Althusserianism.

The Geometry of a Parallelogram:

The importing of Althusser's work into Britain dates from the translation by Brewster of *For Marx* (1969) and *Reading Capital* (1970) and their publication under the imprint of New Left Books. These quickly established a reputation and there ensued a flurry of English derivatives. The philosophical and practical difficulties of early Althusserianism in Britain are now fully registered: Althusser's followers here quickly established an unenviable reputation for hubris. In retrospect this can be attributed in the main, to the problems of relating to a (tightly structured) philosophical system which was grounded in traditions, assumptions and references with which the new generation were, by and large, completely unfamiliar.

British marxism had, conversely, evidenced a spectacular capacity, largely alien to Paris, to produce major artefacts of historiography: the invasion of Althusser was into territory that was already, in a sense, occupied. Initially, this counterposition of a strident Althusserianism against an older, but still vibrant, marxist humanism was just embarrassing, as Gregory Elliott notes of Hindess & Hirst's 1975 opuscle, *Pre-Capitalist Modes of Production*.

'Even as Britain's Marxist historians were producing some of their most brilliant work, a volume of "scientific Marxist theory" was dismissing it as intellectually and politically worthless' (Elliott 1986:89).

The challenge evidently became increasingly intolerable, however, and issued in 1978 in the fiercest of ripostes from Edward Thompson¹⁴. There is no need to reproduce the full terms of that engagement; Perry Anderson (1980) has done the issue full justice. As he notes, for

Thompson, 'Althusser's cardinal sin is his repeated assertion that "history is a process without a subject", in which individual men and women are "supports of relations of production"' (Anderson 1980:17). Thompson believed that Althusser's structured social formation had effectively magicked the individual out of the complex equation of the class struggle and therewith out of the making of history altogether¹⁵. To this he counterposes the humanist categories of 'agency' and (class and personal) 'experience' (Anderson 1980:16ff.). There is an appeal to the role of conscious individual and collective intervention in the historical record, albeit qualified by a recognition of 'social determination' (people as 'part-subjects, part-objects, the voluntary agents of our own involuntary determinations' [Thompson 1978:88]). This is the quintessence of Thompson's reply to Althusser on this key point and it centres on the ('ever-receding') debate over 'free will'. The allusion here is to Engels' classic metaphor of the 'Parallelogram of forces' as outlined in his letter to J. Bloch of 1890.

Althusser had in the briefest terms criticised this 'notorious' construct in *For Marx*. In a familiar refrain, he had suggested that the diversity of interpretations that had been placed on the metaphor were collectively symptomatic of its premature philosophical basis. For Althusser, the parallelogram improperly plagiarised elements of quite distinct *sciences*, at a time when each of them was in only the most embryonic state of development. The metaphor was, in a second sense, a projection without a properly constituted 'subject'. Althusser recognised the circumstances that had attended at its birth; an exasperated 'solution' made necessary by Engels' concern at the 'most amazing' reductionist 'rubbish' being produced by 'the more recent "Marxists"'. Acknowledging this, there is still a need for a critical reading of the hypothesis itself.

Thus, Althusser observed that Engels' formulation posited a theory of individual 'will' as the product of circumstances ('a host of particular conditions of life'), with only another metaphor (base/superstructure) underpinning this determination. (How was the link between circumstance and will made? Were the 'host' of conditions structured, or were they a congeries of disparate 'experiences'? These certainly do not exhaust the range of obvious questions which this hypothesis invites.) Individual will was then reinserted back into the making of history by way of a variant on the 'law of large numbers':

'there are innumerable intersecting forces... which give rise to one resultant-the historical event. This may again itself be viewed as the product of a power which works as a whole *unconsciously* and without volition. For what each individual wills is obstructed by everyone else, and what emerges is something that no one willed' (Marx & Engels 1968:683).

The contest of individual wills is 'merged into an aggregate mean, a common resultant'. Althusser perceives in this reading of the historical record a tendency to miraculism, an (inadvertent) questioning of the law-governed nature of historical development, recovered only by speculation on demiurges (unconscious powers). Engels' attempted clarification, the reattribution of determinate primacy to the economic base, overturns precisely the initial intent of emphasising the diversity of those 'intersecting forces' and the role of consciousness. Essentially for Althusser, this metaphor could not support so many discordant variables on so few 'connections'.

For Timpanaro, writing from a position sympathetic to Engels, the problem is essentially reducible to the manner in which the 'social' is inscribed in personality. This again posits, *contra* Althusser, the possibility of a relatively unproblematical movement from a theory of 'society' to a (subordinate) theory of individuality, *via* a process of 'reflection'. In his reading, he ventures that Engels:

'...knew that the reflections of a socio-economic situation at the level of consciousness and the changes in this situation which individuals seek to realize... are infinitely varied even within the same class as a result of the infinite diversification in cultural background, physical temperament, etc' (Timpanaro 1975:103).

This statement is fatally flawed at a number of levels. First, is there truly an 'infinite diversification' of the cultural resources of (especially) the working class which individuals may freely access? This fails to recognise the cultural restriction brought to bear by the ruling class, as well as the subordinating power of the workers' own cultural apparatus (the form of that 'active consent' in the hegemonic structures that Gramsci noted). The net effect is to promise quite unsustainable political opportunities for a present that is rigorously circumscribed for the dominated class: to theorise a degree of individual creativity that is (again currently) illusory.

Neither does Timpanaro's restatement recognise the need to structure the determinations of the 'socio-economic situation' (a term not wholly dissimilar in its precision to Engels' 'host of particular conditions'). This approach encourages precisely that expressiveness of individuality to the social formation against which Balibar rightly warned.

This lack of precision is if anything compounded in Timpanaro's subsequent discussion of the elements of necessity that determine 'will'. Individual wills, he suggests, 'are themselves the product of a sum of biological, social, cultural, etc. causes'. Such eclectic (and truistic)

formulations leave all of the key questions begging. Again, a fuller analysis of these matters is more appropriately the subject of later chapters; but even these cursory observations suggest that the most sympathetic of readings of the metaphor of the 'Parallelogram of forces' is destined to fall into a chaotic even-handedness that has the longest of theoretical pedigrees.

To return to Thompson: in terms of the general vitriol that characterises *The Poverty of Theory*, Thompson finds himself in 'unfamiliar agreement' with Althusser over how to interpret the 'Parallelogram'! In particular, Thompson too is anxious about a possible breakdown in the historical record. Whereas Althusser believes a solution to be intrinsically impossible however, denied in the very manner in which the problem is posed, Thompson seeks to amend and correct. As Anderson notes, the problem for Thompson is one of the 'appropriate type' of agency. Thompson suggests that the substitution of *class* agency for individual will provides the necessary corrective. He rightly observes that:

“individual wills” are not de-structured atoms in collision but act with, upon, and against each other as *grouped* “wills”... (H)owever “particular” their “conditions of life”, (individuals) have been conditioned in class ways' (Thompson 1978:87).

The 'historical resultant is then seen as the outcome of a collision of contradictory class interests and forces' (*ibidem*). This formulation is already preferable to Timpanaro's eclecticism.

As Anderson observes though, this is not the solution that it purports to be, at least within Thompson's conceptual system. Thompson more than most has sought to define classes in terms of the 'wills' of the 'ever-resurgent' individual agents who compose them. The result is that Engels' 'regression to infinity' (Anderson) is replicated at one remove in the amended version. It is also apparent that the replacement of individual wills by 'contradictory class forces' fails to block that conceptual descending spiral into the 'random chaos of an arbitrary, destructured log-jam'. This is not to say that such a 'log-jam' is impossible in concrete social formations: far from it. Marx identified even worse scenarios as precisely the outcome of such deadlock- the famous speculations on the mutual ruin of the contending classes.

The problem is rather that the Parallelogram displays, in its own terms, no proclivity to ordered over disordered outcomes. On this side of its historical dénouement, order still prevails over crisis as the typical form of existence of capitalist social formations! To enforce this regularity, it is necessary again to posit the existence of a central node of determination. Anderson's discussion of this circularity in the works both of Parsons and Sartre, is illuminating (Anderson 1980:51-53).

In general terms then, it is apparent that the Engelsian metaphor can never, however reformulated, serve any more precise function than that of an *aide memoire*, indicating perhaps the potential difficulties of moving between transindividual and individual-volitional categories. It *cannot* provide a basis for theoretically representing these manifold relations in a satisfactory structure of determinations. When viewed in this light, Althusser's assessment of the importance of the Parallelogram of forces seems strikingly accurate. Yet Thompson's reworking of the terms of that image quite successfully raised vastly larger problems that lay much closer to the epistemological heart of *Reading Capital*. For Anderson, these difficulties centre on how social order and disorder, the mode of reproduction of the totality, are theorised.

Althusser's 'voluntarism' Revisited:

It has already been noted that Althusser's own intellectual gravitation towards Peking tended to result in an increasing emphasis on ideology and the 'class struggle' as the underlying dynamic (and mode of closure) in his theory of history. While he never registered any alteration in his perspective on the Parallelogram (which was in any case strictly speaking unnecessary), he came increasingly to believe that the unfolding of contradictory class forces was the motor force of development; this was ironically, a move towards Thompson. Of course, there is the rather substantial matter of how classes originate and grow, and of how their relative strengths and resources might be assessed. Thompson never claimed that Engels' geometric could be of the slightest assistance at this level of theorisation. Indeed, the issues of class formation and struggle, such as are to be found writ large in *The Making of the English Working Class*, were to form the central organising concerns of his vast work. Clearly, his understanding of the inherent theoretical problems far exceeded that attained by Althusser through his 'rigorous' scientific analysis.

Ironically, Althusser's growing preoccupation with those selfsame mechanisms of class reproduction, so plainly visible in the text of *Lenin and Philosophy*, itself threatened to unravel the carefully woven fabric of his earlier work. As Anderson observes, Althusser's increasing reliance on the 'coercive and cultural machinery of the State' as the mode of insuring regulation against the vagaries of class conflict and struggle pushed the superstructural elements right back to the fore, at the expense of the (supposedly) determinate economic infrastructure. Whatever the contradictory equivocation, this was Althusser's underlying trajectory over this period, and it cut directly against his original anti-culturalist ambition.

What Althusser failed to say then was that the *propensities* of the classes (objectively conceived 'in-themselves') were ultimately derived from and defined by, the structures and connections

within the hegemonic mode of production. With this grounding, it then becomes possible to discuss the superstructural correlates the task of which is precisely the regulation of the class contradictions arising from the demands of the base. (Althusser's failure to recognise this line is doubly curious, since it was the shortest of steps from the key propositions of *Reading Capital*.)

As Anderson remarks, '...class struggle itself is not a causal *prius* in the sustentation of order, for *classes are constituted by modes of production, and not vice versa*' (Anderson 1980:55). The principal stumbling block to this stunningly obvious proposition was Althusser's polemical redefinition of the relation between the duality in the economic base summarised in (5) above.

Anderson's subsequent discussion of Thompson's conception of 'agency' is also of interest, at a number of levels. In one sense it unwittingly confirms Althusser's original concern over the epistemological basis on which the problem had been raised.

Anderson begins by noting Thompson's tendency to existentialise his conception of 'agency', as a willed response on the part of those 'ever-resurgent agents' to the lessons of 'experience'. Thompson treats this relation between will, experience and agency, as an unmediated and simple causality. There is then a failure to subject it to any precise analysis and major ambiguities (including potential *double-entendres*) ensue. Seeking to correct this, Anderson argues for an understanding of agency in terms of 'conscious, goal-directed activity', where of course, 'everything turns on the nature of the "goals"'. He proposes a threefold distinction, of:

- * *'private goals', including the conventional activities of founding and sustaining a 'household', developing individual skills and amassing a stock of personal commodities. These 'projects are inscribed within existing social relations, and typically reproduce them. Yet they... have consumed the greater part of human energy and persistence throughout recorded time'.*
- * *'public' hegemonic goals, notably military conflicts, commercial explorations and cultural creations, which are founded on and address problems in existing social relations, though they 'in their overwhelming majority have not aimed to transform social relations as such'.*
- * *'collective' transformative projects, historical newcomers manifesting 'a full popular agency desiring and creating new social conditions for itself' (Anderson 1980:19-20). For Anderson, the Russian Revolution, fusing this new collective volition with a higher level of historical understanding and disciplined approach to the possibilities of the future, itself derived decisively from 'scientific socialism', inaugurates a new reach of collective will.*

Anderson rightly castigates Thompson for 'sliding' between these distinct kinds of 'self-determination'. He recalls the vocation of the historian, to '...trace the *curve* of such enterprises, which has risen sharply- in terms of mass of participation and scale of objective- in the last two centuries, from previously low levels' (Anderson 1980:21).

These issues, of the definition of agency, of the formation of collective identity and then of gauging the differential impact on the historical record according to an increasingly complex structure of motivation are, self-evidently, diachronic in nature. The theory of modes of production as outlined by the Althusserians, is rooted in synchrony. At a formal (trivial) level then, this theorisation of agency is logically incompatible with Althusser's theory of modes. If this framework of modes of production is rejected, another must be offered in its place, for a marxism that is without such a theory is also without that vital long view of material accumulation that is one of its sources of strength.

If this argument is accepted, then it must also hold, recalling Anderson's earlier observation, that it is the mode of production that constitutes classes: the classes that are so called forth are theoretically completely functional to its needs. The 'class-in-itself' assumption is absolutely vital in this regard.

The questions that Anderson and Thompson have raised would appear therefore to relate to Althusser's theory of social formations. At this level, the class structure is presented as a destructured entity, with the social formation encompassing multiple modes, each with their attendant classes and forms of individuality. The question of agency comes alive at this level, with collective goal definition constituting classes-for-themselves, customarily within a broader network of class alliances traversing different modes.

The degree of contingency in this social formation is now formidable indeed. The economic instance, assimilated to one mode of production, now contains subjects whose fealty can no longer be guaranteed. Their actions generate local tensions between the means and relations of production (DT1) that are sufficient to induce economic crisis. The other instances, which in certain circumstances may be wedded to other modes of production, will also each have their own chronological azimuth, which may or may not be commensurable either with the economic instance or with each other (DT2). Anderson's hypothesis, that the scope for overdetermination is here untenably great, seems affirmed.

Althusser's theory of social formations is thus in some difficulty: his (non-) solution was, as already noted, to regress into theories of class struggle and ideology. There was however, another way forward, namely to posit a third theoretical level intermediary between the theory of modes of production and the social formation, which would ensure a given, verifiable, level of reproductive stability. Interestingly, varieties of this new level of theorisation do feature, unrecognised as such, in Balibar's contribution to *Reading Capital*. The elaboration of this other 'scientific object' is the task of Chapter 2.

Closing the Althusserian structure:

It is perhaps now appropriate to draft a provisional balance-sheet on the Althusserian *oeuvre*.

In *Reading Capital*, Althusser had posited a complex set of interrelations between the mode of production on the one hand, and the general historical form of individuality (personification) on the other. Each of these entities is presented as a (synchronic) theoretical construct: neither therefore has a history or a future. They are ideal-typical representations of the fundamental structures and laws of the economy, and of the necessary conditions of individuality that permit the corresponding mode to reproduce. The appropriate methodology for their study is a periodisation of the elements and connections that comprise them.

These two synchronic 'objects' are allocated to distinct 'sciences': the theory of modes of production is a part of historical materialism, while the framework of personifications belongs, according to Althusser... elsewhere- one presumes, in a wider marxist theory of individuality. In this bifurcation there is the beginnings of an Althusserian response to that 'ever-receding' debate over free will, or structure and subject.

Reading Capital has provided a small number of nonetheless important hypotheses as to how the study of the relation between these two sciences may be conducted. First, there is Balibar's principle of non-correspondence between individual and social formation. This elegantly simple negativity warns against the danger of collapsing the individual into a 'reflection' of the social order. This elision was, as the case of Adorno indicates, extraordinarily common in western marxism. The thesis of non-correspondence may be extended to cover the differential temporality (DT3) of the two objects.

Second, in the relationship between these sciences, there is a definable hierarchy, such that historical materialism and its objects, the mode of production and the social formation, stand in

a superordinate relation to the objects of the theory of individuality. Althusserian work on personifications for the capitalist mode indicates the form this may take, with the postulate of a high degree of structural indifference generating the characteristic of individuals as 'Träger'.

Some of the limits of Althusser's theories are also now more apparent. In historical materialism, there is a significant tendency to anarchy in the destructured and overdetermined social formation, now beset by contradictions. There is some irony here. Althusser is usually cast as an iron determinist, but in this instance he is rightly charged with being incapable of holding a key theoretical object together! The problem that Thompson adverted of moving from synchronic to diachronic forms, from for example, classes conceived 'in-themselves' to being 'for-themselves', is central to the unravelling of Althusserianism. There is ample evidence in the history of marxist thought to suggest that Althusser's theory of historical materialism was missing a key intermediate scientific object, whether it be a Leninist theory of 'stages' or Trotsky's characteristic 'epochs'. It is contended that the introduction of some such entity could radically repair the Althusserian project.

There is also the seeming asymmetry between the objects of historical materialism and the single object of the theory of individuality. There are identified connections between modes of production and forms of individuality at the highest level of abstraction (the production of personifications). Yet no such relation is posited with the social formation. It is certainly not necessary for Althusserian sciences to display the same internal structure. Perhaps the connections break down at the diachronic level and these two sciences diverge? Yet this would certainly be a difficult proposition to defend, a concrete individuality completely sundered from all but the widest imperatives of the social order. It looks then as though the Althusserian theory of individuality is also conceptually deficient.

In overall terms it is however, the great merit of Althusser's work that in splitting the two sides of the equation structure:subject, he has enabled marxism to pose these questions in such a manner. This can be seen by returning to the starting-point of this Chapter and Plekhanov's remarkably far-sighted observation. In *Reading Capital*, Althusser declares that his '..."problem" of "the role of the individual in history" ... is a false problem' (Althusser & Balibar 1979:112). He clearly intends here to register to a wider audience the impossibility of its resolution *within a single structure of knowledge*. It is still an open question as to whether the Althusserian route can produce more fruitful outcomes.

NOTES TO CHAPTER 1

1. *Althusser's indebtedness to Spinoza is in no sense as idiosyncratic in the history of marxism as a cursory reading of for example, Anderson's short (1976) encyclopaedia, implies. As Raphael Samuel has observed:*

'Spinoza, "the Moses of Freethought" was held by many Russian Marxists, starting with Plekhanov, to be the greatest mind in philosophy... (in France) Althusser acknowledges Spinoza as his ultimate master, and much the same was true of those young normaliens of the 1920s- Nizan, Politzer and Henri Lefebvre' (Samuel 1980:62-63).

Althusser's hostility to Hegelian marxism was also clearly in no sense unique in contemporary France. As Elliott notes, French (bourgeois) philosophers were en masse overturning the '...legacy of the "three H's" (Hegel, Husserl, Heidegger)' in favour of the vulgates of structuralism and semiology (Elliott 1987:59-61). The subsequent fate of Althusserianism offers further confirmation of the vicissitudes of fashion in Parisian intellectual activity.

2. *For Elliott, Althusser:*

'...all too often... essayed a reading in which authors, despite the enormous differences between them, are distributed to common "problematics" and for which the location of a putatively non-Marxist element is sufficient to disqualify their claims' (Elliott 1987:42).

His only concessions to the complexity of humanist theoretical history were to distinguish between the 'first generation' humanists (Lukacs, Gramsci and Korsch) and their post-1945 progenies in terms of their political intentions (Left and Right turns respectively); and to exempt Gramsci's historical but not his dialectical materialism from condemnation (Elliott 1987:46).

The influence that Althusser's (largely fictive) triad of adversaries ('historicism; humanism; economism') then had on an entire generation of marxists, blocking any sustained recuperation of what was in reality an extraordinarily complex heritage, remains one of the most negative aspects of his theoretical legacy.

3. *As Callinicos notes, Althusser's conception of 'determination' is founded on a principle of an 'absent cause', one that 'exists only in its effects' (Callinicos 1982:74). This aversion to etiology is more general in Althusser. Callinicos therefore doubts that Althusser's 'determinism' is anything more than*

a specious formalism. In this, he is in accord with Thompson and Anderson. The latter usefully contrasts Althusser's absent cause with the rather more concrete and incisive analyses of Raymond Williams on this matter (Anderson 1980:77-79).

4. *Althusser's legendary dismissive attitude towards historiography and historians was well captured by Douglas Johnson in an obituary appraisal of Althusser's life. Reflecting on their conversations in the 1960s, Johnson recalls:*

'(Althusser)... would ask me what was the point of being an historian, what had any historian contributed to the interpretation of man's evolution? He saw understanding in terms of theory' (D. Johnson 'Philosopher interrogating students: "who am I?'" The Guardian 24th October 1990).

5. *Raymond Williams' (1978) extraordinary review of Timpanaro's On Materialism is acute on this and many associated matters of the natural 'inheritance'. His projection of nature as 'constitutive' to human practice is superior to Timpanaro's unilateral emphasis on 'passivity', from a materialist perspective. Williams' forthright characterisation of triumphal productivism ('...a brash mystique of "overcoming all obstacles"') is also incisive.*

6. *There are, in fact, a number of tempos within the ecological system itself (DT2). Braudel's concept of la longue durée, which was the product of an era of more primitive climatological understanding, is applicable to but one or two of these. These tempos range from the very long term systemic changes resulting from for example, changes in Earth's orbit, tilt and eccentricity to cyclical effects related to erratic solar activity. The net result of these overlapping tempos is of course, the short run unpredictability of weather systems, which in dynamic systems is now generally known as 'flicker noise'.*

The overlay of capitalism's changing excreta on this already complex system can provoke exponential or minimal change in the overall ecology. The fortuitous case of minimisation apparently held through much of the post-1945 period, when the longer term climatic warming associated with the release of (primarily) carbon dioxide in the early stages of industrialisation was largely negated by cooling effects arising from the burning of high-sulphur fuels! Where positive feedback occurs, the pace of disruption, once it becomes apparent, can in fact be much faster than expected. The causal system is, in short, supercritical, as Graudel et al observe.

'What is particularly troublesome is the possibility of unwelcome surprises... (t)he Antarctic ozone hole is a particularly ominous example... Its unexpected severity has demonstrated beyond doubt that the atmosphere can be exquisitely sensitive to what may seem to be small chemical perturbations and that the manifestations of such perturbations can arise much faster than even the most astute scientists could expect' (Thomas E. Graedel et al 'The changing atmosphere' Scientific American vol. 261:3 September 1989).

7. Mephram notes that Althusser's concept of 'Träger' has two origins, in *Capital* (see below), and, more problematically, in Lacanian structural linguistics. As he observes:

'...the concept of "subject" is very much in the nature of a problem for all structuralist-influenced theoretical enquiries. Inasmuch as Althusser gives the impression ...that he is relying on some body of accomplished philosophical research, he is guilty of at least evasion' (Mephram 1985:150).

8. Quite deliberately setting himself in the face of what he viewed as the mechanical marxism of Plekhanov and the Second International, Althusser thereby turned the classical presumption of the primacy of the productive forces on its head. The relations of production determine the structures of the social formation while also (in non-crisis periods of accumulation) acting as the sufficient condition for the extraction and realisation of surplus value. Balibar took this argument to its logical conclusion when he collapsed the forces of production as 'technical social relations of production' to the relations, thereby raising questions over the nature of the contradictions between them.

As Anderson has noted, particularly in the light of G.A. Cohen's celebrated (1978) restatement of the principles of historical materialism, such a diminution in the theoretical independence of the forces of production is historically completely without foundation as well as being unnecessary. Thus:

'crises within modes of production are not identical with confrontations between classes. The two may or may not fuse, according to the historical occasion. The onset of major economic crises, whether under feudalism or capitalism, has typically taken all social classes unawares, deriving from structural depths below those of direct conflict between them' (Anderson 1980:55-56).

Cohen's work is clearly informed by Althusser. It may indeed represent a response to structuralist marxism, as Lock (1988) argues. Whatever the overall judgement on their respective merits, on this issue at least, Cohen's account throws into the sharpest relief Althusser's massive failure at this

major point. This is where Althusserianism was exposed at its weakest; where the class struggle was increasingly plied as a *deus ex machina*.

9. In Rée's striking formulation:

'...French Althusserians stressed (that) ...societies must be analysed in terms of irreducibly transindividual entities like modes of production, rather than of the attributes of individual consciousness' (Rée 1981:83).

Here Rée, in emphasising the social co-ordinates of Althusser's transindividuality, precisely avoids the common elision: as will become clear, Edward Thompson exemplifies those who failed to register the true terms of Althusser's ahumanism.

10. Victor Molina's initial conclusion on Althusser's theoretical scission seems therefore to be entirely accurate:

'...there is nothing in Althusser's work which can be interpreted as a closing of this problematic of "individuality". What we have is only the formulation of some rigorous principles by which to posit this problematic, but this rigour must not be confused with a closing of this problem' (Molina 1977:243).

In an otherwise perspicacious work, Sebastiano Timpanaro claims of Althusser's critique of socialist humanism that *'...with him this rejection culminates in an out-and-out rejection of the "empirical individual"' (Timpanaro 1975:68). Alternatively:*

'Althusser's anti-humanism thus arrives at a denial of the individual as a relatively independent psycho-physical entity- which is no better... than the old denial of the empirical ego on the part of idealism' (Timpanaro 1975:103).

The same charge is made with far less subtlety in so-called 'Analytical marxism': 22 years on from *Reading Capital*, Althusser is characterised (under the generic heading of 'Radical Holism') as one who disavows *'...individual-level mechanisms in principle' (Levine et al 1987:73-74); as though that were the end rather than the start of his work! Conversely, to reduce innately transindividual social structures to the status of incidental consequences of the decisions of sovereign individuals, as methodological individualism proposes, is to retreat rapidly into classical liberalism.*

11. This formulation echoes Marx's own well known statement in the Preface to the first German edition of *Capital* when he says:

'...here individuals are dealt with only in so far as they are the personifications of economic categories, embodiments of particular class-relations and class-interests... My standpoint... can less than any other make the individual responsible for relations whose creature he socially remains, however much he may subjectively raise himself above them' (Marx 1983:20-21).

12. This is of course, only true at the highest theoretical level: empirically, many transactions continue to be governed by more or less formal extra-economic rules. Even for example in the post-modernist shopping utopia, aggressive stereotypes of class, gender and race, continue to govern the form of access to, Indeed, they are currently being accentuated in order to accelerate turnover times and improve margins in Department II. Nonetheless, compared for example to Feudalist politicisation of exchange relations, the magnitude of these effects is reduced in the capitalist mode.

13. The coruscating effects of capitalist modernisation are beautifully captured in the Marxian dictum that *'...all that is solid melts to air'* (the *Manifesto*), rendered immemorial in Marshall Berman's eponymous 1984 account of modernism.

14. A *'brilliant, naked, but often wildly and irresponsibly inaccurate essay'*, according to Rée: an agreeable assessment. Hobsbawm's more balanced reply to Althusser is contained in his 1972 Essay, *'Karl Marx's contribution to Historiography'*, in R. Blackburn (ed) *Ideology in Social Science*.

15. This was by no means an isolated judgement, the unique force and engagement of Thompson's riposte notwithstanding. Thus Norman Geras, whose position on Althusser's work has generally been nuanced and thoughtful, backed the substance of Thompson's charge against Althusser; that in Althusser's marxism there had been a completely unwarranted displacement of individuals as conscious determinants of history. For Althusser, he notes:

'human beings are not the authors or subjects ...(in a process) which, decentred, has no motive subject. They are supports, effects, of the structures and relations of the social formation' (Geras 1986:87).

Hyperbole then takes complete control. In Althusser, *'the human subject is definitively abolished'* (Geras 1986:117).

CHAPTER TWO

FORDISM & THE HISTORICAL FORM OF INDIVIDUALITY

'...The biggest collective effort to date to create, with unprecedented speed, and with a consciousness of purpose unmatched in history, a new type of worker and of man' (Gramsci on Fordism, 1971:302).

The survey of Althusser's work undertaken in Chapter 1 has indicated a number of theoretical blockages which neither Althusser or his protegés were successfully able to overcome in the ensuing period. Chief among these were:

- * the inability to secure adequate determinacy in the theory of social formations.*
- * a structural asymmetry between historical materialism and a theory of personality, such that there was no appellation between the two sciences below the synchronic level of modes of production and personifications.*

It has already been tentatively suggested that the problem of dissolving social formations (overwhelmed by their own overdetermination) could be addressed by the introduction of a third level of concepts intermediate between the mode of production and the social formation. The exploration of this theme, which is only ever implicit in Balibar's contribution to *Reading Capital*, but explicitly promoted by others elsewhere, will form a central part in what follows below. Balibar raises these issues in the context of a brief excursus on the theory of the transition from feudalism to capitalism. It would be an understatement to assert that his efforts here were beset with difficulty. The problem of the transition between modes of production sharply illustrated the more general complexity of bringing a synchronic conceptual apparatus to bear on a diachronic (dare one say, 'historical?') movement.

It will become clear that any resolution of these issues leads ineluctably to an extension of the terms of the projected marxist theory of the personality. The connections already established in the mode of production:personification couplet can then be sustained in a diachronic context.

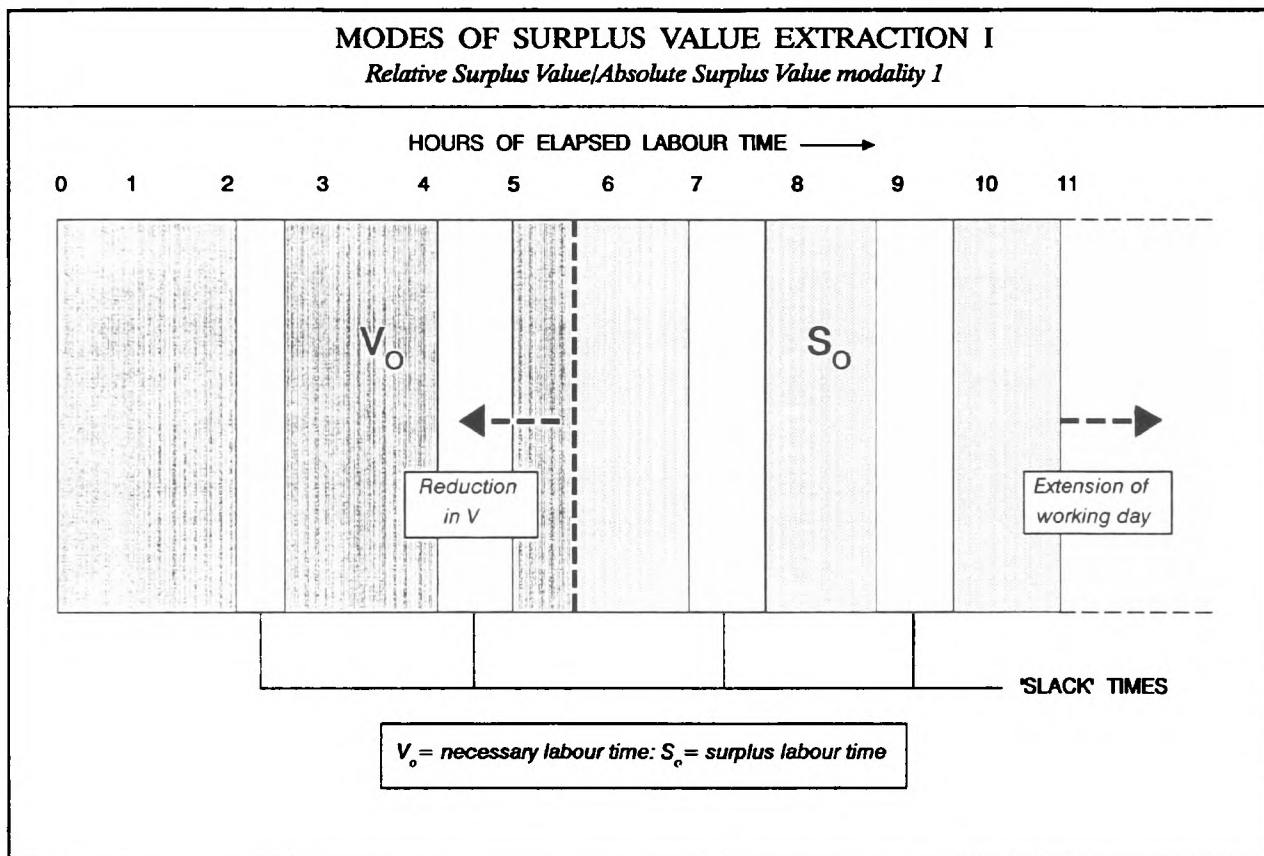
The articulated transition to capitalism:

The problem of theorising the transition to capitalism has been the subject of protracted debate. For Marx, the modernisation of the labour process is the key dimension along which the progress of capitalism to maturity is gauged. Likewise for Balibar, the capitalist break with feudalism hinged on the transition in the labour process from manufacture to modern industry. Both Authors start with what the Althusserians termed the *real appropriation connection* in assessing the genealogy of capitalism. In consequence, discussion of the specific problems associated with the overall self-expansion of value, including circulation, is postponed. Essentially, the transformation in the labour process may be viewed as a three-stage process. ‘...(B)efore the industrial revolution, a “*technique*” was the *indissociable ensemble* of a means of labour ...*and a worker*, moulded to its use by apprenticeship and habit. The technique is essentially individual, even if the organisation of labour is collective’ (Althusser & Balibar 1979:238).

In manufacture, enforced co-operation between workers hastens accumulation through the massing and the soldiering of labour, with an attendant extension of the working day. Absolute surplus value (ASV) predominates as a proportion of the total social surplus. The direct relation of worker to object of labour continues, however, such that physiological capacities still impose an ultimate barrier to productivity growth. In Balibar’s terms, the ‘technical’ and the ‘anthropological processes’ maintain their historic coincidence. Here, there exists only a *formal* subsumption of labour to capital, with forces extrinsic to the technical division of labour enforcing surplus value extraction.

Under modern industry, conversely, the acceleration of mechanisation makes the ‘...organisation of labour completely independent of the characteristics of human labour-power... rather than the instruments (of production) having to be adapted to the human organism, that organism must adapt itself to the instrument’ (Althusser & Balibar 1979:239). This historic reversal has been put altogether more sharply by Aglietta. ‘Instead of wielding tools, the workers become appendages of the machines’ (Aglietta 1979:113). Clearly, the notion of absolute (‘complete’) independence of the organisation of the labour process from the ergonomic and energetic requirements of the labourer is overstated in any foreseeable practical circumstance. This thrust towards independence is an historical movement that is only truly completed in theory, in the concept of the mode of production. Nonetheless, *theoretically*, the degree of flexibility in the deployment of labour power expands significantly relative to that available to all pre-existing modes of production.

The growing intermediation of the means of production in the labour process drives a wedge between the labourer and the object of labour and thus permits new (and increasingly impersonal) forms of metrology and control to be introduced. Labour is then objectively subsumed under a new temporality of the machine system (the real subsumption of labour to capital). With rapid increases in productivity induced by mechanisation, so the importance of relative surplus value (RSV) grows. The distinguishing of these two systems of surplus-extraction is critical to an understanding of the technical revolution ushered in by capitalism. Davis (1978) provides a useful graphical illustration of the characteristics of each extractive form:

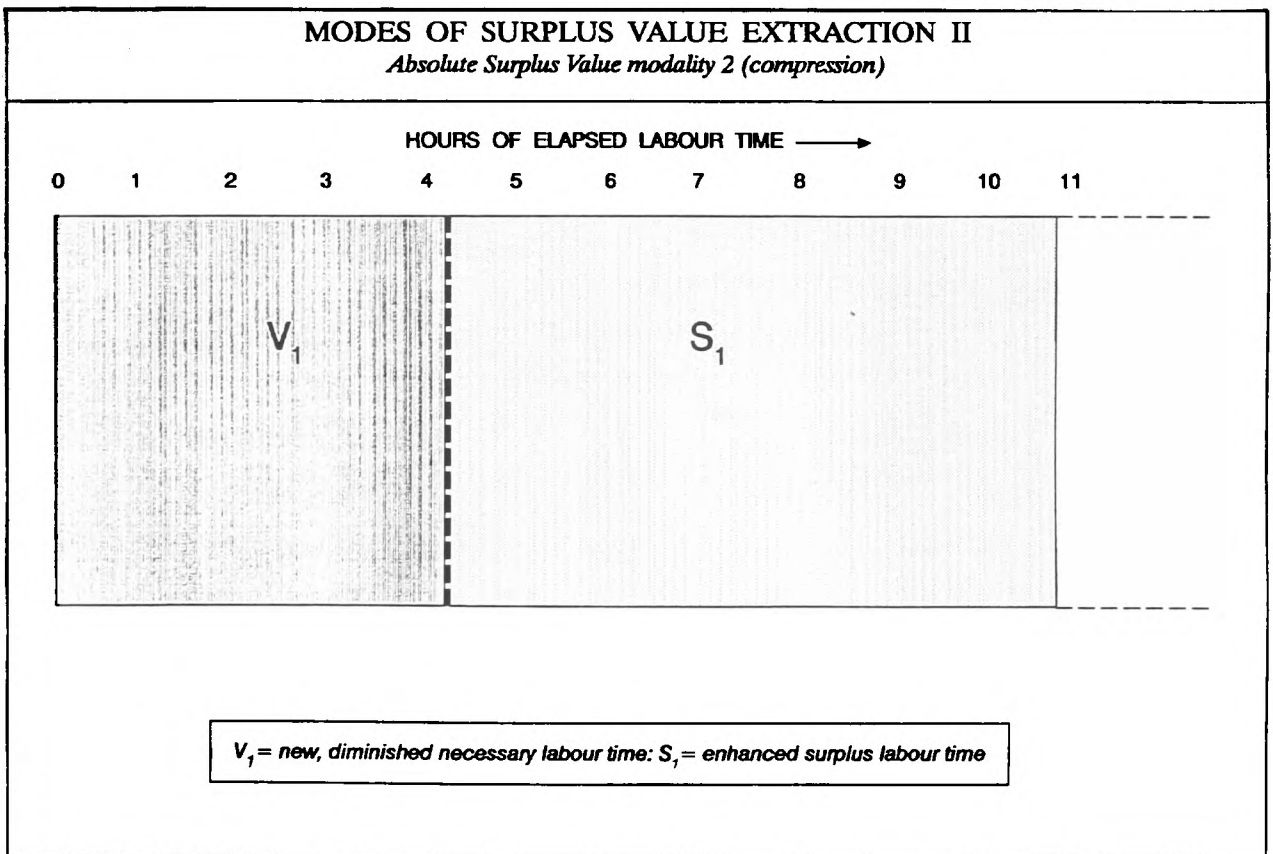


Source: Davis 1978:216

Here, the working day (of duration d) is divided into three segments. First, there is a proportion of labour that is allotted to the production of commodities the values of which cover wage costs. This production is therefore socially necessary for the reproduction of variable capital (hence, V_o). Second, time is given over to commodity production which is appropriated for capital (S_o). Finally, there is a residuum (composed of the *slack periods*) that is lost to production altogether. The mass of porosity is clearly $(d - [V_o + S_o])$. $(V_o + S_o)$ represents the value-creating period (V.C.). Formally, the rate of surplus value is of course:

$$s = \frac{VC - V_0}{V_0}$$

ASV₁, which involves essentially extending the working day, increases S₀ by raising V.C. and leaving porosity unchanged. Contrarily, V₀ may be reduced by devaluing the bundle of commodities that define the historically variable subsistence wage. This may be achieved *inter alia* by improving productivity in Department II; that is, through the extraction of relative surplus value. Clearly, changes in ASV₁ or RSV will leave porosity levels untouched. The strategic objective of ASV₂ would be to eliminate *all* such slack times by intensifying labour. The ratio of value creation to hired labour time is a measure of intensity $i = VC/d$. The limits to intensification are manifold, with ergonomic, technical and legal roots. Porosity can arise from worker customs or collective agreements: these are vulnerable to challenge as labour market conditions permit. Imperfect productive organisation may also generate porosity. Poor co-ordination of labour power, or inefficient planning methodologies can both generate balancing downtime. Finally, simple machine breakdown contributes its toll. Davis' second diagram below illustrates the reduction in V ($V_0 \rightarrow V_1$) and ensuing rise in the proportion of S through the implementation of ASV₂.



To repeat, the total elimination of slack posited here represents a theoretical limit case and the real barriers are absolute. The *tendency (à la Marx)* for RSV/ASV₂ effects to assume dominance constitutes a move towards an *intensive* mode of surplus value extraction.

Under this compulsion of intensive productivity increases, Balibar notes the increasing dedication of scientific and technical resources to the development of the means of production. One symbol of this new level of specialisation is the accelerating establishment of private research facilities from the 1880s onward. From here on, the evolution of machinery and the change in quality of labour power 'acquire different forms of development'.

Balibar's account of the development of capitalism is of course closely modelled on part IV of *Capital I*. Like Marx, Balibar places supreme emphasis on the succession of new methods of organisation of the labour process as the organising theme of the transition to maturity of capitalism. There are nonetheless significant distinctions between the two accounts. Balibar's labour process emphasis is virtually total, and, moreover, remains so throughout *Reading Capital*: no consideration is given to problems of supply of labour and raw materials, nor is the classical analysis of the extent of the market economy anywhere in evidence. The level of qualification in Marx is striking in contrast.

'So soon... as the factory system has gained a ...definite degree of maturity and, especially, so soon as its technical basis, machinery, is itself produced by machinery ...so soon, in short, as the general conditions requisite for production by the modern industrial system have been established, this mode of production acquires an elasticity... that finds no hindrance except in the supply of raw material and in the disposal of the produce' (Marx 1983:424).

That these two great 'hindrances' have deeply marked the development and expansion of capitalism is beyond dispute: the theoretical importance of the circulation of capital for Marx is evident in the dedication of volume II and much of volume III of *Capital* to its exploration. The effective marginalisation of these issues in Balibar's account of the transition is by the same token, perplexing. How might this omission be explained?

Balibar was attempting an account of the emergence of capitalism founded directly on a reading of the theory of modes of production. It will be recalled that he enumerates two connections within that theory, but elaborates on only one- the real appropriation connection (the internal structure of the productive forces)- in his reading of capitalist development. At no point in *Reading*

Capital is there any sustained account of the development of appropriate forms of property or the modes of valorisation that render them effective. Herein lies the diminished role of realisation and commodification in his rendition when compared to Marx's. The Althusserian account is thereby rendered incomplete and profoundly inadequate.

There is a further issue here: Althusser repeatedly asserts that modes are synchronic constructs which can be periodised but which have no dynamic and therefore no history. The tenuousness of any mediation with the real was also continually emphasised. Yet Balibar proceeds with the selfsame modes to construct an historical account which must be verifiable with all of those tools of historical and empirical analysis that Althusser so consistently rubbished! There is a dichotomy here between the theory of modes of production and the 'appropriated real object' (the schematic of the transition): the two inhabit different levels of analysis.

This theoretical discordance is central to the problems of periodisation versus dynamics that have plagued the Althusserian project and which accelerated its progressive marginalisation in succeeding marxist work. What, for example, is the status of the manufacturing period as a 'simultaneity' in the structuralist account? Balibar initially suggested that manufacturing was an auto-degenerative 'transitional' mode of production: it embraced the conditions for its own destruction in the configuration of its internal structure. What Balibar was proposing here was precisely that anarchy of synchronic (periodic) and diachronic (historical/dynamic) elements which he and Althusser had so cogently and directly criticised as essentialism in others. Althusser's subsequent critique spurred Balibar to produce new hypotheses which are recognisably more robust even if still deeply problematical.

Dispensing with modes of production theory, Balibar proceeded to link the manufacturing 'simultaneity' directly with the theory of social formations. He recalls that concrete social formations are composited structures encompassing a number of modes of production. *Relations of dominance* are posited to order the manner in which these modes of production either coexist, attain universality or disappear. (The appropriate linguistics for modes of production is of course always static/passive). These relations of dominance then become the *explanandum* of the theory of social formations. The manufacturing period is now cast as an amalgam of overlapping modes of production within a complex social formation. It is constituted in a specific configuration and then held together by the 'glue' of the relations of dominance. The manufacturing period expires, conversely, because the contradictory pressures of its component and overlapping modes of production eventually undermine the coherence of the dominance relations.

Within this framework there did seem to be scope for introducing dynamics and thus for returning to the problems of history. A study of the evolution of these relations of dominance over time would certainly be valuable. Yet this was not to be. In a sweep that was to lead rapidly towards an infinite regress, Balibar contended that these relations of dominance were themselves a 'more general synchrony than that of the mode of production itself' (Althusser & Balibar 1979:307). This inexplicable gesture projects the theoretical structure ever further upwards towards a meta-theory of general determinations! Balibar was thus demonstrably unable to introduce diachrony into his analysis of 'simultaneities', where history was so obviously required.

The untenable nature of these final propositions does not however, end the Althusserian sojourn. The fact that Balibar took this theoreticist turn is significantly related to the ultimately philosophical bent of *Reading Capital*. Recast by historians with the benefit of historical-empirical data, the crux of these propositions could yet prove extremely fruitful.

Aidan Foster-Carter (1978), in a helpful review of Althusserian work on modes of production and their relation to social change, analyses the historiography of Pierre-Philippe Rey. Rey's reformulation of the transition to capitalism goes some way to unjamming the blocked Althusserian position. For Rey, the modes of production that comprise the simultaneity are *articulated* in a process *over time*. He proposes a three-stage transition from feudalism:

- * *first, capital is subservient to the needs of the feudal system, on which it relies for agricultural produce and labour supply. Its activities promote feudal reproduction and do not necessarily deepen the quality of the capital:labour relation.*
- * *in the second stage, capitalism assumes hegemony in the social formation, and its development bring about the progressive disintegration of the previous mode. Specifically, the expansion of the capital relation annihilates handicraft and artisan labour, while (less assuredly) transforming peasant agriculture.*
- * *finally, mature capitalism is able to meet all of its essential reproduction needs, either from within its own capacities (crucially, through the transformation of agriculture) or by restructuring /subordinating other extant modes of production (colonialism).*

As Foster-Carter notes, this periodisation of the overlapping modes of production over the duration of the transition has the merit of '...at least bring(ing) articulation down to earth by specifying its content' (Foster-Carter 1978:61).

The 'relations of dominance' posited by Balibar are now reinterpreted in terms of negotiated and quasi-stable strategic compromises forged in the coalition of the exploiters. In the period of transition from feudalism to capitalism this is composed of feudal and capitalistic (including mercantile) class fractions. The fate of these strategic compromises over time will be necessarily determined by the relations of super-/subordinacy between the articulated modes of production, of which relations and interests the respective agents will be the bearers. Thus, these ensembles of ruling classes will enclose ascendant/declining fractions in hegemonic/dominated alliances¹.

These compromises of the ruling classes may resolve *pro tempore*, immediate problems in the economic base in terms of contested claims on the social product (both its production and absorption) and competing demands on the different qualities of available labour power.

Rey's reading, which is a vital extension of elements of Althusser's own work, suggests a sequence of 'simultaneities', negotiated and enduring compromises, which successively give greater ground to the emerging forces of capitalism. (There are, on the other hand, many paths that could lead to stagnation of the productive forces and the failure of transition in the medium term: the weak Development Thesis [see Note 1 above] is only probabilistic). Each 'simultaneity' exhibits different characteristics in its economic structure and displays a distinct pace and form of accumulation. It is important here to note the differences between a theory of simultaneities and one based on so-called 'long waves' of capitalist development. The exchanges between Trotsky and Kondratiev in the 1920s illuminate these differences in the clearest possible manner.

For Trotsky, as Day notes, the '...concept of uneven development', when applied to the long run dynamics of the development of capitalism, 'implied a trend broken into discontinuous periods, each represented by a distinct line with a different slope' (Day 1976:71ff). The moment of transition from one epoch to the next is uncertain, hingeing on contingent factors in the external environment (geographical limits of the market or availability/quality of labour power, for example, or the introduction of constricting legislation founded on a decisive shift in the hegemonic State coalition).

In his debate with Kondratiev, Trotsky advocated a theory of periodisation over the latter's long waves, since the concept of a 'wave' necessarily implied a continuous '...theoretical norm in relation to which waves might be discerned' (Day 1976:82). For Trotsky, this decisively understates the newness of each epoch as it unfolds. Capitalism displays far more mutability (and volatility) than a theory of long waves would indicate. In these suggestive comments, the

similarities of Trotsky's and Balibar's (and Rey's) approaches to the problem of the transition become apparent. Trotsky's concept of 'periods' also recalls Lenin's famous hypothesis of 'stages' of accumulation in the development of capitalism. This intermediate level of abstraction, which is irreducible either to the theory of modes of production or to social formations, can best be approached in terms of a model of uneven (sectoral/spatial) development, encompassing both the real appropriation and property connections of the relevant epoch.

In sum, Rey suggests a theory of quasi-stable simultaneities (epochs; stages) on the basis of inter-/intra-class alliances. It has also been noted that the internal dynamic of capitalism (which is more fluid than that of any previous mode of production) generates escalating material demands that may increasingly outstrip the material and human capacities of the feudal integument. The demands for new qualities of labour power and new forms of labour discipline, for example, where they cannot be met from within the resource base of the existing epoch, generate a set of contradictions or 'non-correspondences' (Balibar) which travel out from the new mode of production to dislocate every element of the simultaneity. One of these 'non-correspondences' forms a central contradiction of the transition period; it is also of great salience to the project of a marxist theory of individuality.

'In the case of manufacture, for example, the definition of non-correspondence depends on definitions of the forms of individuality as determined in handicrafts on the one hand, and in the capitalist ownership of the means of production on the other' (Althusser & Balibar 1979:307).

In sum, it is evident that for both Marx and Balibar, capitalism only achieves maturity as the dominant and self-contained mode of production in a social formation when that organisation of production that Marx called modern industry is ascendant. In relation to modern industry, manufacturing, simple commodity production *et cetera* are but its prefigurative forms. (It should be noted here that Marx did view manufacturing along the labour process dimension as a developed form of the capitalist mode, insofar as its rapidly generalising specialised worker is objectively reliant on a collective [co-operative] workshop labour process. For Marx, manufacturing does not, however, furnish the wherewithal to produce machines by machines, which is the *differentia specifica* of modern industry and which gives its productive base a self-propelling potential).

The supreme importance of modern industry as the first fully developed societal expression of the capital relation, and the suggestive comments of Balibar on the non-correspondence of the forms of individuality and capitalist valorisation under manufacture, when taken together, indicate the need for a closer analysis of the conditions of its emergence at the turn of the century. This history centres on the biographical implications of new labour processes for individuality.

A 'Vision of Industrial Productivity':

The rise of modern industry corresponded to the establishment of the United States as world leader economy and the early mechanisation of advanced industrial sectors. There were strategic changes taking place in the structure of the labour process, and a relatively high degree of class mobilisation. The activities of the Lynn shoemakers in 1860, the 'Molly Maguires' in the following decade and the vicious railroad dispute in 1877 attest to this heightened combativity (Henderson *et al* 1982:115).

The thrust of innovation centred on the labour process: this restructuring presupposed a wider modernisation of social structures. This was contingent in turn on the outcomes of associated politico-ideological conflicts.

In Charles Maier's reading of early 20th century America, the ascendancy of productivist ideology in civil society was practically universal. All social projects, including those of a reformist bearing, converged on the theme of the size and rate of increase in the surplus product. Thus, 'social efficiency in the years before the first world war became a shibboleth for reform as well as for productivity' (Maier 1970:32). This hegemony was vital to the successful introduction of a range of new productive practices that enabled subsequent mechanisation to occur.

The general commitment to productivism in the American intelligentsia was itself a result of twenty years of intense proselytising by management apologists, including the systematic management movement (the systemisers) of the 1880s. This was comprised of a diverse group of engineers, accountants, superintendents and works managers. It was in this decade too that Frederick Taylor, the 'Father of Scientific Management', began pioneering work at the Midvale Steel Company into the conditions of labour and the barriers to productivity growth.

As is well known, Taylor concluded that the craft orientation of the labour force implied a degree of higher order process control on the part of workers that effectively undermined the prerogatives of supervisory staff and management. In the typical manufactory, machinery only

assisted a labour force that remained objectively central to the valorisation process. To reverse this control structure required the enforced monopolisation of synthetic productive knowledge in the management hierarchy. As Zerzan (1984:141) notes, then, the rationale for the introduction of scientific management was to effect greater control, rather than any immediate thrust to boost profits. Undoubtedly though, the achievement of greater control would permit the substitution of simple for complex labours and thereby reduce the value of labour power, thus directly contributing discretely to profit².

What Taylor proposed was the ('independent') evaluation of job routines, based on detailed observation (time-and-motion or 'distal' study), and the identification (off the job) of optimal work practices and times for every stage of the labour process ('proximal' study). For capital, this immediately promised the maximum integration of existing constant and variable capitals. Ultimately, proximal study could yield a database of sufficient complexity to permit inference of predetermined time-quotas for new processes. Importantly, this could be done without any intervention in actual (analogous) labour processes and without any reliance on the existing labour force (Doray 1988:95).

For labour, the associated work on fatigue and ergonomics in management science held out the promise of a brake to the uncontrolled and often lethal hyper-exploitation of primitive factory labour³.

Systematised work study, it was claimed, would also permit the relative contributions of different groups of labour to be objectively assessed and paved the way for the introduction of piecework wage systems to reward the more productive over the laggard worker. This was important in introducing heterogeneity into a labour force that scientific management and ultimately, mechanisation would objectively render more common and uniform than ever:

'such a system (of scientific piece-rates) would, (Frederick) Taylor argued, serve admirably to subvert any emergent *solidarity* in a workforce by engendering *individuality* and, hence, provide at least a partial solution to "the labour problem"' (Taylor 1979:24).

As Nyland (1987) notes, these measures were to constitute but the first stage in the full application of the Taylor method to production planning. Emphasising the innovatory *plant* management aspects of Taylor's work, he observes:

‘Taylor, for example, made significant contributions to the systemisation of the production process in the areas of stores accounting, stores management purchase, standardisation and plant design and layout. He also developed a number of important new products, the most significant of which was high-speed steel’ (Nyland 1987:59).

Taylorism did not consist simply of new methods for the regulation of workers’ labour time, but the total application of the scientific method in every area of plant operation. Last in a careful sequence of operational changes came the analysis of the management function itself, which was predicated on the establishment of a powerful planning department. This fundamental strategic commitment by management was interpreted as the ultimate sign of a company’s adoption of Taylorism.

Yet this goal, of reshaping employer consciousness, was to prove among the most difficult to achieve. Taylorites frequently bemoaned lack of systematicity among employers. This was particularly manifest in the absence of ‘scientific’ control over the utilisation of company time. Exhortation was clearly not enough, however. It was a continuing squeeze on profits caused by the protracted Great Recession and especially by real wages that were, in relation to the stage of the accumulation cycle and international norms, obdurately high, that forced the eventual adoption by leading sectors, including vitally, steel, of elements of Taylorism. Macroeconomic pressure, rather than ideological persuasion, was the catalyst of change. Even then, a narrow focus on the labourer and the work-station prevailed.

If employers were a constant source of frustration, the Taylorites were as cognizant of the worker collectivity as another formidable conservative force. Thus, as Zerzan notes:

‘the Taylor Society warned employers to expect strikes and sabotage, to proceed with cunning so as to infiltrate under false appearances, and to expect opposition at every step’ (Zerzan 1984:142).

Doray reflects on the same theme: a Taylorite commenting approvingly in 1932 on the ‘long march’ of organisational change over a four-year period in Carl Barth’s Pullman Company. The same Thomas W. Mitchell urged that time standards should begin with highly mechanised stages of the labour process, applying in the first instance only to small numbers of workers.

This Machiavellianism contrasts markedly with Taylor's own well-known profound contempt for the individual and collective worker. Indeed, for Nyland, the association of Taylorism with a dismissive perspective on the nature, disposition and powers of (at least some) individuals (as 'trained gorillas') is so strong that it disables attempts at a more critical reading from within historical materialism.

The spread of Taylor's new ideas on plant management was immensely facilitated by the tireless efforts of the Taylor Society, with its close links to the associations of American engineers (and particularly the American Society of Mechanical Engineers). Indeed, the engineer was their *leitmotiv* of modernisation: bearer of a higher scientific rationality, the engineer was to be dedicated to the new principles of labour process organisation and production management.

All could benefit in the unfolding Progressive Era: this was the claim of the Taylor Society. The scientific analysis of the organisation of production, including management, would yield significant productivity and income gains for workers and bosses alike. At this point, as Taylor observes, the issue of primary concern for the social actors is no longer the distribution of the surplus but rather, its *size*. Herein lies the ground for the co-optation of an already critically weak reformism to productivism.

The microeconomic effects of the early application of Taylorism give, as one might expect, only partial affirmation to this consensualist claim. At Bethlehem Steel, as Young notes, the productivity of shovellers rose from sixteen to fifty-nine tons per day, and yard labourers' numbers were reduced from approximately 500 to 140, with no reduction in total output. He continues:

'(Taylor) revolutionised the art of cutting metals and doubled the speed at which such fine steelwork was done. On increasing production in one instance by 369 per cent, he increased wages 60 per cent... the unit cost for production was lowered by 218 per cent' (Young 1990:122-3).

There was in this pilot study then a significant increase in wages resulting from the introduction of Taylorism: but strikingly, the reduction in costs, and the relative proportion of the surplus thus made available to employers was much greater. The distributional inequalities remain as pronounced as ever.

Such inequity notwithstanding, the union bureaucracies were by and large agnostic towards Taylorism- and significantly more equivocal than the workforces in whose name agreements were signed (Zerzan 1984). Traditionally, U.S. collective bargaining agreements explicitly recognised the manager control prerogative. Unions' remit was over pay and Health and Safety; the structure of production was unchallengeable. Agreements were therefore reached to introduce scientific management as a *quid pro quo* for, for example, formal recognition of a closed shop (Plimpton Press/Typographical Union 1914; New York garment industry/International Ladies Garment Workers' Union 1916). This was sometimes simply not enough for workers. Revealingly, in a 1907 agreement along similar lines, unionised workers acceded to union agreement to the introduction of Taylorism, while unorganised machinists struck in anger.

The temporary collaboration of the two major classes produced by wartime labour shortage, together with the enhanced influence of the liberal Taylorites ensuing from the death of Taylor in 1915, permitted the likes of Morris Cooke to promote the 'human factor' in restructuring. It was Cooke who persuaded the Ordinance Department to adopt the minimum conditions of labour enshrined in its General Order Number 13 (Nyland 1987:65). This was however, but the humane and positive aspect to an older, reactionary instrumentalism in Taylorism. Individual profiling of worker intelligence and testing of a host of other psycho-physical traits such as dexterity and concentration spans, were often used in scientific management to select the corporate conformers and eject misfits.

Of course, the two aspects to the same instrumentality- the reformism of Cooke and the older social darwinism- connoted very different factory environments for the workforce. The changing balance between the two over time strikingly illustrates that the detailed application of Taylorism was concretely implemented in a given context, was critically mediated through the overall balance of class forces. This at least partially vindicates Nyland's (1987) hypothesis⁴.

To return to the union question: the potential benefits of industrial unionism as a means of easing the introduction *en bloc* of scientific management were not lost on Cooke and his associates. Some Taylorites even advocated recognition of the Wobblies. Reciprocally, Wobbly activists and other American socialists saw a modernising role for scientific management 'after the revolution'. This sanguineness was undoubtedly influenced in part by the humanising elements in Taylorism.

After the War, the reformist A.F.L. under Gompers began to seek common ground with the Taylor Society and a *modus vivendi* developed over the '20s. Union opposition continued to time-

and-motion studies but 'fatigue research' was welcomed in principle. This period thus represents the political maturation of Taylorism.

Worker hostility to Taylorism continued regardless. This was unsurprising given those early and quite public contemptuous tendencies of Taylor and some of his associates towards labour. There was undoubtedly a growing schism between the worker and the union bureaucracy. Thus, while union officials were generally relaxed about the introduction of the new methods, strategic groups of workers responded with 'wildcat' protests. 3,000 unorganised workers at Sonnenborn and Company (garment producers) walked out in 1914; more significantly, A.F.L. workers at Watertown U.S. arsenal base in 1911 spontaneously struck in the face of A.F.L. complacency. Only the International Association of Machinists supported worker action with weak public proclamation, and then under pressure of a haemorrhage of its members to the National League of Government Employees. 5,000 of the 7,000 workers at Bethlehem Steel resisted the new bonus system: and the Illinois Central-Harriman dispute starting in 1911 was explicitly directed against time study and incentive pay.

Taylorism promulgated:

As has already been noted, only War conditions forced the pace of change⁵: but when change came, the impact was apparently, extraordinary. As Nyland observes, in the post-1918 period, the rate of growth in manufacturing output accelerated rapidly. Whereas the achieved annual rate of growth over the period 1899-1914 had been less than 0.5% p.a., between 1919-1926, manufacturing output rose cumulatively by over 40%.

The 1929 Committee on Recent Economic Changes, and numerous other contemporary commentators, could only attribute this change of gear to the broad ranging introduction of new production and plant organisation procedures. These, it was claimed, made the larger firm comparable to the small entrepreneurial concern in terms of flexibility and cost efficiency, while its ability to amass development and other resources on the requisite scale for the tasks of the new era remained incomparable.

If the tools for scientifically based production were now available and tested, then the rationalisation of US industry in terms of standards and transfer of best practices was the logical next step in order to optimise the expected benefits. This was actively promoted by among the most influential of Taylorism's advocates, Herbert Hoover. Formerly the President of the Federated American Engineering Societies, then appointed Secretary of Commerce in 1922,

Hoover advocated limited State involvement in antitrust and in the promotion of standardisation, product simplification and other key aspects of scientific management.

Fordism:

At one level, 'Fordism' may be viewed as the incorporation of the productive knowledge sequestered from the crafted labour force under Taylorism into a new generation of articulated machinery. The specific differences between the Taylor route and that of Henry Ford can be expressed at the plant level in terms of the *degree of dedication* of individual work-stations to specific tasks and the *scale of integration* of each into a unitary factory-wide mechanism. Fordism thus represents in one sense the culmination of Taylorism in terms of a plant-wide restructuring of labour force practices in the quest for 'efficiency'.

In a different light, Fordism, in its epochal mechanical innovations for reducing internal circulation times, moves a qualitative step beyond scientific management⁶. It is Fordism, not scientific management, that breaks the anthropological basis of the labour process and proclaims the establishment of modern industry. As Gartman (1979) has shown, the historical evolution of systems production at the Ford Motor Company provides the clearest illustration of this development through Taylorist practices to a quite new form of unification of the infrastructure of production and the direct productive forces.

The single great *technical* innovation of Fordism around which the multiplying mechanised work-stations articulated was of course, the conveyer assembly line. Line production was itself hardly new: primitive (non-mechanised) line operation characterised much of the American agricultural processing industry in the latter decades of the nineteenth century (the so-called 'disassembly lines' in the slaughterhouses). McCormick's reaper plant utilised line operation as early as 1847; and, in automotive assembly, Ransom Olds was organised for manually propelled line working by 1903 (Gartman 1979). Neither was Ford the first to mechanise the line itself: Fiat opened a mechanically integrated line at Turin in 1912, while Ford's Detroit complex opened a year later.

As Doray notes, the assembly line is an unusual innovation, in that it does not act directly on the object of labour and moreover, does not itself add value to the commodity. It nonetheless effects significant changes in the operation of the forces of production. The input to each mechanised work-station had previously to be fed by hand, or by gravity in early line systems, with the augmented product removed also by hand: these manual operations placed severe limits on the introduction of full production flow programming.

With the mechanisation of the line, a rapid improvement in process control was effected, such that the internal circulation times of raw material and semi-finished product were dramatically reduced. The immediate and formal target of this mechanisation of internal circulation was to reduce the estimated 17% of total assembly time devoted to component carrying at Ford.

The iterative nature of the development via scientific management to Fordism is apparent here too. The productivity increases associated with scientific management clearly invited renewed attention to the possibilities of line operation. The acceleration in what Coombs calls 'primary productive efficiency', turnover times at the point of material transformation, only served to highlight the '...increasing inadequacies of the *transfer systems* for moving work between transformation operations' (Coombs 1984:679)⁷. Reciprocally, as the Ford managers were clearly aware, if they could capture how and at what pace different labours interconnected, then much else that scientific management had promised might be decisively attained. Here again, the prime motivating force was the continuing quest for control over the expenditure of labour power.

The first, experimental mechanical conveyor line was introduced into magneto assembly at Highland Park: Gutman traces the ensuing temporal effects on assembly. Prior to task restructuring, a single labourer working up the whole sub-assembly took approximately twenty minutes per magneto. In 1914, a '...chain-driven moving line' was introduced while production was sub-divided into 29 discrete operations. Labour time fell rapidly to just over thirteen minutes. Subsequent substitution of workers and operating experience reduced production time to just five minutes, a 75% saving: the shop workforce was cut from 29 to 14 persons. Such temporal reductions were typical as mechanised line working spread through production.

These kinds of temporal savings at the point of production need to be situated in relation to the wider productive intensity of what Erik Dahmen (1970) has called the 'Development Block' as a whole (see Appendix 1). In this context as Clarke (1990) notes:

'(a)lthough the savings in assembly time were dramatic, assembly was only a small part of the costs of the automobile. The most complex assembly line, that of chassis assembly, cut the labour required to assemble the chassis sixfold, but this only represented a saving of ten hours of labour-time, or about two dollars fifty in wage costs, for a car which was selling for around five hundred dollars' (Clarke 1990:138).

The historical quality of the changes heralded at Ford, to repeat, lay not so much in the individual cases of productivity enhancement, spectacular as they were. Rather, the critical aspect is to be found in the more general acceleration in internal transfer times and inter-Firm discipline that mass production invoked in the Development Block as a whole. The Line is important insofar as it rapidly effected a plant-wide unification of the productive forces- most notably, in their temporal expenditure. Contracting suppliers of necessity drew the appropriate lessons in terms of the need for higher quality standards and tautness/scale in component supply.

The overall result of line mechanisation was significantly to accelerate productive consumption of the increasing stock of fixed capital that was a necessary concomitant of the adoption of deep mechanisation, and thus to effect a corresponding reduction in the value composition of capital. The other innovatory aspects of Ford's operations can be summarised as: the utilisation of interchangeable components and sub-assemblies to produce a standardised, low cost product designed to expand markets; and a rationalised skill structure and high wage regime. These were as integral to the efficacy of the Ford 'way' as the discrete technical innovations.

The 'Fordman' and the 'New Deal':

Mechanical line working held a number of added attractions for capital in terms of changed labour practices. First, speed-up could be defended in asocial, scientific terms, with '...the concealment of social relations behind a technological facade' (Doray 1988:67). Second, the radical deskilling of the mechanised line, coupled with an heightened interdependence of the collective labourer, made individualised forms of escape for workers from the set time/energy expenditure levels (through, for example, sabotage or quality degradation) extremely difficult.

The nature of supervision was also significantly altered by deep mechanisation. The apparently technical source of pacing seemed to neutralise the immediate control function, so that supervisory staff could now assume a less interventionist role, with potential industrial relations benefits⁸.

In sum, Fordism attempted the incorporation of quantified and devalorised labour skills into new interconnected networks of machinery. To the extent that this was attained, it clearly represents the achievement of that rupture between an anthropological labour process and the organisation of the productive forces according to technical/mechanical principles by which Balibar defined the maturation of the capitalist mode of production itself: Fordism is clearly a specific form of modern industry.

These changes in the productive forces proper were coupled with systematic attempts to co-opt the labour force to a productivist ideology, with a propaganda offensive of a scale and intensity not theretofore seen.

All aspects of Ford's plants communicated the standard company line to a workforce audience that was largely Eastern European immigrant⁹. Cleanliness and collectivity were often severely emphasised under the aegis of an authoritarian management. (Doray highlights this commitment in the shape of a 700-strong army of cleaners, painters and window-cleaners who maintained an austere cleanliness. The attention to detail in the anti-individuality drive was astounding: for example, the complete lack of privacy in the plant, right down to the layout of the lavatories.) The welfare facilities, sophisticated and well-endowed, again acted as organic parts of Ford's propaganda machine.

The ultimate message about the beneficence of the Ford 'way' was however, delivered in January 1914, when Henry Ford announced the most comprehensive profit-sharing scheme in the history of capitalism. The message is seemingly clear: high performance capitalism can 'deliver the goods' on the wage bundle better than any alternative utopian venture, and it can do so moreover, without the interference of labour institutions (Thus, '[t]here is nothing that a union membership could do for our people'.) Fordism becomes, on Maier's reading, a broad-ranging project for social change on strictly conservative lines. The elements of Fordism were '...seized upon to prove the social potential open to capitalism and large-scale industry, as they existed' (Maier 1970:55).

Appearances in such matters are more often than not, deceptive. Raff's (1988) incisive account of the rationale behind this so-called 'five-dollar day' indicates that Ford had expeditiously stood the real conditions attending its introduction quite on their head.

This is not to understate the objective importance of the Ford initiative, nor the degree of innovation in relation to its precursors. Doray cites the large scale experimentation in profit-sharing at the Carl Zeiss Foundation from the 1890s; in 1909, the United States Steel Corporation had issued over 30,000 shares to its workforce (Doray 1988:106-7). Ford's experiment was, however, unprecedented in terms both of the numbers eligible and in terms of the magnitude *per capita* of the distributed profit-share. In most of the eligible cases, the result would be practically to double the average \$2.34 payment for unskilled workers at Ford.

Ford was able to introduce the new regime only on the basis of the prior revolution in the scale and quality of the productive forces recounted above. The *necessity* for the introduction of this radically improved wage regime is altogether less clear: and it is this issue that is Raff's primary concern. Raff studies in turn, interpretations of the new scheme as a means of reducing staff turnover rates; as a way of attracting higher qualities of labour; and finally, as a means of blocking unionisation and safeguarding the accelerated devalorisation of the capital stock.

In relation to labour turnover, rates were very high at the Detroit plant (370% in 1913). This meant, as Meyer (1980) observed, that with an establishment of approximately 13,600 workers, over 52,000 workers had to be hired each year to meet this haemorrhage. Moreover, the rates experienced at Ford were well in excess of those prevailing in the U.S. automotive sector as a whole. The new wage structure was combined with other measures to reduce labour turnover: job classifications were reduced from sixty-nine to just eight, in a move that announced the advent of the massified worker. The working day was also reduced from ten to nine hours. The net result in terms of turnover was significant. By 1918, Ford's labour turnover rate had fallen to 46%, the lowest figure in the Detroit industry (May 1982).

Even so, the burdens associated with the extraordinary turnover of labour in the pre-War period (measured primarily in terms of the outlays on retraining to produce equivalent workers) do not equate with the costs of the new profit-sharing initiative; this is therefore an unlikely explanation for its introduction. Was the new scheme designed to attract a different quality of Fordman? This seems highly implausible, since the degree of mechanisation rendered personal characteristics of vanishing import at Ford's. Even prior to the new wage structure, long queues for work at Ford plants were commonplace. If a worker failed to meet line pacing, this would become rapidly evident in an accumulation of inputs at the workstation. With a pool of substitute Fordmen always on the Payroll, the removal of individuals seemed but a minor inconvenience to the Company.

Furthermore, the skill level of an average Fordman was, by any criterion, strikingly low. (Raff reports on a large scale job survey at Detroit in 1919, which showed that some 85% of positions required less than one *week* of preliminary training.) This radical deskilling was only the reciprocal of an enormous accretion of dead labour. It was this build-up of fixed capital that formed the basis for Ford's incomparable profit performance, as outlined by Raff and reproduced below.

U.S. AUTOMOTIVE MAJORS' PROFIT PERFORMANCE PER ANNUM & PER OPERATING WEEK 1913-14

COMPANY	ANNUAL PROFIT(\$m)	PROFIT/PRODN WEEK (\$)
Ford	27.08	542,000
General Motors	8.18	183,911
Willys-Overland	5.86	131,911
Packard	2.36	53,136
Studebaker	1.91	42,818

Source: Raff 1988:390.

The trend in market penetration was also spectacular over the War years. Prices of the Model 'T' fell from \$850 in 1908 to \$360 in 1916 (Williams *et al* 1987), while Ford's share of the car market increased rapidly from 19.9% in 1911 to 55.7% by 1921 (May 1982). Sales of the Model 'T' reached an extraordinary 15 million by 1926.

What, then, was the rationale for the 'five-dollar day'? The unique production methodology of Fordism was based on scale, tempo and specialisation of each productive force in the company's plants. Yet this deep mechanisation also rendered Ford peculiarly vulnerable. The growing threat of Wobbly unionisation in the pre-war period was widely perceived in the American bourgeoisie. If this threat actualised in the car industry, Ford's position would be more exposed than most. All of the advantages of an extended division of labour would turn instantly into massive loss in the event of *collective* worker action; an occupation or sit-down strike posed a disastrous scenario.

The Wobblies had threatened in 1913 to launch a unionisation assault on Ford the following year, and by the winter, after industrial action at Studebaker, a strike at Ford was widely held to be imminent. Henry Ford had intimated in private that the new wage regime was established explicitly to counter that threat. Overall then, claims from Ford and others as to the millennial nature of the scheme would appear to be *ex post* justification and propaganda. The new wage structure was categorically a means of combating unionisation and the ensuing grave threat to Ford profitability.

The famous eligibility criteria which Ford attached to the scheme encompassed all behavioural aspects of the Fordmen in every area of their lives, and this new intrusiveness was overseen by a small army of personal investigators. This regime reinforced the ascetic image of the Ford worker. The constant projection of a standardised Fordman coupled with unprecedented mechanisation and deskilling combined to produce a general intimidation of scale and personal anomie in the first years of mass production.

There was also a yet wider quasi-utopian aspect to the Ford project. The sheer scale and massive quality of Ford's operation impacted on the workforce and contemporary consciousness of the entire American populus as the incarnation of an American Century:

'Fordism evoked the image of Henry Ford's ...super-factory at River Rouge with its totally-integrated production processes; iron ore and coal entering one end, finished automobiles emerging from the other' (Davis 1978: 230).

In the cultural sphere, the social power and magnetism of the new American systems is strikingly evident. The ensuing period is marked by a rapid proliferation of machine cults and dystopias of social alienation: the Futurist school and essentially, the Fritz Lang film *Metropolis* herald the arrival of the highly mechanised economy of modern industry (Jordanova 1985). In these responses, the projection of a powerful new technocratic caste reflects the emergence of an intelligentsia tightly integrated into the productive order. The strategic importance of technical personnel in turn faithfully recalls the Taylorites' noted eulogisation of the engineer¹⁰.

Problems of Taylorism & Fordism:

If the main innovations of the new waves of American production systems have now been identified, it is appropriate immediately to register some of the problems and mistaken claims that these selfsame advances in the capital relation generated. These are of two orders of generality. First, there are a set of problems with Taylorism/Fordism which relate to its internal scientific closure, its coherence in relation to its own claim to be a systematic mode of organising the labour process and the operation of the plant. Crucially, the underlying hypotheses about labour, work and proletarian consciousness have presented severe difficulties to its advocates. The second order of blockage relates to the continuing fragility of the accumulation path in the medium term, an instability which these new productive orders were strikingly incapable of addressing.

1) Taylorism claimed to measure work effort in terms of an abstract principle of fatigue: it sought optimisation of energy expenditure in relation to renewable labour power. The analogies here with mechanics and energetics are obvious. After two decades of trying, however, Frederick Taylor gave up the fatigue project, and there is no sign yet even in principle, that this work can be brought to a conclusion. The 'objective' measuring system of Taylorism was then crucially wanting of a scientific postulate in the area of quantification of labour depreciation.

Then there were the range of correctives coming through from the 'human relations' studies of Mayo *et al.* These focussed on motivation and (to a limited extent) group behaviour. Their research concluded that *work* could not be measured satisfactorily in a non-volitional, abstract, manner (precisely the Taylorite proposition). The result of such attempts in 'scientific' terms is even less satisfactory when the metrologist is an alien time-and-motion engineer. All that may ever truly be gauged in scientific management is a unit time of *labour*, calibrated in terms of standardised dimensions of motion/load/accuracy *et cetera* (Taylor 1979:32-5).

Even on this score, Taylorism was in practice deficient, since it discounted the 'dynamics of posture'. The limits of the mechanics origin become apparent at this point: Doray takes Taylor's own illuminating example of the problem, a labourer carrying a load of pig-iron. When in motion, the worker undertakes productive labour (exerts horsepower), which can be approximated in an objective assessment. Stationary, the mass to velocity calculation breaks down. Of course, the mere suspension of the pig-iron from the ground requires considerable *work*, but this aspect of labour (being non-productive) does not feature in the Taylor assessment. Therefore, the claim that the expenditure of labour power can be fully captured (and then harnessed) through application of scientific management is demonstrably false. As Hirschhorn succinctly puts it, '...rest could not be regarded as independent of activity. Rest and motion were part of a seam of action' (Hirschhorn 1984:64). As the veil of scientificity is lifted, a key ideological component of the new capital relation (its objective 'fairness') weakens.

2) Relatedly, the standardised times of production, whether they are produced standard labour times or whether the pre-set line speed of Fordism, only apply generally to the *execution* of the most regularised and recurring operations. They do not (except in the most probabilistic manner) capture the intermittent tasks of fault analysis and simple maintenance of the workstation. The implication here is that pores in the working year generated from intermittent labour commitments continue to elude the systematisation and regulation efforts of the time-and-motion team (Doray 1988:128). There is a continuing quantum of absolute surplus value that remains inaccessible. This is one of the key themes in the contemporary Japanese deepening of

Fordism. Scrupulous attention to 'off-line' (overhead) functions, as well as continuous monitoring of process parameters 'on-line' (through, for example, Statistical Process Control) seeks to provide workers with a context for necessary correctives which they are increasingly charged with undertaking (see Chapter 5 below).

3) The application of any new configuration of the productive forces in one company, all other things being equal, will generate supernormal profits for that individual capital: as competition generalises the innovation, the surplus will be progressively eliminated. This is precisely what happened to Ford. Meyer (1980) notes the rapid diffusion of the new production methods to the 'automotive and machine shops' of Detroit, in modified form to Sloan's General Motors and subsequently to a range of emerging industries across the United States.

This generalisation had a dual and contradictory aspect. On the one hand, the codification of new, tauter norms throughout the automotive sector made mass production and the assembly stage in particular, less hazardous in terms of quality and sourcing. This was a vital element in General Motors' decision in the latter-1920s to move to increased out-sourcing for components and whole sub-assemblies- a decision that ran completely in the face of Ford's earlier integrating logic.

This tendency to closer interlocking of productive methodologies and temporalities in competitor and supplier firms represents the historically progressive element in the maturation of the Development Block as a whole.

On the other hand, the increasing competence of imitating competitors rapidly generalised necessary labour times, prices (the proximate pricing of the new mass-produced Chevrolet to the Model 'T' in the 1920s) and ultimately, profit rates. In this phase, the characteristics of dedication of both product and process that were intrinsic to Ford's pioneering business strategy transmuted into problems of inflexibility and rigidity. As Clarke notes, Ford did not for example anticipate the growing commercial threat posed by a second-hand car market to his unchanging Model 'T'. The debts associated with massification at the new River Rouge plant generated a significant additional problem in the 1920-21 recession.

In general, only a continuing revolution in the productive forces and in the definition of the product could forestall this equalisation and secular stabilisation in profit rates and then only for some. The claim that scientific management represented a basis for this is patently erroneous, insofar as it was a stepped development in the relations of production. Fordism, on the other hand, presented a potency for further long run development that was still to be explored: the means of

production were at last granted a measure of relative autonomy. Ironically, the Ford Company stood poorly placed in the inter-War period to gain from innovations that it had been largely responsible for introducing.

4) Consequently, as its super-rents reduced over the 1920s, Ford's ability to pay higher wages (and thereby to command the assent of the Taylorised/Fordist worker) eroded. This was, as Meyer shows, the immediate fate of the 1914 \$5-day wage/profit bargain. Its real value fell rapidly in the face of war inflation: this fall was not compensated by a \$6 payment from 1919. Furthermore, the ratio between the wage and profit elements swung towards the former, with the profit 'incentive' falling from 50% of total income in 1914 to 20% by 1918.

5) Taylor was seeking a once-and-for-all bargain with the worker, a trade of skill and control for historically high wages linked more rigorously to a planned temporal expenditure of living labour. Labour process research indicates however, that the real subordination of labour has to be continuously reasserted.

There are countertendencies in learning in the workforce, in the structure of competition and in the demands of the market that to varying degrees reconstitute tasks as 'skilled', or that undermine objectification efforts by management (Elger 1979:63ff; Taylor 1979:31ff). For example, Aglietta (1979:144-5) notes the fascinating empirical studies of workers' collective manipulation of the pace of their labour in piecework payment regimes to reflect their judgement of the attainability of the output norms. These reactive developments, while they work within the overall structure of control (accepting the managerial prerogative of work-pacing), nonetheless effectively neutralise some of the more onerous aspects of both scientific management and later, of Fordism.

6) Finally, notwithstanding Ford's high-wage regime (the motivation for which should now be clear), the realm of circulation and realisation initially remained unreconstructed. The restructured corporations were as susceptible to overaccumulation as those that they superseded. In fact, the distribution of income became more regressive through the 1920s, with the share in disposable incomes of the top 1% increasing from 13% in 1923 to 19% in 1929 (Nyland 1987:71). Profits rose in the 1920s by 80% and a proportion of this rise has been attributed to the application of Taylorism/Fordism.

The ultimately transitory nature of this improvement in profit in the inter-War period scarcely needs recalling. Neither was the macroeconomic implication of this regression in the distribution

of income over the 1920s lost on radical liberals. By 1930, some Taylorists were arguing for the extension of the corporate planning structure to the level of the nation and in certain cases, socialisation of the means of production: similar calls were more famously issuing from underconsumptionist circles.

Americanism in Europe:

In the pioneering pre-War environment, however, these issues seemed of little moment. Indeed, the face of Americanism was turned confidently outwards, on an expansionary international plane. The fate of the American production systems in Europe is of particular interest here, insofar as the difficulties of migration indicate with great clarity some of the preconditions for success.

It was in Germany and Italy that the potential implications of America's extraordinary new productivist footing were first recognised in Europe. The establishment of the State-industry *Werkbund* in 1907 (including left and left-liberal politicians) in the former country, and the increasing cultural influence of ultra-right Futurism under Marinetti in Italy, heralded the start of a long and contradictory infatuation with Americanism¹¹.

In Italy, the Futurists had reified the technocrat and lambasted parliamentary institutions: there was thus a ready connection after the First World War with emerging fascism. Mussolini's *produttovismo* initially elevated the expert technocrat over the extant State bureaucracy, with its corrupt and parasitical inclinations. The *gruppi di competenza* were to restructure industry and lead the fascist assault on the State apparatus.

The syndicalist themes were progressively dropped to 1924, however, when fascist control of the State apparatus looked secure: then, the *gruppi di competenza* were decisively subordinated in a new structure to Party control. As Maier recalls, the trend at this time on the European right was to augment and partially to displace the technocratic emphasis with vitalist and nationalist themes (thus, the Italian flirtation with the *combattenti*, or war-veterans, and the rise of Spenglerism in Germany).

Yet, a programmatic commitment to modernisation clearly remained. The process of rationalising industry would be founded on the arbitration of factory interests (the residual and fading commitment to syndicalism) in order to boost productivity. The formation of ENIOS by big Italian manufacturing to push labour efficiency and corporate interests signalled precisely who

would arbitrate and portended the increasingly reactionary turn. Nonetheless, the lure of collaboration to union bureaucracies was strong. While the A.F.L. co-operated in the United States, rationalisation was also embraced by the C.G.T. in France and the A.D.G.B. in Germany.

Rationalisation was also intended to seize the resources of backward sectors- in particular, those of the petit bourgeoisie, which was deemed structurally incapable of making the transition to modern practices, but the feudal estate owners proper could also face sequestration. This perception of the petit bourgeois as inveterately backward was common property in Europe at this time. In France under Poincaré between 1926-9, efforts were similarly made to restructure and concentrate small capitals into oblivion on the altar of scale¹². Thus, rationalisation was increasingly presented in terms of the pursuit of size economies and managed (labour/corporate) markets.

The roll-call of obstacles to a Fascist-led modernisation in Europe was then, formidably long: the petit bourgeoisie; the *latifundia* and peasant farmer; a corrupt and indolent state bureaucracy and 'obsolescent' parliamentary system; and the social democratic and communist organisations of labour. Furthermore, the reformist pretensions of Taylorites and the lingering commitment to syndicalism still offered consensual possibilities which were potentially dangerous to national bourgeoisies that had only recently enjoyed workplace anarchy and attempted communist revolutions.

There lay beyond this domestic *travail* the antagonism of nations and the effacing power of international (foreign) capital. In a European atmosphere of virulent national chauvinism, the phenomenon of 'Americanism' was viewed with increasing ambiguity. On the one hand the U.S. had undoubtedly borne a higher form of productive organisation. On the other, it stood at the centre of an intensely threatening neo-colonial finance network, which operated under the hypocritical cloak of representative democracy.

It was in this confused and volatile European context that Gramsci composed his singular work, *Americanism and Fordism*. This Essay, which constitutes one of the earliest and most perspicacious analyses of the impact of Americanism on the balance of European and world class forces, has been largely passed over in the renaissance of interest in Gramsci's work from the 1970s. *Americanism and Fordism* can be seen as a concrete application of his work on political strategy to socio-economic problems, including a detailed analysis of the *construction of an historical bloc*. In terms of the central aesthetic concerns of western marxism, such an emphasis on the political economy is remarkable in itself. In regard to Gramsci's own writings, the Essay

obtrudes. The thirty-six pages of *Americanism and Fordism* stand out starkly both from the main themes of the *Prison Notebooks* and from the common interpretation of Gramsci's work as irredeemably 'culturalist'¹³.

Gramsci, like Lenin and many other leading marxists of his age, was remarkably sanguine about the character of the American innovations. This reflected in part a residual adherence to the teleology of Second International marxism (the rigid determinism of sequenced 'stages' of capitalist development), from which even Gramsci could not completely escape. Whatever capitalism undertook in order to master the organisation of production was historically 'necessary' for the leap into socialism.

Additionally, the Taylorite claims to scientificity resonated with a rationalist/scientific perspective on marxism that was closely associated with Engels (albeit to varying degrees) and especially with Plekhanov and Kautsky. After 1917, Lenin's positive assessment of Taylorism-founded largely on such propositions- gained influence in the Communist International¹⁴.

A combination of these factors persuades Gramsci that the American development of the control apparatus represents a significant move towards a planned economy, and the massing and simplification of labour thereby becomes a step towards collectivism. (Here, Gramsci decisively understates the importance of Taylorite labour fragmentation as a key element in forestalling an identity of the collective worker. This divisiveness formed an integral part of the new system and its underestimation in itself casts doubt on the strategy of a 'socialist Taylorism'.)

In addition, as Gramsci's English editors note, Gramsci wrote on Fordism in a period of retrenchment of working class power in the West. Time and again, Gramsci recalls the suppression of national labour organisations in both Europe and the United States and the receding tide of revolutionary commitment in the intelligentsia. The new forces of production are cast as objectively revolutionary, but the limits of that revolutionary process are inscribed in the fundamental characteristics of the capitalist mode of production. As Hoare *et al* observe, Fordist modernisation is the archetype of a Gramscian passive revolution. The contradictions that the new forces ameliorate or eliminate will be replaced with new ones, radically different from but of equivalent gravity to, those so recently displaced or resolved (Gramsci 1971:277-8). Thus, when the new methods are universalised and the long run tendency for the rate of profit to fall comes once more to the fore, the objective conditions for revolutionary advance would again become available.

These are the limiting perspectives in which *Americanism and Fordism* was written: a recognition of the progressive nature of capitalist production methods when seen against a broader historical sweep, combined with a hard-headed assessment of the current weakness of the working class and its capacity to resist.

Gramsci focuses on the potential for transfer of the new systems from the United States to Italy. He emphasises throughout how complex and contradictory the class impact of Fordism in the encrusted class formations of old Europe would be. Thus Fordism would impact deleteriously on established labour movement bastions and could, if successfully implanted, destroy craft bases of labour process control. It would also erode the multiple feudal residues in southern Europe.

Ultimately, he is persuaded that the thrust of transatlantic competition will prove irresistible (a strong interpretation of the Development Thesis). The mechanisms of transferral differ however, from those of indigenous growth. Whereas the American model was internally-generated in 'the industrial and productive world', any transformation in old Europe must come '...from the outside, through the... construction of a formal judicial arm which can guide... the necessary evolution of the productive apparatus' (Gramsci 1971:280).

Gramsci poses three key preconditions for the establishment of a Fordist regime in Italy:

- * *a 'rational demographic structure', with no major 'passive sedimentations' acting as blocks to a total productivist gearing in the social formation.*
- * *a state apparatus oriented single-mindedly towards the quest for modernisation on corporate terms thus enabling the new rational demography to be imposed in the teeth of opposition.*
- * *an extension of state-corporate regulation such that workers' reproductive activity is controlled to meet the demands of new intensive factory methods.*

The productive activity of all societies is informed by a demographic 'law of fixed proportions', a bounded relation between the productive and unproductive, between old and young, and between town and country, that promotes or arrests the generation of a social surplus and that profoundly affects its size. The success of Fordism in the U.S. has its root in the lack of accumulated strata of the unproductive.

In comparison, European history:

‘...has left behind a heap of passive sedimentations produced by the phenomenon of the saturation and fossilisation of civil-service personnel and intellectuals, of clergy and landowners, piratical commerce and the professional army’ (Gramsci 1971:281).

These are the ‘pensioners of economic history’. Modernisation implies their progressive reduction and elimination, as the new forces at the capitalist centre move out through the social formation. This process of disintegration of the classes of the antecedent mode of production by the forces of the new strikingly recalls Rey’s model of the transition. Gramsci gives a concrete example: Ford’s organisation of the commodity distribution system in house yielded cost and efficiency improvements (principally in terms of programming and rationalisation, but also in terms of security). This centralisation diminished the role of merchant capital: a ‘...reduction of the economic function of transport and trade to the level of a genuinely subaltern activity of production’. This process had no analogy in Italy, where such activities were if anything growing.

For Gramsci, Americanism implies a rationalised society, in which structure dominates superstructure and in which elements of that superstructure are brought into an ever more unmediated and functional relation to the productive base. This process centres on the subordination of all unproductive pensioner elements in a new streamlined demography.

The problem (then very public in Fascist work) of town/country relations is central to the project of implanting Fordism in the Italian soil. For Gramsci, Americanism is completely intertwined with urban organisation: the city is vital to a mode of production that demands the massing of productive resources on an unprecedented scale. This urbanism was brilliantly understood and eulogised in Futurist painting (most famously, in the works of Stella and Leger). In the United States, immigration maintains the stock of the labour force while permitting the formation of a dual labour market and a native labour aristocracy.

In Italy however, a lower relative birth rate in the cities than in the rural hinterland poses problems for the supply of adequately trained industrial workers. The urban worker is exposed to a ‘...general apprenticeship, a process of psycho-physical adaptation to specific conditions of work, nutrition, housing, customs etc’. Where there is an insufficiency of supply, this deficit can only be covered by the importation of rural labour, which is missing precisely this lifelong habituation. The cost of this for capital is posed in the form of increased production costs and indirectly, in terms of an heightened scope for political challenge to the system as a whole:

‘the low birth-rate in the cities imposes the need for continual massive expenditure on the training of a continued flow of new arrivals in the city and brings with it a continual change in the socio-political composition of the city, thus changing the terrain on which the problem of hegemony is to be posed’ (Gramsci 1971:296).

Gramsci’s concern here with the psycho-physical composition of the urban versus rural labour force connects immediately with his second major theme, that of the attempted regulation by Ford of the totality of public and private relations of his workforce. In a passage that strikingly recalls Balibar, Gramsci recounts the minimum social conditions (in the labour process) for the success of the Fordist project. It requires:

‘...developing in the worker to the highest degree automatic and mechanical attitudes, breaking up the old psycho-physical nexus of qualified professional work, which demands a certain active participation of intelligence, fantasy and initiative on the part of the worker, and reducing productive operations exclusively to the mechanical, physical aspect’ (Gramsci 1971:302).

This proposition echoes the hypothesis of non-correspondence between the demands of the simultaneity and the pre-given form of personality in the rise of modern industry. For Gramsci, worker opposition to Fordism that seeks simply to defend pre-existing handicraft skills and temporalities is historically reactionary.

The high-wage policy, Gramsci suggests, operates in part as a means of recompense for chronically deskilled workers now labouring to new, ‘more wearying and exhausting’ norms. In light of Raff’s work, this is a debatable point. Gramsci does recognise, however, the provisional basis of these high wages in the monopoly rents of leading U.S. corporations.

Gramsci also notes the wider attempt in the United States to control and channel workers’ hedonism in order to reserve their capacity for useful labour. Alcohol Prohibition, for example, was designed to eliminate wastage in the labour force attributable to its poisonous effects. (Interestingly, Gramsci sees little evidence of principled opposition to Prohibition from either workers or advanced capital. The illegal commerce, attendant ‘gangsterism’ and widespread corruption which brought it down was the product primarily of upper class trading interests). As part of this new ‘puritanism’, Gramsci also cites the attempts of leading corporations to control sexual promiscuity and family structure in ‘its’ working class.

‘The new industrialism wants monogamy: it wants the ...worker not to squander his nervous energies in the disorderly and stimulating pursuit of occasional sexual satisfaction’ (Gramsci 1971:304-5).

The reference here is clearly to the *Americanisation* programmes instigated by International Harvester (1910) and extensively adopted in 1914 by the Ford company. These companies sponsored barely disguised racist citizenship and language programmes in which the starting-point of Americanism was nakedly a language of production. The profit-sharing element in Ford’s wage innovation was made conditional on the achievement of behavioural norms in personal life which were monitored by the Ford Sociological Department (Henderson et al 1982; Meyer 1980). Under the impact of *Americanisation*, the proportion of non-English speakers at Ford fell from 35.5% in 1914 to 11.7% in 1917.

As Gramsci observes, this effort could not hope to succeed: the destruction in the combatant nations of the First World War of a generation of males had shattered the existing sexual morality. This was reinforced by the blatant sexual hypocrisy of the upper classes in the United States, which devalued much of the propaganda work. Gramsci registers the limitations inherent in these partial measures and suggests that the State would be obliged to intervene to universalise the message. Indeed, the City of Detroit had launched its own *Americanisation campaign* based largely on the Ford model; and the City programme became in turn in 1915 the basis for a large-scale Federal programme.

For the *rationalised* American worker, there is a capitalist equivalent: Gramsci contrasts the American multi-millionaire (who ‘...continues to be active right up to the last day of his conscious life’) to the typical parasitical Italian State functionary, who desists from any productive activity after twenty-five years in the labour force. The relentless vocationalism of the capitalist has its roots in the powerful ideology of ‘frontier’ individualism. Here, Gramsci notes the first signs of a weakening in the American productivist orientation, with the families of the rich increasingly turning to unproductive pursuits and assuming parasitical functions. They are there-with gradually ‘...being transformed into castes just as they have been in Europe’ (Gramsci 1971:306).

Allusion has already been made to certain potential Fordist demands on the state ideological apparatus. The state also has a key role to play in the fields of distribution and taxation, law and planning. The first priority is to reduce the volume of ‘parasitical’ savings, by levying direct taxes, and then to mobilise resultant revenues to promote industrial restructuring. Additional

changes would be required to company law (including the registration of share issuance and ownership) and to the management of the national debt (chiefly its gradual amortisation).

The Gramscian Model- an assessment:

Americanism and Fordism is in many ways a path-breaking work. Its suggestive power lies in part in its breadth: Gramsci seeks an understanding of the new regime that recalls, *inter alia*, demography, state power, labour process control and class consciousness, into a single frame of reference. His overall judgement is clear: that Fordism represents an historically advanced productive base which capitalism will have the greatest difficulty in generalising across the continents or sustaining into the future. In Europe, important fascist constituencies stand opposed (through the most immediate economic interest) to 'rationalisation' while others in the same fascist coalition hanker for American economic power without the supporting 'hypocrisy' of Americanism. Gramsci quite deliberately left the issue of which constituency would prevail open.

It is interesting in the context of this Essay that Gramsci regards the Fordist struggle to restructure worker consciousness and habits as a key element in American modernisation. He views the potential for success in this as being restricted and uncertain.

This emphasis prompts an important theoretical question: does the development of this strategy on the part of advanced capital, and the subsequent range of worker responses represent, then, that terrain on which historical materialism and personality come into decisive contact? Such an hypothesis would certainly hearten Edward Thompson. It would imply a move away from the Althusserian model of the mode of production/historical forms of existence of individuality couplet to a diachronic (and *willed*) relation between the social formation (simultaneity) and a 'lived experience' of the proletariat. This would constitute just the shift from structure to agency that Thompson had demanded.

This is a tempting path down which to proceed: but its destination is in totalising theories of ideology (habituation; dominant ideology theses; and so on) or in voluntarism. The problems with this approach are well documented in relation to the unilateralism of western marxism in the face of a total capital-logic and ideological hegemony. Theory then posits a *direct correspondence* between the ambitions of ideological projects such as the Ford-led Americanisation venture and the personality and consciousness of the labourer. In short, the former comes to dominate the latter.

This leads in one form or another to a familiar view of the personality as a simulacrum of the totality or as a product of the social formation: that is, to compatibilism. The result is that the objects of two sciences (the individual and the social formation) are, against all obvious empirical evidence to the contrary, conflated. This is also the ultimate destination of Gramsci's thinking on this score.

There is, however, an alternative route which builds on the epistemology of *Reading Capital* and which promises potentially more fruitful results. It is notable, first, that these *conscious* interventions by Ford and others are neither the only or the most important biographical data in the Fordist restructuring of labour that lay at the heart of the new American systems. The supreme importance of the Taylorist deconstruction of handicraft 'time', and the Fordist reconstitution of labour time as an adjunct to the temporality of the line has been consistently emphasised above. It is at least plausible to suggest that these changes would be of enormous significance in determining individual biography and the definition of the collective labourer. As will become clear, the full implications of this approach differ very substantially from those exemplified in the writings of the western marxists.

Fordism and the Theory of 'Epochs':

Finally, it is appropriate to reconsider, from the experience of the onset of Fordism, the very difficult relationship between epochs (Althusser's 'simultaneities') in the development of capitalism and periodic major change in the structure of production. Coombs' (1984) review of recent contributions to long wave theory is helpful here. He indicates that the origin of the epochal search by capital for radical innovation in the forces of production lies in structural barriers to valorisation posed by the anti-systemic integrity of the individual/collective labourer. At the point of exhaustion of the pre-existing epoch, political and ideological factors assume great significance in determining the move (where such a move is available) to a new structure of production.

Both of these factors (anti-systemic blockage; politicisation of the social formation) were in evidence in the political economy of the United States in the early 20th Century. There had indeed been significant labour unrest over the preceding period. Moreover, the craft structure of labour was a powerful historic block to the extraction of surplus value. As has been shown, Taylorism was specifically directed at skilled labour, precisely in recognition of its pivotal role in many industrial labour processes.

On Coombs' second generality: the sustained attempt to build a productivist orientation into U.S. culture (the Progressive Era) represented just such an attempt to construct a coherent ideological formation in which to rebuild the conditions for valorisation. These factors were even more sharply present in a later, emulative Europe.

Both Coombs and Walker (1989) press the important distinction between *process* and *product* innovations: indeed, Walker goes so far as to describe that relationship as dialectical. It is truistically, through process (including methods) change that the productive forces are restructured. A vital productive base is a necessary condition for healthy accumulation and the maintenance of the capital relation itself. Ultimately then, process change is the prime mover in a functional innovation mechanism. Process change is tied in with the fate of the capital goods sector: hence, the classical emphasis in marxism on Department I.

There are other grounds for prioritising process innovation. As Gramsci suggests, the demands of capital for corresponding types of personalities (the Fordman; the ever-restless U.S. capitalist) are centred on production necessities. A theoretically and practically important encounter takes place at the point of production, as the biographical and the economic come into direct contact. Process change impacts on the lived experience of individuals in a particularly sharp manner at this point. It is in the labour process that the features of non-correspondence between the economic and the individual and collective worker first present themselves.

Finally, Coombs' assertion that major change in the labour process is not coterminous with the epochal transitions between simultaneities as such is entirely valid¹⁵. Again, it is necessary but not sufficient: a host of secondary factors need to be considered. One such condition is clearly the degree to which socially adequate qualities of labour power can be secured, and within this, the form of personality is an important consideration. Also of significance are issues surrounding the property connection (the degree of concentration and centralisation of capital and the accompanying distribution of risk); and the mode of circulation of capital (turnover times) in capital-saving.

The dynamic linking the productive forces with the development of epochs in the capitalist mode is, then, an attenuated one. This attenuation underpins the diverse ways in which the Fordist organisation of the technical resources of modern industry has manifested in different social formations and over time. The portrait of Fordism presented by for example, the so-called 'New Times' theorists in recent years consistently elides labour process change with epochal transitions in an astoundingly casual manner.

Conclusions:

While Althusser and Balibar made outstanding contributions to the theory of modes of production, there were very serious problems in terms of establishing an equivalent theoretical status for their 'simultaneities'. This is most marked in their abortive theory of transitional modes of production. The perception of a need for such an intermediate category of historical forms goes far beyond structural marxism itself. With substantive (and revealing) differences in taxonomy and emphasis, this class of concepts was embraced by Marx himself and by many in the Second and Third Internationals. The work of Trotsky and particularly Gramsci is of great pertinence in this respect. In contemporary terms, this theoretical framework has been most notably utilised by Ernest Mandel, Michel Aglietta and also by the Japanese 'Uno School'.

Is this theoretical blockage in the Althusserian project immanent in the structuralist method itself? The work of Rey suggests not. Where classes (defined 'in-themselves') are introduced into the determination of the ensemble of modes of production which constitute social formations, then fruitful results may yet be achieved. Rey's model of hegemonic classes-in-themselves in transitory coalitional arrangements based on divergent socio-economic interests is potentially highly fruitful. The grounding of these coalitions in overlapping modes of production in the economic base of the simultaneity provides the necessary structural co-ordinates within which these diverging coalitions of the exploiters may be held together or undone. Such considerations eluded Althusser and Balibar.

It is an extension of the same failure that Althusser and Balibar were unable to establish a correspondence at the level of these simultaneities with their higher order (synchronic) couplet 'mode of production:personification'. Structuralism was incapable of translating these concepts into a theoretical apparatus founded on historical epochs. For so long as the internal form of the simultaneity remained indefinable, there could necessarily be no exploration of the equivalent production of adequate individuality (nor, of course, any analysis of the contradictions and inadequacies in personality development which may be presented at this theoretical level).

Gramsci's monograph on Fordism brilliantly explores the range of personal qualities that advanced capital was seeking from its workers in the new labour processes of modern industry and the problems in the way of producing this new personification. This is a localised case of the dysjuncture which Balibar summarised in his non-correspondence hypothesis. For whatever its tentative quality, *Americanism and Fordism* is in this respect (as an indicative account of the biographical changes sought by capital) already in advance of the structuralist account.

Yet this datum (that which capitalism seeks) represents but one half of the essential relation that links historical materialism with a theory of the forms of individuality. Clearly, there is another transforming process in the constitution of individuality itself. Changing social needs are processed within an individual mechanism of reproduction, which is ontologically and epistemologically distinct from the commanding structures of the social formation. The locus of this encounter is of course, the *personality*. A materialist account of the internal and external relations of the personality, and therefore of the forces that drive its development, is founded on the social relations that underpin this procession, but new knowledge and theory is required to specify this key relation of the internal to the external. Such an attempt, the most ambitious to date, was produced, in a development that owes much to the work of the Althusserians, by Lucien Sève.

APPENDIX 1: Brief Observations on the Theory of Epochs.

*The capitalist mode of production operates through an historically unprecedented accumulative discipline. The law of value essentialises this drive, which presses with equal measure on the exploiters and exploited and which is supremely indifferent to all concrete factors (specific individuals; specific labours; specific commodities). No comparable mode of production has matched this extraordinary and decentralised system of discipline in terms of a general technical or organisational competence: a (yet) unparalleled capacity to innovate. The Development Thesis that underpins this analysis forms a central part of marxism's double-edged interpretation of capitalism. Yet this proclivity can only operate in an unrestrained manner in the abstract theoretical universe of modes of production. A lower level of analysis must be capable of understanding the intermittent nature of this feverish accumulation tendency, within which certain periods and cultures, which are recognisably dominated by capitalist relations, exhibit a surprisingly weak **emulation drive**.*

Some of the possible explanations for this counter-tendency have already been identified in the theoretical framework outlined above. It will be recalled that Marx saw realisation and the supply of raw materials as the crucial countervailing tendencies. In relation to the introduction of the new American systems, the frustration of many in the Taylor Society with the slothfulness of the vast majority of capitalists who shunned the methodology and accumulated practical experience of scientific management for two decades and more, is striking testimony to the only partial efficacy of this Development Thesis. Again, the relatively slow incorporation of Ford's dazzlingly successful production methods, even in his home automotive sector, is strikingly suggestive. Similar disappointment has been repeatedly voiced by diverse modernists and innovators in the subsequent period too.

Erik Dahmen's monumental study of the technical/organisational foundations for the inter-War sectoral transformation of Swedish industry is illuminating in this regard.

*For Dahmen, the pace at which product/process innovations have been disseminated has been slowed on numerous occasions in Swedish industrial history by the **limited extent of the market**. Dahmen cites the cases of ASEA in nascent electrical engineering, and Skanska Cement AB in concrete products, as two turn of the century examples in the capital goods sector. The expansion of both was hindered by the lack of export markets and by the limited scope of domestic demand. These realisation problems are but one species of the countervailing elements retarding the emergence of a more general and linked structure of sectoral modernisation. These sectoral components of a larger structure of accumulation are mutually interlinked (conventionally, through inter-sectoral 'forward and backward linkages'). The larger structure is theorised as a **Development Block**. This concept, which is central to the trajectory of the work as a whole, connotes distinct processes in each historical epoch.*

In the initial phases of Swedish industrialisation (the establishment of manufacture), a formal, technical basis for understanding the moment of shift to relative surplus value extraction is adequate.

'Rapid expansion required growth in a combination of components as well as technical advances. These requirements were sometimes hard to meet in an initial stage when the development blocks often could not be completed because certain preconditions were not fulfilled. Development would often be slow as long as a technical component was missing. But when the "missing link" had been found, a cumulative expansion followed' (Dahmen 1970:74).

*Incomplete development blocks '...not only prevented numerous projects from being undertaken but also hampered projects already underway' (Dahmen 1970:71). The large British losses in Swedish railway infrastructure and mineral extraction in the 1880s illustrate the latter contention. Further, where over-production on the basis of immature markets threatened (entrepreneurial 'malinvestment'), take-over by far-sighted finance houses with the liquidity to complete the development block was commonplace. The emphasis in the later periods thus diverges from narrowly-defined technical imperatives, with a new emphasis on the key role of **capital centralisation** (here clearly echoing Hilferding and Lenin). This is the logical concomitant in the property connection to the tendency under American systems production to amass dead and living labour in a new spatial and labour process configuration.*

In the inter-War period, Dahmen characterises the 1920s as a decade of high invention but relatively low dissemination. Loan capital was scarce (tight credit conditions) with internally-generated funds also at a recessionary premium. Furthermore, the new 'rationalisation' innovations in transfer systems here characterised as Fordism, themselves demanded the development of considerable operational experience among the new managerial elites; Dahmen conjectures that the 'structural tensions' experienced in companies in the 1920s are largely explicable in terms of their working their way up this methods curve.

The 1930s saw the emergence and integration of a number of new development blocks, including inter alia the Swedish steel industry and crucially, the electrical engineering sector under the leadership of ASEA and Ericsson. This was made possible in part by the stabilisation of profit rates and planning horizons ensuing from effective cartelisation (Dahmen 1970:360-1). This echoes that generic trend noted above in the Italian, French and German inter-War contexts towards market control and stabilisation (corporatism).

In electrical engineering, the leaders established subsidiaries downstream to bid in a competitive manner for contracts in new or expanding public infrastructure and strategically, to open up new markets.

While industrial development in Sweden lagged not inconsiderably behind the United States at this time, automotive production- and the associated components supply sector- was of rapidly growing importance over the 1930s. This was symbolised by the opening of an integrated assembly plant by the quasi-Fordised General Motors in Sweden at the turn of the decade. A similar linked pattern of development was strongly evident here too.

Dahmen's study is fundamentally empirical, and speculation on the general implications of his findings is all too infrequent. However, in his Concluding Remarks on the study of long run industrial development, he rightly observes:

'...it would appear ...fruitful to proceed somewhat independently of the business cycle issues and to focus, for example, on the periodicity of the industrial transformation process' (Dahmen 1970:427),

...where this periodisation is founded on the identification of 'economic development and the firm structure of industries'. This infers a methodology of 'leading and lagging sectors', within a superordinate pattern of investment penetration and labour process restructuring that gives rise

to epochal spurts of modernisation. The important kernel to Dahmen's analysis is that it clearly registers the importance of the property connection in building the conditions for sustainable accumulation (and thus epochs). The structure of corporate ownership, and the specific conditions then dictated in the supply/purchasing networks that grease the Development Blocks, are as necessary to the process of epochal formation as the pace of innovation and embodiment of technical change.

There are clear distinctions here from the 'long wave' approach, which tends to emphasise autonomous technological change. Thus, Christopher Freeman's concept of a 'new technology system', for example, focuses on the relation between new processes/products and the pace of accumulation. This univalent approach practically assumes effective integration of functions both within and between firms. As Elam (1990) notes, this is- despite protestations to the contrary- a neo-Schumpeterian perspective. It 'makes insufficient room for the less tangible social innovations which always coexist alongside the more hard and fast technical ones' (Elam 1990:13). The specific combination of the Development Block is just such a key social innovation.

Dahmen's work also suggests an increasing complexity of relations between the property and technical (real appropriation) connections over time. Modernisation bequethes a chronic and enduring diversity of forms of labour control and valorisation imperatives. As Elger notes, the:

'... "completion" of real subordination is not uniform or entirely coherent- for example, the objectification of capitalist control ...and the augmentation of the reserve army of labour press variously on different sectors, and in different phases of the cycle of accumulation' (Elger 1979:66).

Dahmen's Study has shown that the process of modernisation demands multiple changes in all aspects of the valorisation process. Thus, the moment of transition (at the sectoral level) is conditional on the successful resolution of a number of interlinked variables of accumulation, including, particularly, the structure and availability of investment funds. Dahmen has thereby given concrete expression to Trotsky's thesis of combined and uneven development in the context of an historical social formation.

NOTES TO CHAPTER 2

1. Ultimately, of course, the capitalist fraction comes to assume dominance. As Wood recalls, the specific aspect of capitalism's superiority is its internal (structural) requirement impelling the development of the productive forces, one unmatched by any preceding mode. Yet the extended duration of the transition in Europe (and the geographical incompleteness of that revolution) suggests that only a weak version of the famous 'Development Thesis' is in operation here. The Thesis is even more problematical when it is applied as unilinear causality to earlier modes or to transitions outwith the A.C.C. bloc. (Cf. E.M. Wood [1984] 'Marxism and the course of history', *New Left Review* 147: also, Erik Olin Wright [1983] 'Gidden's critique of marxism' *New Left Review* 138; Callinicos [1987] ch.2, provides a valuable summary of the whole debate).

2. This question, of the rationale for innovation, is of course itself a very complex one, especially where more general conclusions are sought over longer time-frames. As Coombs notes (1984:675ff), a transhistorical deskilling hypothesis is far too simplistic, indeed runs counter to the available empirical data. These studies indicate for the contemporary capitalist economy, that the complex abacus of costs and control can generate a diversity of skill and labour process combinations.

Coombs does not however, discuss the fundamental distinctions between the development of capitalist instruments of control and the operable skills of the labourer. The conventional assumption of a negative linear relationship between these two factors is becoming increasingly indefensible. There have been a number of occasions in recent years in which new and powerful remote control systems have been established in hand with systems that actively reskill at the point of production. Flexible manufacturing techniques, for example, build on workers in possession of a broadening band of skills.

All that is being claimed here, at the moment of introduction of scientific management, is first, that control was the emphasis given to the project by its prosthelatisers, which is distinct from a hypothesis of deskilling and which is an important datum in its subsequent dissemination. Second, insofar as deskilling was a feature of Taylorism, this restructuring of skill was primarily undertaken according to cost calculations within a tightening overarching control structure. Third, it is asserted that the deskilling associated with the introduction of scientific management was an atypical response to a particular stage in the development of capitalism and to the specific balance of class forces then prevalent. Taylorism was a stepped movement in the development of the productive forces. The precise nature of that step will be further discussed in Chapter 4 below.

3. *There was of course, nothing of charity in this. As Doray notes, ergonomic work was dedicated to the establishment of optimal rates for the productive consumption of labour power:*

'(f)or the industrialist or factory-owner, it is less a question of making men and animals yield the greatest possible quantity of absolute labour each day at risk of compromising their health than of using, in the most advantageous way possible, all the available internal action provided by food and rest' (Poncelet 1839, quoted Doray 1988:76).

4. *An improvement in the immediate working environment was potentially common ground for a Taylorite management and the worker collectivity in the light of the aforementioned fatigue research and ergonomics undertaken, among others, by Taylor. The fact that the application of this research only assumed importance in the changed class circumstance of wartime labour shortage is obviously theoretically the key fact.*

In a similar vein, Elger (1979) has shown that the assertion (à la Braverman) that Taylorism was an innately deskilling methodology is difficult to sustain either over time or at the level of the collective worker. Again, where a collective deskilling occurred, this was a result of the extant balance of class power. Further, Elger shows that niches of specialised expertise/pseudo-craft labour can actually be called into being as a result of the introduction of Taylorism; or that reskilling may be imposed by workers on management in later situations of generalised labour shortage by the strengthened collective worker. Elger's work, inter alia, provides further support to the vital distinction between capitalist control and the content of workers' skills in the labour process already referred to (see note 2 above and Chapter 4).

5. *As estimated by D. Montgomery, there were less than thirty plants in the United States that had been completely restructured according to the principles of scientific management by 1917 (Montgomery 1979 *Workers' Control in America*).*

6. *Gartman (1979) recounts the incremental productive development of the Ford Motor Company from crafted labour through scientific management to non-mechanised and then to the fully mechanised line system over the decade from its foundation in 1903.*

In the early years, small scale production coupled with extensive reworking of poor quality bought-in components virtually necessitated highly skilled team working. Component variability reduced significantly with the general and rapid introduction of new machine tools in the 1900s: furthermore, in 1906, Ford decided to bring much of this component work in-house. The Company's strategic

dependence on scarce and truculent skilled labour then became the central focus of managerial innovation.

In the first instance, Ford management responded by deepening the division of labour and concentrating work activity at the appropriate skill level. Work teams were increasingly dedicated to particular manufacturing operations such as transmission, axle and spring fabrication and assembly. As the scale of production increased, part working was spatially aligned to parallel the assembly flow in a 'progressive work layout': this necessitated the introduction of highly specialised machine tools.

Then ensued from 1908 extensive experimentation with primitive line operations. These 'non-mechanised assembly line' (gravity-fed) methods, encapsulated in the work slide, provided physical links between work stations. They enabled further task specialisation as well as considerable speed-up. Thus, fabrication of the piston/connecting rod sub-assembly, previously the task responsibility of a single worker, was divided in three, with time reduced from 3 minutes 5 seconds to 1 minute 24 seconds. The simple truth about physically linked operations, that they tie the output of one worker to the input capacity of another was not lost on Ford management, which proceeded to reward 'pacesetters' with incremental payments.

*7. Coombs cites the German **Platzarbeit** system as an extraordinary example of the pre-existing importance of the internal transfer time to the organic composition of capital. Under the **Platzarbeit**, more time was spent in moving the product between work-stations (transformation sites) than in the process of production itself. This problem anticipates again certain aspects of contemporary Japanese flexible manufacturing: the efficiency of the kanban system is founded in part on studious planning of plant layout and operations research.*

8. This aspect, the role of supervisory staff, is one of the issues over which the strategies of scientific management and Fordism most clearly diverge. In the former, the supervisory function is enhanced and also made more prominent to the worker at the point of production: in Fordism, the anterior programming of the work stations and pacing of the Line renders much of the direct human coercion redundant.

The trend over these years was for the density of supervisors to rise. There was one supervisor to forty-five workers in 1900, whereas by 1920, the ratio stood at 1:24.

9. As Doray notes:

'(a)ccording to Ford Factory Facts, roughly half the workers employed at Ford in 1920 were foreigners; this was slightly below the average for American factories. Even so, fifty-eight nationalities were represented at Highland Park in 1917' (Doray 1988:182 n.16).

10. *The emergence of the scientific-technical intelligentsia was itself a contradictory process in class terms. With no history and no obvious class affiliation (a 'contradictory class location', as Erik Olin Wright puts it), the engineer was a potentially volatile operative. The strategic position of such personnel in Taylorism, moreover, rendered capital potentially vulnerable to any radicalisation on the part of this group.*

The unfolding strategy, as interpreted by Meiksins, was double edged. First, American capital supported the development of educational and other infrastructures (including lines of corporate progression) for the engineers in particular. The objective here was to professionalise and neutralise. Second, and reflecting the possible dangers in taking professionalisation too far, capital sought to maximise access to the new professions and block formation of guild-type systems. Thus:

'(t)he thrust of capitalist involvement in the evolution of the engineer has been to support a professionalizing project, but one that does not include a viable claim to professional autonomy... (However), no support has been forthcoming for attempts to rationalize or limit the spread of professional institutions. For, to support any such limitation would be to help the occupation to gain control over the market, and thus to gain autonomy' (Meiksins 1984:201-2).

11. *In terms of the principal structural differences between the economies of the United States and Europe, and intra-European distinctions that materially affected the introduction and promulgation of Taylorism, two areas appear, by consensus, to be critical:*

- * the (non-)availability of imperial markets as a realisation 'cushion' for the American economy (Hobsbawm). The fact that the weaker economies or the vanquished without Empire embraced productivism in Europe is a symptom of this.*
- * a generally lower level of wages in Europe promoting capital-saving investment compared to the labour shortage/ mechanisation tendencies in the United States (Zerzan/ Samuel).*

A great deal of (rather open-ended) work has been undertaken to estimate the relative substitution characteristics of the U.S. as against Britain. As a general reflection of the importance of these differences, Samuel's judgement is not untypical.

'In the United States... labour-saving improvements were a very condition of capitalist growth, and self-acting machinery, which in many cases the Americans invented...made much more rapid strides than it did in mid-Victorian England' (Samuel 1977:48).

12. This aspect of the impetus to 'rationalisation' symbolises the assumption of capitalism to hegemony over feudal and other anachronistic 'remnants' in these social formations. These public signs of the impending destruction of the feudal estates and petit bourgeois property are the clearest social expressions of the attainment of Rey's third stage in the transition.

*13. Perry Anderson exemplifies this. On the one hand, he applauds Gramsci's contributions to the study of the state, the relations between civil and political society, et cetera. Thus, Gramsci was '...the greatest Marxist political thinker in the West' (Anderson 1976:n.75). On the other, '...Gramsci's silence on economic problems was complete' (Anderson *ibidem*).*

*It is ironic that this judgement was passed in the same year as Aglietta's acclaimed *A Theory of Capitalist Regulation* was published in France, a work which is clearly profoundly indebted to Gramsci's *Essay*. To repeat a point against Anderson that he has himself made about Althusser: the importance of an author's work cannot be judged simply in its own self-contained terms. Rather, the judgement must be made in terms of the wider catalytic effect on a whole intellectual community; that is, the formation of a coherent research agenda.*

The marginalisation of this monograph is more generally characteristic of the Gramsci revival of the 1980s. Indeed, the only systematic account in English of Americanism and Fordism to date is to be found in Clarke (1990). Of course, that neglect is hardly accidental: it reflects the overriding cultural preoccupations of those 'New Times' theorists.

14. 'For Lenin, Taylorism was part of the general advance of capitalism, which paved the way for socialism. Lenin justified Taylor's methods on the grounds that they would lead to a reduction in working hours to "six hours of physical work per day for each adult citizen and four hours running the state"' (Smith 1983:13-14).

Clarke goes an important step further on this score. He sees Americanism and Fordism as Gramsci's utopian statement. In this programme for the future, direct parallels can be drawn between the rationalised social formation (and the rationalism) of Fordist production and the organisation of the socialist interregnum. This project, according to Clarke, included a major element of meritocracy, '...in which social position was (to be) determined in strict accordance with technical function' (Clarke 1990:141).

If Clarke's interpretation is accepted, then it only serves to indicate the great paucity of anticipatory resources in the Communist International at the time!

15. Levidow makes the same point, in a critical commentary on the technological determinism of the 'New Times' British Communist Party of the late-1980s. As he notes:

'...the assembly line did not give us Fordism. At most, that labour process created the potential for several different regimes' (Levidow 1990:66).

Aglietta's response to this is altogether more ambitious. Again, epochs are founded on the historical periodisation of accumulation (which he baptises as 'regimes of accumulation'). Such 'regimes' do though involve a significant conceptual extension, for they embrace both a process of production and a corresponding mode of consumption of the social product. This is a problematical hypothesis.

The projection beyond this of 'modes of regulation' as wider institutional structures sustaining the accumulation cycle is even more difficult to defend. When a 'theory of regulation' thus encompasses so many of the factors that constitute actual societies, then it becomes extremely difficult to draw a line between them. Conversely, the particularity of the relation between the regime of accumulation and the mode of regulation in Aglietta's study raises a very obvious and widely put question: what is the significance of a theory that basically reduces in its specificity to the stylised history of but one country?

This is exactly the point of the theory of epochs: a focus on the long run development in the forces of production, including the property connection, coupled with a recognition of significant contingency in the wider reproductive relations in the social formation. To go much further than this is to conflate theoretical entities and invite absolutely legitimate empirical refutation.

CHAPTER THREE

MARXIST TIME ECONOMICS: THE CASE OF LUCIEN SEVE

'The legitimate generalities from which the science of biography can start... are first of all those which have their foundation outside the concrete individual as such: psychobiological knowledge on the one hand, psychosocial on the other, in particular the social forms of individuality which underlie all the temporal relations of the individual life' (Sève 1978:382).

There are very few attempts from within marxism to establish a materialist account of those forces that drive or inhibit the development of personality. Lucien Sève's *Marxism and the Theory of the Personality* seeks, exceptionally, to provide just such a framework. It is a halting and uneven work: its thematic is legitimation- the unending search for a (positivist) scientific foundation from which to defend a marxist inquiry into the field of personality development. In this attempt Sève quite unsurprisingly, failed. From the deployment of concepts that were innately ambiguous and thus fatally impaired ('scientific humanism') through to an inadequate account of the political economy, Sève's quest to define an inviolable space for a marxist ontology was doomed from the outset.

In direct proportion to this defensive posture, the *Theory of the Personality* is stylistically flawed by an 'extraordinary prolixity' (Timpanaro), an endless circumlocution. There are also those constant paeans to the life of a 'militant'. Behind this flimsiest of screens, one is beckoned to the French Communist Party, of which Sève was an orthodox Central Committee member in the 1960s¹.

If these lapses make the reading of Sève's work an act of some patience, the rewards are there, clustered in its concluding section, 'Hypotheses for a scientific theory of Personality'. Here at last, after three hundred dense, tortured pages, Sève begins the task of producing those new concepts and structures that precisely substantiate, more than any ontological *coup de grâces*, that marxist legitimacy that he had sought.

The methodology of the 'Hypotheses' is to work from basic to synthetic conceptual categories. Thus Sève analyses the concepts of 'need', 'act' and 'capacity' as such; then he turns to relational forms (relation of 'need:act' for example); and finally, there is the fascinating (but all too brief) excursus of the total relational form of the personality, its 'infrastructure' and ideological 'superstructures'. This method is reproduced in the brief resumé of Sève's work with which this Chapter opens.

As Althusser noted, however, there is no such thing as a purely neutral 'reading'. This is also the case here. Much of the philosophising of the *Theory of the Personality* is, to be blunt, irrelevant to the case that Sève needs to make: it is therefore, for all practical purposes, ignored in what follows.

It should also be noted that there are connections that Sève projected but, for diverse reasons, could do little to substantiate. This is the hidden research agenda of a work with great unfulfilled promise. Sève contends, for example, that the marxist theory of personality is imbricated in historical materialism on the one hand, and biological science on the other. This point is amply sustained in theoretical terms but there is no convincing practical demonstration of what is an extremely important hypothesis. (Undoubtedly, should such an attempt have been founded on the distorted economic analyses of the mid-1960s PCF., the result would anyway have been abortive.) These lacunae are specifically addressed in the reading of Sève offered here.

As this reading makes clear, Sève has provided a potentially powerful framework within which further research may be pursued. The cogency of his work is demonstrated by the brief comparison then drawn with two alternative accounts: one essentially neo-classical and one of a more radical affiliation. Finally, there are numerous scattered criticisms of Sève, made in isolation by a number of Authors over the subsequent period, which are brought together and augmented below and which point a very fruitful way forward to the concrete discussion of the following Chapters.

First, what exactly are these 'Hypotheses', and how much theoretical authority do they carry?

The Determinants of Personal Development:

For Sève, there is very little in the human personality that is truly transhistorical. There are three levels of determination that ultimately pattern personality development:

- * the 'psychobiological', which includes the effects of ageing and of '...nervous type or temporal characteristics on individual conditions of learning'.
- * the 'psychosocial', '...all the limitations directly imposed by social conditions on the acquisition of new capacities'.
- * the psychological proper.

In the first instance Sève notes the 'essentially *contingent*' nature of the psychosocial and psychobiological levels in relation to the personality: they do not compose an internal part of its specific logic, but are rather, as it were, its parametric functions. Their evolution and tempos are determined by the operation of laws in other, quite distinct areas of activity and these laws are theoretically appropriated in distinct knowledge-systems (including, for the psychosocial, historical materialism). The influence of Althusserian epistemology is strikingly evident here. It follows then, that:

'(s)ocial individuality itself develops within biological individuals who as such are not at all the product of the social base and its contradictions but of a quite distinct reality' (Sève 1978:144).

That 'quite distinct reality' is constituted through the psychological dynamic, and it is within this constitutive process that the effects of the operation of the psychobiological and psychosocial parameters are registered and mediated. This important formulation recalls Balibar's principle of non-correspondence; its effect is to enforce a crucial condition of uniqueness in the theory of the Individual. In other words, the specificity of individuality arises from its location at the centre of three (contradictory) nodes of determination, only one of which (the psychological proper) is uniquely its own.

Having identified these three levels of determination, what is then required is a means of integrating them into a larger systematic framework: that is, to constitute the personality in theory. In the first instance, Sève develops an account of the *hierarchies* of the psychobiological and the psychosocial in relation to the psychological proper². This is evidently (at this theoretical level) a synchronic model.

In grappling with these connections, Sève falls back on a rather familiar metaphor (even if the taxonomy differs). Individuals are 'juxtastructured' in social relations, '...laterally meshed in with

(social relations) and wholly subordinated to (them)' (Sève 1978:144). Alternatively, the 'basic individual life-processes do not appear *on the basis* of social relations, they are a part of them' (*ibidem*).

The implication is clear: the psychological level is irreducible in its mechanics and its products to any other theoretical object; yet, its parameters are rigidly set by the laws of the social formation, which constitutes the superordinate ('sovereign') factor. The notion of juxtrastructure is formulated precisely to reflect this simultaneous subordinacy and uniqueness. Its inspiration is clearly the 'base:superstructure' metaphor. In what ways does the function of the social formation differ from that of the personality?

1) The evolution of social formations is principally self-contained and *internal*, pivoting on the development of the productive forces. (The ecological conditions that sustain this insularity are unrecognised.)

Superficially, the development of the personality presents a similar integrated perspective, as the dynamic 'expression of psychological capacities'. Yet, the social/economic origin of the critical constraints on personality (under capitalism, the 'objective logic' of the law of value) makes the fundamental dependency relation rather more evident. (As Sève notes later, this relation of social dominance is doubly obscured for the social actors first by its inherently transindividual logic, and then by the subsequent 'internalisation' of this external logic in self-legitimising psychological superstructures [see below]).

2) The sequence of activity that composes the biography of an individual is relatively malleable, capable of significant differentiation over short timespans. This flexibility is of course finite: the need to reproduce ensures a given (involuntary) insertion of individuality into the prevailing set of indifferent social relations, which often contradict the development needs of the whole personality. In comparison however, social relations are (through the Law of Large Numbers) *historically* (epochally) given. The inelastic structure of social relations sets limits to the plasticity of biographical forms (see [1] above). This is recognisably an example of Althusserian DT3 contradiction. The more extended temporality of the social formation delimits the developmental possibilities of concrete individuals, which are characteristically more ephemeral and plastic.

This individual malleability in the deployment of time, when coupled with the specificity of the psychological level, is seen as the basis for the infinite proliferation of individuality. On the other hand, the different temporalities of the psychosocial and psychological levels, together with their

distinct associated laws of development, bring the processes of social as against psychopersonal development into a continually provisional equilibrium. Again, the overall causal ascendancy in the expansion of personality is accorded to the psychosocial level.

Yet this axiomatically social basis of personality is strikingly absent from both prevailing scientific explanations of personality and from 'common sense': why? The relation between individuals and the social formation is mediated by a vast 'detour' through the organisational forms that compose the social mechanism. This detour, passing from act initiation to outcome, explains '...the basic spontaneous unconsciousness of the individual of the real bases of his personality' (Sève 1978:224).

This characteristic excentration is held to be the central problem of personality development in prevailing social conditions. Given that the '...circuit of acts goes enormously beyond the limits of organic individuality and beyond the field directly knowable by the individual' (a reflection of the high relative level of development of social intercourse), the '...capacity of social relations necessarily produces a corresponding opacity of the relations constituting the personality' (Sève 1978:353). This is one of the foundations for Marx's ambiguous concept of alienation.

Sève gives an example of the way in which the different levels of determination, the psychological proper, the psychosocial and the psychobiological, intertwine in a single practical activity. The growth of capacities (the sustained ability to undertake an act) occurs through determinate laws of learning that are essentially psychological. Learning capacity is augmented or constrained by psychosocial structures imposed by the social formation (and, apparently marginally, by the Individual's place in the life-cycle). These externalities are 'contradictorily integrated' into the infrastructure of the personality through a so-called 'internal requirement of use-time'.

The concept of 'use-time' is central to Sève's Hypotheses. Use-time implies a '...temporal system of relations between... concrete personal activity and abstract social activity' (Sève 1978:339). The ratio of abstract to concrete activity that characterises a given structure of use-time is defined by extra-individual forces, principally the ahumanistic logic of the social formation and ineluctable psychobiological determinations. Under capitalist relations, the proportionality of abstract:concrete acts in an Individual's use-time is a barometer of the degree of alienation.

It will be apparent even at this early stage that Sève assigns the psychological level decisively to the social formation (which is regarded as the superordinate factor) through the concept of an excentred personality. The corollary is an equally emphatic diminution in the importance of

the third level; the psychobiological. Sève accepts that biology (which is tendentially redefined as ‘neurophysiology’) plays a part in psychological individuation: but biology is incapable of explaining ‘...how and why the personalities of concrete individuals differ across *historico-social formations*’ (Sève 1978:234). This perspective reflects Sève’s radical historical relativism. Its formulation strikingly recalls the Althusserian promotion of a theory of historical forms of individuality as the study of synchronic constructs eufunctional with the mode of production³.

Sève advocates then, a quasi-Althusserian theoretical priority of historical forms of individuality over the biographical life-process of the concrete individual. The price that is paid, however- at least in this formulation- for radical historical relativism is precisely the marginalisation of the psychobiological, and the reduction of ‘psychobiology’ to neurophysiology is symptomatic of this. The wider materialist interpretation of psychobiology must surely, decades on from Lysenko, settle accounts with genetics (which certainly does not imply the acceptance of a reactionary ‘sociobiology’). There is also a need to recognise the deeper cultural significance of the life-cycle in terms of the shifting emphases of pleasure and pain, which (recalling Williams) in grouped form travel out from the Individual to repercuss on the social formation as a whole.

This superficial attitude to the continuing biological conditioning of individual activity, and the lack of recognition of how its continuance also ramifies on important aspects of culture, is evident in Sève’s comments on mortality. Biological ageing is ‘certainly not desirable’ (Sève 1978:201), but the intellectual and social ossification associated with advancing years is prematurely developed on the widest scale by stagnant social relations. This is indicated by the significant attainments of privileged personalities even in later life, or by occasional inter-generational mobility in the division of labour. These are valid points in themselves: but it is what Sève does not say that is telling here. In the first instance, the comment on ageing is masterfully understated. Moreover, while the effects of ageing are indeed variously accentuated by a multitude of negative social practices, it is a *reductio ad absurdum* then to ignore accelerating physiologically-based exhaustion or increasing incidence of classes of disease. The exchange between Williams and Timpanaro on these matters will be considered in full below.

The Infrastructure of Personality:

While Sève projects a causal hierarchy which is headed up by a theory of historical forms of individuality, it is clear that the thrust of his work is practically grounded at a lower level, in the study of forms of *biography*. This is evident for example, in his emphasis on temporal (diachronic)

norms, or in his preoccupation with life-cycle patterns of personality development. Indeed, it is a significant problem with the *Theory of the Personality* that the synchronic categories are inadequately distinguished from diachronic forms and that the 'levels of analysis' constantly intermingle. Thus, Sève refers to the synchronic forms as the 'general topology' of the science of biography, but fails to offer a convincing account of their interpenetration with the diachronic biographical forms. It is however, with regard to the diachronic forms that much of the novelty of Sève's work becomes evident. The concept of the infrastructure of the personality is of profound significance here.

The core of the developed personality is shaped by, for example, the structure of the child's psychic apparatus, the form of domestic heritage and role in (hence, organisation of) the domestic labour processes. These early traces are not eradicated in the developed personality, but the hegemonic domain shifts decisively to the 'system of acts, the content of the biography' (Sève 1978:332), which, it will become clear, re-orientates the discussion decisively towards the problems of adult life. It is here that the 'essence of human life' crystallises. This system of acts is necessarily *temporal*, homologous with an internal logic of activity and development.

'What we are looking for ...is the structure of activity itself, in other words, the dialectic of its development in time, which represents *the unity of (the personality's) functioning structure and its law of historical movement*' (Sève 1978:333).

The infrastructure of the personality is comprised of three basic sectors of psychological reproduction: needs, acts and capacities, together with the inter-relations between them. The fundamental infrastructural activities are those 'which produce or reproduce the personality in whatever sector'. This definition excludes purely biological functions (breathing) and *superstructural* activities (those which are 'organisational or simply derivative at any level').

A. An Historicist Theory of Need:

Sève's theory of need has two major defining characteristics: it is historically relative to the development of the social formation, within the shifting bounds of psychophysical constraints. Second, need is also therefore capable of (potentially) unlimited diversification and growth.

Sève's historical relativism is founded on the distinguishing of two categories of need, 'basic' and 'complex'. Basic needs have a direct physiological foundation. Thus:

‘...the objective needs of the organism taken in their primary form are *at the beginning* of all psychological activity’ (Sève 1978:316).

These basic needs are the ‘...minimal conditions of possibility’ of human life. Beyond subsistence however, new complexities and possibilities are generated in social life that render these basic needs of reducing customary significance.

Complex needs are therefore qualitatively different from immediate organic needs in relation to the degree of discretion available to individuals as to for example, the mode in which those complex needs are to be fulfilled. (Sève concludes from this that the theoretical tendency to model the analysis of human psychology on that of other species is ill-founded.) In sum, needs are:

* *secondarily socialised* (basic organic need is a physiological pre-given, but the further elaboration of the structure of need in the developing personality is pursued through successive processes of restructuring according to social imperatives).

* *inverted* for the individuals of social formations enjoying relative material abundance, with complex need assuming dominance in relation to basic need through the social ‘...production of a radically new structure of motivation’ (Sève 1978:318).

The *differentia specifica* of complex needs are their ‘margin of tolerance’, ‘excentration’ and ‘intrinsically unlimited *expanded reproduction*’. Sève uses his favoured example of a ‘militant’ who recognises that personal satisfaction is impossible without the general need satisfaction of the collectivity through radical social change. When embedded into the complex structure of need, militancy generates its own self-fulfillment, auguring ‘...the general surpassing in communist society in its higher stage, of the contradictions which underlie the personality within class society’ (Sève 1978:319).

In relation to the posited expanded reproduction of complex need, Sève notes the ‘remarkable historical diversification of the motivations of human activity... in the domain of artistic enjoyment, for example’ (*ibidem*).

In short, complex, developed needs are non-homeostatic. If matters were otherwise, Sève observes, the development of more sophisticated forms of collective activity over time becomes inexplicable, or at least explicable only in the unacceptable terms of a speculative humanist ‘need for self-transcendence’.

In overall terms, this is an elegant argument, even if the reference to collective activity as an aggregate of individual needs begs more questions than it answers. This approach registers the inherently social and historically relative manner in which need is defined (through the more general process of excentration of personality) without giving all to relativism (those continuing basic needs). The notion of inversion of basic and complex is, moreover, attractive. Sève is surely right in inferring an increasing complexity of individual need in the context of an expansion in the collective *reach*⁴ of the species. That this expansion conditions (in Raymond Williams' correct formulation) the structure of the social formation and therewith the shape of collective and individual needs is indisputable. It is a major preoccupation of Sève's work to elaborate the causal mechanisms that permit this *shaping*.

There is one important qualification that may be lodged here to this approach: that this inversion is extremely unevenly distributed and that this unevenness generates contradictory pressures. It is worth recalling again the example of accelerating years bringing basic needs (experienced in an increasingly anti-hedonistic manner) back to the fore. The incompleteness of this inversion can also be seen in class terms.

It is a common observation that ecological concerns (especially where these are centred on consumerist responses) are concentrated among the intelligentsia and professionalised workers. These are of course precisely the groups whose structure of need has very materially transcended basic physiological concerns, but whose interests are not immediately incompatible with radical measures of ecological control. Workers and their parties and Unions have been typically more restrained in claiming the ascendancy of *sustainable growth* over all other social concerns, precisely because of this differentially distributed structure of need. Thus, discretion over needs, while generally expanding, is unevenly distributed by class, gender, race, nation, and by age, in an extremely politicised manner.

B. Socially Valorised Acts:

At the most rudimentary level, an *act* may be considered simply as the exercise of a quantum of psycho-physical energy. To be brought to a successful conclusion, an act '...presupposes a certain physiological expenditure and the investment of a certain psychological time' (Sève 1978:320). As a crude generalisation, acts typically require:

- * *a given stock of human energy and a degree of subjective assent ('motivation') in their undertaking.*

* *historically variable experiential and theoretical understanding, coupled to an appropriate sensual apparatus (which is also variably developed).*

Consistently, the emphasis in this treatment of acts is again on historical variance. Given that the basis of personality is, moreover, 'historico-social', acts cannot be considered in isolation from the interposing social structure. Sève is extremely reckless at this point. Acts are, he says, 'socially determined and determinant for the individual' (Sève 1978:304). This statement is of course, potentially damaging to the intentions of the overall project. The problems hinge on the (still-multiplying) ambiguities in the concept of 'determination'. Sève completely fails to expand on its precise meaning in this context. A positivist interpretation of determination as determinism engenders that unwelcome condition of compatibilism of social formation and individuality. Given the Althusserian tenor of the work as a whole however, one may interpret determination rather in terms of the 'delimitation' of a vector of choices.

The social determination of the personal value of acts is visible in the manner in which the same acts have different freight when pursued in personal or domestic contexts than when pursued as wage-earning activity. The difference is founded on the exploitation and alienation of commoditised labour. This holds whether the measure of an act is behaviouralism or so-called time budgetary analysis. The ramifications of a formally identical act on the 'real economy of the personality' vary from one social context to another. (Examples of this differential weighting are legion. The psychological implications of the act of sexual intercourse in prostitution differ from those ensuing from a fuller erotic and sensual encounter. The act of preparing fast food for sale is radically different from cooking nightly in a gender-divided household while the preparation of food for guests is a differing phenomenon again.)

So defined, acts are ontologically distinct from 'behaviour': this latter concept '*...a priori* eliminates all social relations between acts, i.e., all the real structures of the developed personality'. Behaviouralism mistakes the external apparel of an act for its real content. A similar superficiality attaches to neurophysiology, which deals with psychic acts, the physiological and energetic prerequisites for *action* and (sometimes) the hedonistic resultants, but cannot interpret the psychological *value* and developmental content of an act:

'...the psychology of personality is not concerned with dealing with *psychic acts* ...but with the *relations which underlie them* ...relations which are *social* in the last instance but which are always "attached to" acts and which "appear as" acts' (Sève 1978:183).

It should by now be apparent where Sève is heading: since the human essence is defined by the structure of social relations, and the central relation in capitalist economy is the value form of labour, then this is also the essential category for deciphering the adult personality and the acts which reproduce it. The wage relation is ‘...the most internal of all the (social) relations that constitute concrete personal life’ (Sève 1978:189). Again:

‘the unchallengeable fact (is) that social labour is generally the activity in which the individual is in contact with the productive forces and the most decisive social relations in the last analysis’ (Sève 1978:203).

Thus, while acts considered simply as concrete material activity are ‘biological in their content and socialised in their form’, since they are integrated into the structure of social relations and psychologically valorised through them, the effect of acts in general will customarily be to reproduce those social relations. In sum:

‘(f)rom this standpoint they are no longer the acts of a subject but of a determinate social formation’ (Sève 1978:212).

This is (though Sève would then have contested it) an ahumanistic position. If acts are the key factor in evaluating the possibilities for personal development, and the value of acts to the personality is determined by a social formation which is indifferent to these effects, then it follows that the structure of acts is (within limits) involuntary to the subject and unconcerned with the structure of need. Herein lies an important source of contradiction in personality development.

C. Capacities- the Fount of Personal Reproduction:

The notion of ‘capacity’ is the key linking concept in the infrastructure of the personality. A capacity is defined as the ‘individual precondition’ for an act: it enables acts to be successfully undertaken, but does not ensure success. A capacity is a prerequisite, a necessary but not sufficient condition. Capacities specifically exclude volitional factors. There is a dialectical relation of act-capacity wherein one class of acts forms the ‘...source of development or differentiation’ of capacity:

* ‘sector I’, grouping ‘the set of acts which produce, develop or specifically determine capacities’ (Sève 1978:313).

* 'sector II', encompassing 'the set of acts which, only making use of the capacities already existing, produces some effect which the exercise of these capacities makes it possible to attain' (ibidem).

As will become evident, Sève borrows extensively from historical materialism as a framework for his research hypotheses (for example, in the notion of 'juxtastructure' outlined above). In this case, the reference is unambiguous enough: to the distinction drawn in volume II of *Capital* between the production of the means of production and production of the means of consumption in relation to the schemas of reproduction. Here, the active moment of (psychological) production centres on the act, which either augments the structure of capacities (sector I) or merely utilises elements of capacity to reproduce a given psychological structure.

Capacity is pivotal in Sève's theory of the infrastructure of the personality. Curiously, it bears at first sight more than a passing resemblance to the concept of 'competence' in State-sponsored attempts to encode the skill structure of the labour force in Britain. These are supposed to be about the 'ability to do' in the labour process.

Sève's concept is however, radically different insofar as the existing ability to undertake a (socially valorised) act is referred to the capacity to undertake the same (sector II) or an expanded (sector I) range of acts in the future. It is, to repeat, a developmental model, whereas the ongoing efforts by the National Council for Vocational Qualification (N.C.V.Q.) more resembles an audit (one which given the dynamic of the labour process is also of decaying value). More significantly, capacity is constantly referred back to the personal requirements of the subject, whereas competence is abstracted from the psychological structure of the 'actor'. Contrarily, the only capacities that are recognised in the N.C.V.Q. approach are those that are drawn down in the labour process (in other words, those that are socially valorised). Sève's model explicitly embraces all capacities of psychological value, including anti-systemic capacities as well as those that are essentially private. There is, as shall become clear, an explicit mechanism referring acts to capacity and back to need.

Relational Concepts in the Personality:

A. Relation of Needs to Activity:

Need and activity constantly interact: neither would cohere without the other and they stand in reciprocal determination. An act satisfies (or sometimes transforms) a need, while a need

necessitates an act for its satisfaction. In terms of a 'cycle' of need-act (N-A) then, there is superficially no basis for preferring the cycle A-N-A to N-A-N. Sève is here criticising models (based on studies of animal psychology) that take the primacy of need as their starting point. He suggests instead a fourfold typography of N-A relations:

(i) *an act reproduces the corresponding needs that formed the volitional base for the initial act (homoeostasis, or N-A-N).*

(ii) *an act occasions the permanent satisfaction of pre-existing need 'by its nature or its effect' and thus alters the structure of need (N-A-N').*

(iii) *an act produces an **income** that also enables need satisfaction, but by a route that is crucially mediated.*

(iv) *a (sector I) act, as the purposive application of capacities, expands the 'fixed capital' of capacities in a movement that Sève calls 'psychological progress'.*

Evidently, only in the first two relations is there a direct link between act and need satisfaction. In the final case, there is no immediate need satisfaction. In the third case, which Sève treats as vital, the linkage is articulated through social relations. The precise definition of the act under conditions of waged labour is itself largely beyond the control of the worker (at least from the time that the labour contract is signed). Such acts are abstracted from the Individual and valorised through the ahumanistic system of relative commodity price movements enforcing socially necessary labour times and wages. Abstract activity is thus distinguished from concrete labour which is directly related to the structure of need. In this case, the need structure that gave rise to abstract labour generates a set of psychological results that are unknowable *ex ante*. Sève is hardly expansive on this point, but it is not at all difficult to envisage what might be involved.

First, as already mentioned, the acts that secure a given money wage are (in detail at least) specified by an other in relation to the dictates of the economic instance. The involuntary or unanticipated acts which ensue will then affect capacities and also feed back on needs in ways that more or less concord with the developmental requirements of the personality infrastructure.

Second, the 'negotiated' wage is of only probabilistic real purchasing power. This uncertainty is complex in origin, but its determinants include the prevalent forms of labour contract, the skill structure of the labour force, the size of the reserve army of labour and the general trend in prices.

The volume of need satisfaction ensuing from a given quantum of abstract labour therefore remains indeterminate at the outset, precisely because of this variability in the real wage. Thus, 'wages do not depend on the concrete labour carried out by the individual, (nor)...on the concrete needs for which it is carried out' (Sève 1978:320).

Finally, it is evident that *commoditised* needs are subject to historical transformation. Especially in the case of complex needs, a growing component is commoditised and as a result socially determined. This social determination is evident at a number of levels. For example, the form of the process of consumption (an active transformation) associated with a given individual need is actively restructured over time with changes in the technical characteristics of the commodity. The act of consumption, as Sève observed, changes the initial need begging satisfaction. What happens as a result of the commodification of need is simply that this process of need reconstruction is rendered (seemingly) ever-more rapid, as the technical prowess of the capitalist mode of production becomes entrenched in general social relations.

This restructuring of consumption patterns takes well recorded forms: built-in obsolescence linked to long run corporate investment plans; 'marketing' and the dictatorship of fashion; more interestingly, the withdrawal or undermining of an antecedent generation of commodities or an entire *commodity-system* in a pre-planned manner.

There are other examples of the social relativity of commoditised needs which, in a transitional or depressed period of profitability, actually contradict the functioning of the economic instance. These phenomena must therefore (*contra* the above) be considered, in the short run at least, to be contributory to crisis. Regular and accelerating need reconstruction among workers generates an expectation of continual rises in the subsistence wage, or at least, a downward rigidity. This expectation, part-universalised through the social wage, is, in historical context, quite new: and its obdurance represents a substantial brake on the crisis-resolving capacity of those social formations in which it has become embedded.

From the individual perspective, this variability in use values (which is of course one of the extreme difficulties with the concept) may present significant contradiction. Thus, an initial bundle of commoditised needs that generates the requirement for abstract labour, may be substantially restructured by the very engagement with the social formation that waged labour entails. This gives rise to the familiar spiral of initial commoditised need being expanded and changed by the socialisation of waged labour that was supposed to satiate them, in such a manner as to 'necessitate' further waged work; and so on.

In short, case (iii) is the site on which both abstracted labour and commoditised needs make their appearance. For the reasons outlined above, the simple relation between N-A-N utterly breaks down. The act of abstract labour ramifies in a profound manner on both needs and capacities, and thus on the whole infrastructure of the personality: Sève calls these systemic effects the 'psychological product' (P), the change in proportions of needs, capacities and acts that ensue from an act. In the historical establishment of the capitalist mode, and the subsequent broadening and deepening of the capital relation, the importance of area (iii) in the typical biography grows proportionately. This is a key conclusion the ramifications of which will become clear in ensuing sections.

The twin classification of acts into abstract and concrete is, as Sève recognises, static and reductionist. There are important species of labours that need to be further distinguished as qualitatively distinct in their own right, and there are significant examples which constantly threaten to slip between these easy categories.

There is an 'intermediate class of activities' between the abstract and concrete that is analytically difficult because internally diverse: it includes the assimilation of personal leisure or skills to abstract labour; the application of work skills to domestic labours (for example, 'Do-It-Yourself' activity); and the 'essentially' intermediate phenomena of interpersonal exchange and domestic labour.

Domestic labour is clearly viewed as the most significant of these intermediate classes of labour. The reproduction of the household is for Sève essentially a supra-individual activity, governed by the 'objective relations of the couple, the family'. Yet, the 'logic of exchange does not by itself transform psychological activity into abstract activity' in the domestic context. It is of course a convention that the exchange of a good or service in this manner does not therewith transform that economic activity into a commodity. This comes about only when the use values are universally expressed through the unique third commodity, money. This is then a fairly orthodox account.

Additionally, the 'territory' of the domestic labour economy is constantly being invaded by the expanding sphere of social wage labour, in two key ways:

- * *the domestic labour force is lured into the paid sector by new definitions of subsistence.*
- * *the domestic labour process is valorised through the hiring of a daily helper on a waged basis.*

Again, this mode of analysis was to become, largely subsequent to Sève's analysis, ubiquitous (if far more refined) in the works of marxist feminists in the late-1970s and early-80s. It is undoubtedly a fruitful line of research that has yet to bear its full value. Contrarily, the assumption of monogamous heterosexual pairing that underpins this account is becoming historically decidedly insecure and moreover, deeply questionable as an exemplary moral ordering.

Accepting these caveats in the typology of acts does not alter the fundamental conclusion: that for one supremely important class of acts (those undertaken under the conditions of abstract labour), the direct relation of need:act breaks down. The intervening social relations define the psychological product in an ahumanistic manner (structural indifference).

‘What incites one to act is not the need in itself and in isolation but the extent and the conditions in which the corresponding activity is able to satisfy it’ (Sève 1978:321).

In sum, as Sève goes on, the crucial relation for the development of needs is therefore that ‘between *the possible effects of the act and the needs to be satisfied...* in short, the *relation between product and need*’ (*ibidem*) (P/N). This relation ‘...partly corresponds to the conventional present-day psychological notion of motivation’ (Sève 1978:331).

B. Product:need and Use-time:

Much of the above discussion has centred on the psychological product of acts variously conducted under conditions of concrete or abstract labour. It will be recalled that Sève designates the temporal relation of abstract:concrete labour in the biography its ‘use-time’ (*l'emploi du temps*). This is an important concept that requires further explanation.

Certain empirical aspects of use-time are ‘quite visible’ to even casual inspection of biographies. It is theoretically quite possible to evaluate the distribution of use-time across different classes of labour through temporal accounting. This is indeed the valuable contribution that time-budget analysis provides.

The realist gesture is then immediately qualified: use-time audits remain only indicative. In the first instance, they do not differentiate the apparent distribution of activities over time from the real and divergent psychological value that those acts bear. Thus, time-budget analysis fails utterly to capture the transfer of time from worker to capitalist that underpins the distinction between labour and labour-power. Given that this is the continuing source of the temporal discretion and

social power of the capitalist class, this is a remarkable oversight in accounting methodology! The implicit assumption in most time-budgetary analysis is that the social relations (especially of production) are effectively a pre-given, a theoretical slip that recalls the tendentious *ceteris paribus* of neo-classical economics in relation to the initial 'endowment' of wealth assets.

The same problem presents itself in the indistinguishing of use value from exchange value. In short, there is no acceptable route from labour to wage, to the purchase of commodities to reproductive consumption, that can avoid addressing social relations and the veil that they throw over psychological temporality, at any of these transformative moments.

Neither can a consistent picture of use-time be built up from the subjective estimations of the individuals themselves. Such approaches tend towards ideal(-ised) use-times, which may be socially unattainable: the Individual, as already adverted, will be unlikely to penetrate to the (socially mediated) heart of temporality. There is then a gulf between the real allocation of activities and 'their immediate form in the sphere of lived experience' (Sève 1978:334)⁵.

The subjective manifestations of average use-time are however, there, even if the interpretation is awry. The socially inscribed limitations on the development of personality provokes an 'enigmatic' need: the need for 'time for living' (*temps de vivre*). This need, which Sève suggests presses more on women than men, is a yearning for liberated time, a frustration with '...the sacrifice of concrete personal life to abstract social life and abstract social life to the requirements of the ceaseless reproduction of the whole system' (Sève 1978:340). It is counterposed to the alienated 'time to be lived' (*temps à vivre*). Time for Living, surely self-contradictory, manifests in this curious way because the causes of personality development remain multiply obscured by social relations.

In essence then, use-time subsumes all the elements at the core of the personality: it captures the energy-time nexus of the act within an appropriate framework of social relations. It will already be apparent from Sève's criticisms of time-budgetary analysis though, that use-time is only approximately captured by clock time. A differential temporality is immanent here, which Sève labels *psychological time*. This concept, which remains rather cryptic in the *Theory of the Personality*, is finite over any calendar period but is nonetheless distinct from it. It is observed that:

'the importance of the expenditure of time required by an act is not only determined by the absolute magnitude of this time but by the corresponding density of use-time' (Sève 1978:340).

The psychological time of an act is thus referred to this concept of use-time 'density'. Density of course implies a degree of (in this case, temporal) concentration of activity/phenomena. This is confirmed in Sève, when he relates (in a projected 'marginalist type of analysis') the psychological product of each new act to the totality of current commitments. Put simply, in a biography that is already preoccupied with acts yielding a high psychological product, the displacement cost of an incremental act will be correspondingly high. This argument seems to generate a synergetic logic. Impoverished personalities will tend to display a lower marginal psychological product and will thus accept new tasks of minimal development value. Contrarily, the fortunate personality already attaining high P/N will gravitate to new activity of an even higher product level. The potentially reactionary interpretations that could be placed on this reading should require no further elaboration: more of this below.

The 'psychological time' of act 'A' is then the ratio of its psychological product *pro tempore* to the average psychological product of the intramarginal acts that would have to be foregone to enable the adoption of 'A'. Unsurprisingly, Sève provides little indication as to how this new conception of time may be systematically related back to clock time, nor therefore on how procedures of empirical validation and research may be established.

The reasoning that underpins the concept of psychological time also provides a basis for speculation on the 'optimal organisation of use-time'. This is defined as that allocation of biographical activities which permits the greatest level of psychological product to be attained in the given social constraints. This approach, which is evidently based on a logic of constrained optimisation, seems to preclude contradiction; a surprising development given the emphasis of the work as a whole.

To be fair to Sève, this hypothesis is immediately wrapped around with qualification. Those psychosocial aspects are immediately reinstated as sovereign limiting factors in the growth of personality: moreover, the effects that flow from the social formation act not only as external features in the biography but internalise in psychological *superstructures* that deflect this optimisation process from the 'inside'. The optimisation of use-times may then be reinterpreted as a tendency, constantly disrupted by changes in the social formation and occluded by the internalised features of a 'false consciousness'.

It is apparent from this that the lifting of these social constraints or their further constriction would either allow (in an upward direction) the accessing of or enforce (downwards) a different P/N matrix. A series of biographical changes would then be required to reintroduce equilibrium

in the psychological product of acts, and this restructuring would then further impact on needs and capacities.

C. The 'Law' of Correspondence of Capacities to Use-time:

The hypothesis of constrained optimisation of psychological product to use-time is a comparative static analysis: it says nothing about the much more important laws of development of the personality over time. It is to this issue that Sève then turns his attention. The key question here is: what makes learning possible? In the terms of his model, learning is symptomatically represented in capacity. The two concepts are articulated through sector I of acts, which makes psychological progress possible.

The pace at which capacities can be augmented or lost is eminently constrained. There is, in some abstract sense, a maximum rate which is consistent with the psychobiological limitations of the Individual. As Sève rightly observes, though, there is little evidence that such psychophysiological saturation has yet been achieved in contemporary personality. What is instead striking is the degree to which the structural indifference of the social formation constantly jeopardises the bases of capacity. In a process that is, from the standpoint of the personality infrastructure, quite arbitrary, the acts that compose the labour process are redefined, and therewith the structure of the psychological product. Where the trend in skills is read as irremediably downward (as in Braverman, for example), then the implications for capacities are potentially serious. One recalls here again the dystopian speculation of western marxism and the effective rejoinder that contemporary events continue to give to such readings.

This is however, to anticipate. The question of the relationship between use-time (the relation of abstract:concrete labour) and the development of capacities is still open. There is for Sève a 'proportionality' between the expansion of capacities and the portfolio of sector I acts iff the pattern of use-time is capable of reabsorbing, in a productive manner, those existing and developing skills. Assume some increase in the mass of sector I acts ('a') over a given time-period, such that a new, higher level of capacity ('C') may thus be attained. There are two development paths that may then ensue:

$$(1) C \rightarrow a_1' \rightarrow C' \rightarrow a_2 \rightarrow C' \text{ (proportional development);}$$

$$(2) C \rightarrow a_1' \rightarrow C' \rightarrow a_2 \rightarrow C'' \text{ (non-sustainability).}$$

...where C = initial stock of capacities;
 a_1' = enhanced portfolio of sector I acts;
 C' = capacities resulting from a_1' ;
 a_2 = sector II acts;
 C'' = capacities resulting from a_2 ;

...and $C' > C$; $C'' < C'$.

In case (1), the higher level of capacities is successfully embedded, appropriate learning takes place. Here, a_2 is capable of absorbing those new skills in subsequent application in concrete or abstract work. In (2), the expanded structure of capacities cannot be maintained in the sequence of acts through which they are applied. A proportion of capacities therefore wither ($C' \rightarrow C''$). Now, it is not necessarily the case that the lost capacities are the incremental ones. The imbalance between a_1 and a_2 produces multiple adjustments in capacities and needs. These changes will ramify, through changes in the psychological product, across the personality infrastructure. The capacities that are lost may then be drawn from any learning vintage.

In general, Sève suggests that the embedding of new capacities arising from a change in the acts that compose sector I requires a corresponding ability to realise those enhanced capacities in the acts that compose sector II if that learning is to be cemented. The ratio of $a_1:a_2$ in the overall structure of the biography Sève calls the 'organic composition of use-time' (O.C.U.): a high ratio indicates a substantial biographical commitment to learning activities. The potential development of the personality hinges on just such a commitment. Ironically, the *maintenance* of this high O.C.U. depends on a favourable psychological product of activities in sector II. The scope for contradiction is manifest:

'the increase in learning of new capacities... requires an increase in time set aside for sector I activity and consequently a decrease of time available for sector II' (Sève 1978:340).

It is of course, quite possible for the quality of acts in sector II (defined as the density of capacities required for their successful undertaking) to be upgraded. Yet this depends in large part on the evolution of the social formation, which is structurally indifferent to the demands of its individual servants.

The Personality Infrastructure- Necessities of Development:

Sève is now in a position to generalise from the foregoing towards a vision of the whole personality and of the forces that militate against its development. The psychobiological and psychosocial determinations are 'objective conditions of personal life', which delimit the quite distinct 'psychological reality' of a theory of personality. That reality centres on the capacity for learning, which, as has been shown, correlates capacities with acts in the structure of use-time.

This relation of acts:capacities is conceptualised in terms of proportionalities: particularly the qualitative and quantitative ratio of $a_1:a_2$ summarised as the organic composition of use-time. The 'general law' of personality is therefore:

'...the law of necessary correspondence between the level of capacities and the structure of use-time' (Sève 1978:357).

A change in the structure of acts, possibly externally-induced, leads to the alteration of capacities, which reflects back on acts (then on needs). This redistribution of acts, if quantitative, will by definition also change use-time. The constraints on use-time are evident at the level of the social formation in the work-norms and wider valorisation procedures of the capitalist economy (the set of complications surrounding the relation of P/N arising from waged labour). The never-ending process of bringing use-time into correspondence with capacities- an 'internal psychological requirement'- constantly runs up against the indifference and rigidity of the productive forces. Thus:

'real use-time sometimes comes into conflict with internal psychological necessities of development... here we are at the heart of the deepest dynamic of personalities, a dynamic which is socially determined and concretely individual at one and the same time' (Sève 1978:358, emphasis removed).

A moment's reflection on the foregoing indicates its significant philosophical merits in relation to a marxist theory of personality. It will be recalled that the tendency to conflate subject and structure is the recurring dilemma in much marxist (and non-marxist) thinking on this matter: it was, as has been observed, the fatal(istic) elision in western marxism.

Althusser's radical bisection involved the projection of two sciences with their own internal structure and dynamics. The work on historical materialism was novel and substantive: that on

marxist individuality was perfunctory. Sève has now provided a basis for exploring that second science. His work has outlined a theoretical object (the Individual) that is both subordinate to the political economy *and* causally independent: simultaneously contingent and unique. Thus is the 'quite distinct reality' of human individuality categorically conserved in theory. He has also provides a locus in which the two sciences may be diachronically reconciled. This is the precise theoretical function played by the contradiction of use-time and internal psychological necessity and manifests in the practice of learning.

There is a further aspect to the internal dynamic of accumulation of capacities that relates to the time-path of psychological progress over the human life-span. Sève notes the 'very general tendency' for the rate of psychological progress to fall with the passing years: but this is not seen as a 'natural necessity'. He identifies three possible (psychologically internal) explanations for this 'tendency of the falling rate of progress':

** a given quantum of learning issues in a reducing return in new capacities.*

** the absolute volume of learning activity falls over time while the associated rate of psychological progress remains constant.*

** the total stock of capacities rises over time so that the impact of new capacities diminishes in relative terms.*

It is to the last of these that Sève turns his attentions. In a confusing nomenclature, he labels the ratio of existing capacities to acts, the general level of skill in relation to all activity, the 'organic composition of the personality' (O.C.P.). As the stock of capacities rises with learning (and age), it is probable that the O.C.P. will rise concomitantly. With a constant O.C.U., the net effect of that flat learning commitment will tend to diminish against this backdrop of accumulating skills (the 'rate of progress... by no means remains constant if the organic composition of use-time remains constant' [Sève 1978: 360-1, emphasis removed]). To illustrate this, Sève compares the probable learning outcomes of a daily commitment of two hours to skill development for a developed adult personality with that of a child:

'the effect of the progress produced by these two hours will be proportionately much weaker on the personality of an adult who already has numerous developed capacities (accordingly, on a personality with a high rate of organic composition) than on the personality of a child with a weak organic composition' (ibidem).

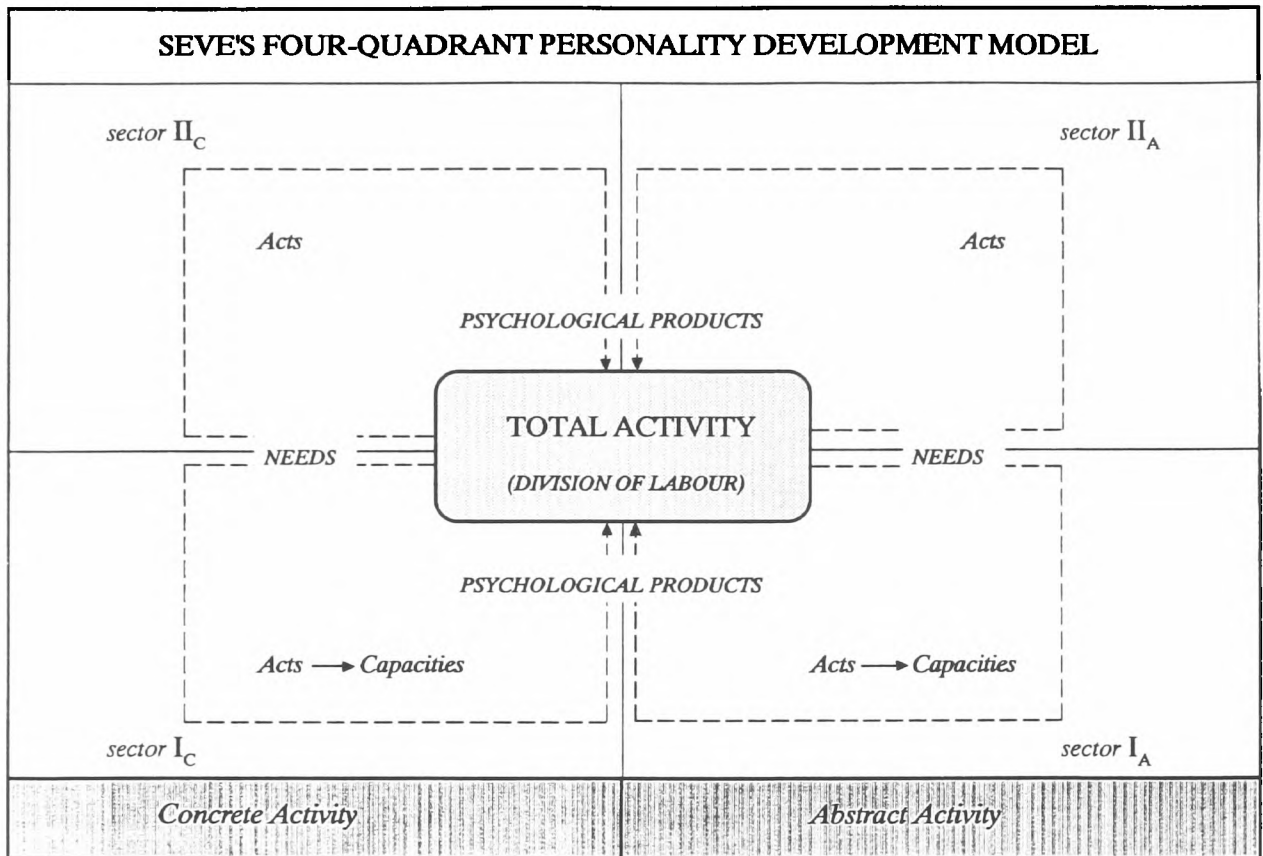
This tendency of a falling rate of psychological progress does not displace biological senescence, which Sève recognises as an enduring negativity of mortal existence. It does provide a counterweight to *biologism*, the incorrect (and reactionary) association of a premature eclipse of the personality arising in actuality from social relations with psychobiology. In an elliptical extension, Sève proclaims that 'psychological longevity' is socially determined. The 'falling rate of progress' is instilled from youth in social relations that '...stand in the way of a high organic composition of use-time'. In its own right, this may well be accurate: the differential access to education, training and culture that Sève adverts is fact. These factors are of course, substantial disincentives to any motivation to learning.

A line should be drawn, however, between this problem and that of the falling psychological impact of learning arising from a high O.C.P. This feature- like the long run tendency for the rate of profit to fall from the drag of the O.C.C.- cannot be overcome without some qualitative psychological restructuring equivalent to devalorisation. Radically new understanding would be required to permit any social formation (not just capitalism) to circumvent fundamental problems which relate to the mode of integration of new capacities within the existing stock. To put it at its most stark: it seems rather bizarre to blame a problem of quotients grounded in the *internal* dynamic of learning on capitalism. That this blockage in social relations- and the ideological apparatus that supports it (a class-differentiated anti-intellectualism)- is essentially a second-order question in comparison to the issue of the O.C.P. is then implicitly recognised by Sève. He observes:

'...in the conditions of capitalism, a phenomenon ...comes to *supplement* this tendency of the personality to ossify, a phenomenon which... constitutes the most decisive obstacle to further psychological progress' (Sève 1978:362, emphasis added).

This (now) supplementary social aspect to the basic problem of diminishing marginal returns to learning Sève denotes as 'dichotomy'. This relates the 'ensemble of processes of separation and partitioning' that divide the whole personality into rigidly demarked 'territories'. The essential divides are those between abstract and concrete activity (use-time), and between sector I and sector II acts, from which four 'quadrants' of activity are obtained. Activity within each quadrant produces a varying psychological product, which restructures capacities and needs, generates subsequent activity in given proportions (a particular Organic Composition of Use-time); and so on...

In the abstract (discounting the rigidities imposed by social conditions on use-time), the logic of total activity can be summarised graphically in a four-quadrant mapping:



Source: Sève 1978:347.

Recall that:

- sector I_C = concrete acts that build capacities;
- sector I_A = abstract capacity-building acts;
- sector II_C = concrete acts that expend existing capacities; and
- sector II_A = abstract acts expending capacities.

The causal dynamic runs from act to need then act (A-N-A') in sector II, while in sector I, this pathway is intermediated by the mastery of new capacities. Activity is the locus of all psychological development and therefore occupies a central symbolic space in this representation.

This Diagram illustrates the 'general topology of personalities produced within capitalist forms of individuality' (Sève 1978:347). It does not signify a typical individual. Dichotomy

manifests itself as a sharp demarcation line dividing abstract and concrete activity, a rigid *compartmentalisation* of the biography.

Sève illustrates dichotomy with a simple example. Assume that the rate of learning in abstract activity is low (routinised labour with little learning): psychological proportionality would indicate (*via* reducing capacities) a depressing effect on sector II acts. What might this actually mean? A worker whose learning capacity 'on-the-job' is perforce minimalised faces the loss of infrequently used work-related capacities. The ability to respond to work process irregularities is undercut therewith. This atrophy is progressive, with 'core' abstract capacities also susceptible to decay. In a compounding process, this structure of use-time ramifies on the relation of P/N and thereby undercuts the basis of motivation: this process often evidences itself in a behaviour pattern displaying passivity and partial withdrawal. The abstract dimension to the personality as a whole is thus devalued. As a result, all 'dynamism' within the personality comes to focus on concrete activity.

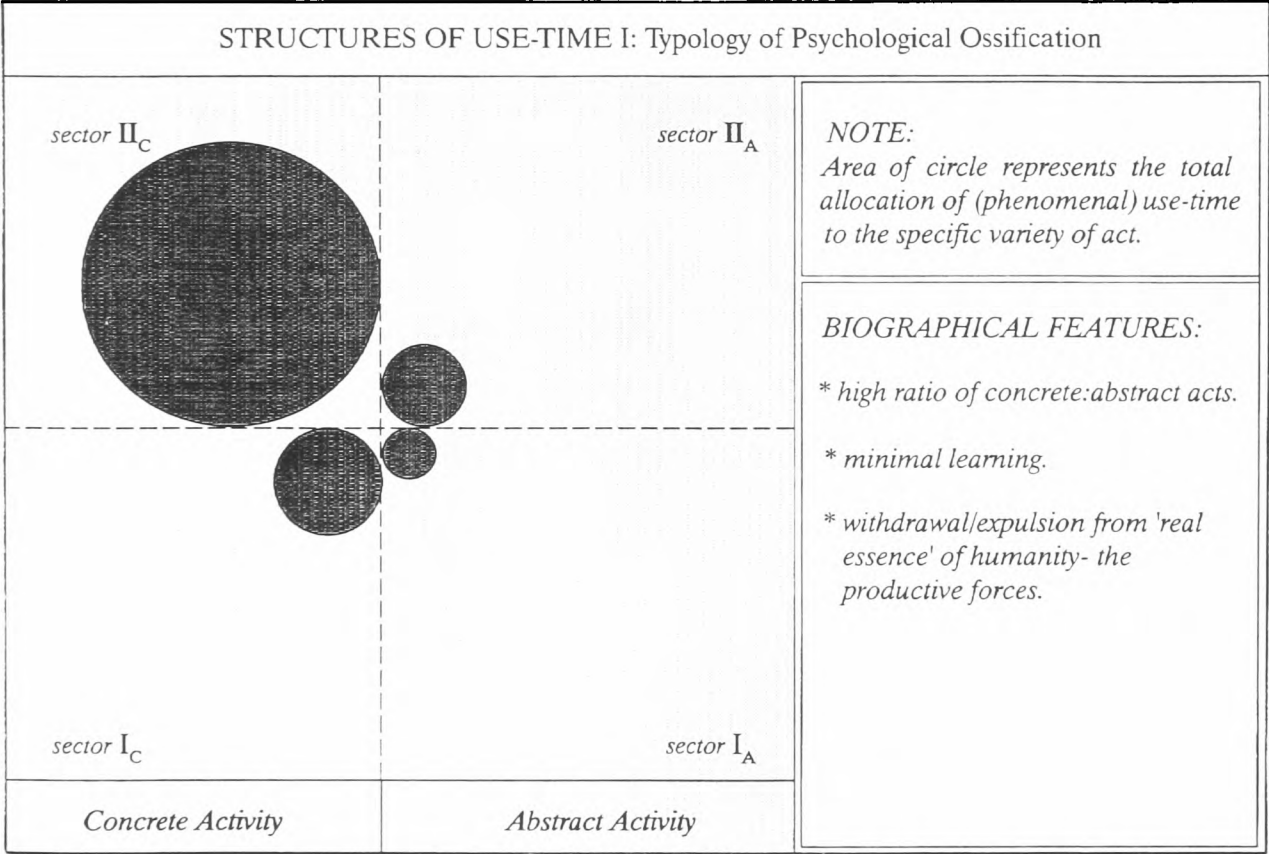
Yet for Sève, the psychological progress that is possible within concrete activity is significantly constrained. The productive forces, within which abstract activity is embedded, bear the 'real essence' of humanity to the individual. Under capitalism, the transindividual and mechanical principles propel the forces of production to new heights. The contradictions that accompany this development have already been extensively highlighted: the structural indifference to individual development needs is an important aspect to this. In this context, insofar as social (abstract) labour is the bearer to the Individual of this historical movement, then debarment from learning in abstract labour also represents a social expulsion from this crucial legacy. The concrete personality is thus severed from the instruments of its vital development; the acquisition in imposed but developing forms of collectivity of socialised temporality and shared capacities.

What then happens when all the developmental potential of the personality turns inwards from this seminal but indifferent social world to a reduced sphere of concrete activity?

'(T)his dynamism can only be invested in limited activities, narrow diversions and compensations which themselves may turn out to have a falling rate of organic composition' (Sève 1978:363).

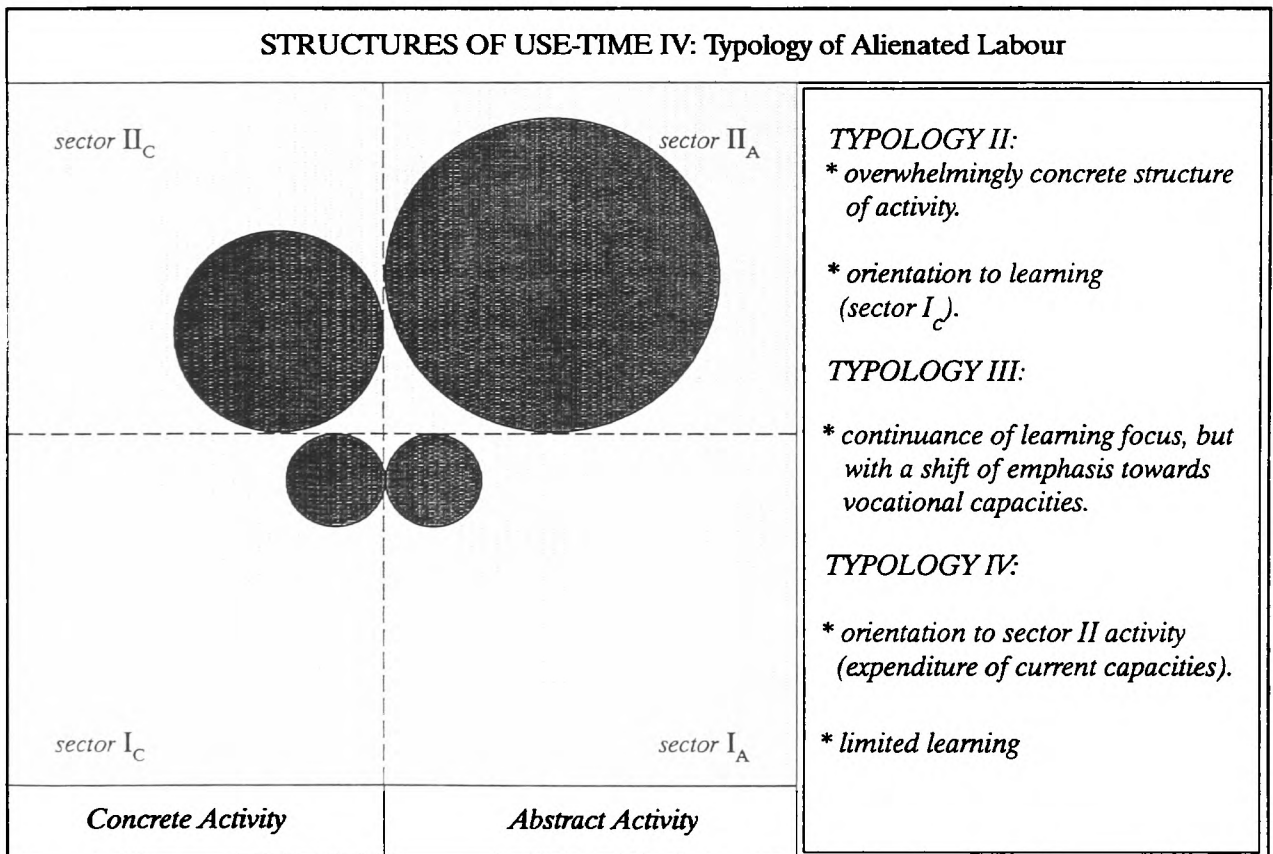
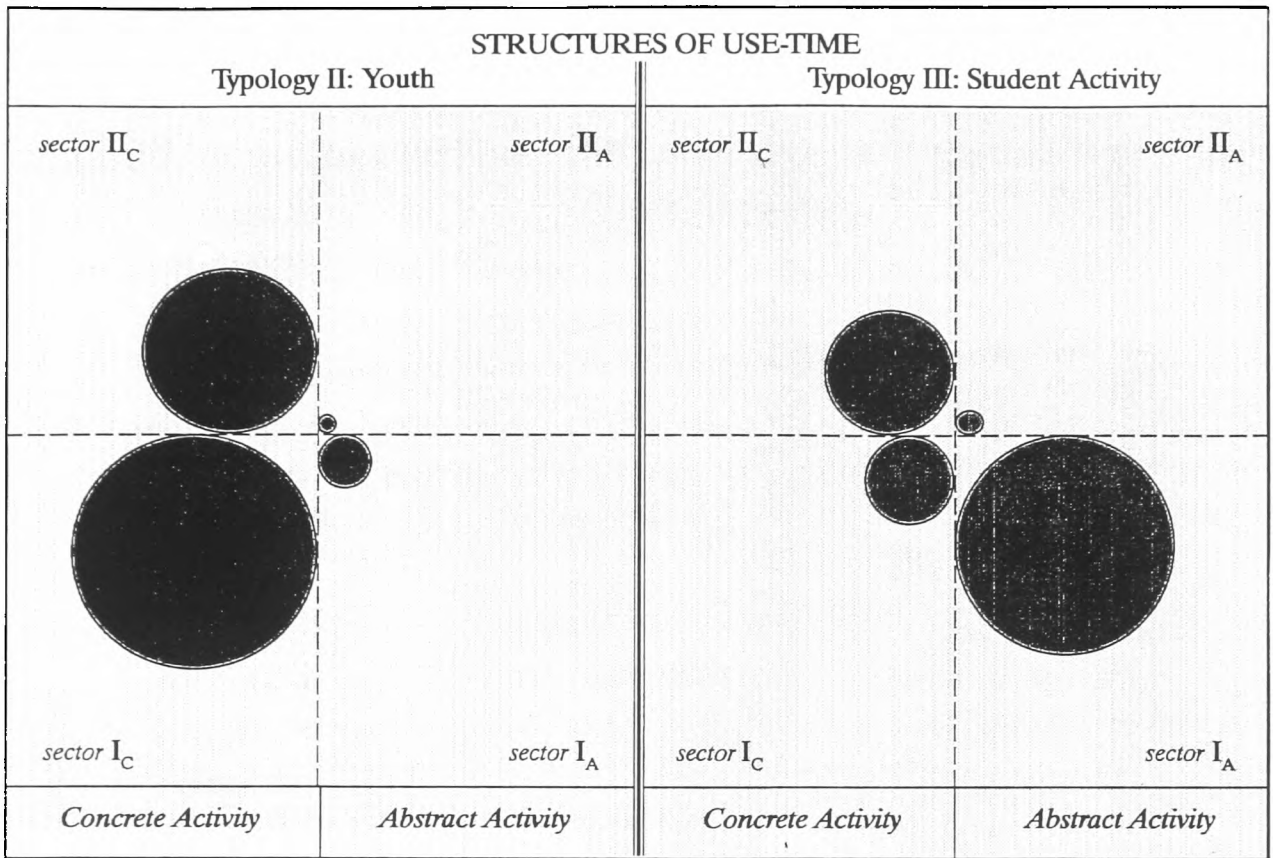
The capacity for learning in concrete activity is, Sève contends, limited. The biography then comes to centre on reproductive acts in concrete life. Again, the progressive and debilitating consequences of such an emphasis (summarised as a 'senile structure of the personality' by Sève)

in terms of motivational (P/N) factors as well as non-proportionality between capacities and acts, should now be clear. Dichotomisation of the biography arises from a rigid division of social labour and from the brittle structure of use-time that ensues. The blockages in access to social resources that many endure as a result of the ahumanism of capitalism cannot however, be contained in the biography within the sphere of abstract activity: cut off from the wellspring of learning- social development- the whole personality suffers profound involution. In a contradictory movement, biographical dichotomisation thus gives way to broadening cycles of motivational atrophy that eventually encompass all areas of individual activity: the biography goes into eclipse. Sève types this phase as a *senile* structure of use-time, which is inaccurate given that such tendencies can manifest at any adult age and that *senile dementia* has clear physiological roots that do not relate to use-time. *Ossification* is in many ways a preferable formulation. This ossified structure of use-time may be represented using the four-quadrant approach already outlined, in the following manner:



Source: Sève 1978:348.

The same modelling can be applied to other allocations of use-time typical of contemporary individuality. Sève relates the phases of childhood; youth; and manual full-time work.



Source: Sève 1978:348

This graphical mode of representation is particularly effective at emphasising the massive changes in use-time that characterise the different phases of the life-cycle.

In practice, there is the problem that Sève has already adverted of the necessary distinction between *phenomenal* and clock use-time. Even a cursory analysis of the foregoing can indicate certain interesting biographical features:

- * *there is significant congestion of total activity in earlier years, especially around the time of entry into the labour force. The tensions of managing learning activity in toto and of sustaining an accustomed rate of concrete activity in the context of a dramatic rise in abstract acts are severe.*
- * *there is a striking capacity within the currently brittle structure of use-time for experiential and temporal shock, evident on entry to, and also on exit from the labour force. On retirement, a major temporal reallocation of three of the four biographical activity areas is enforced.*

As Sève notes, these conflicts in (phenomenal) use-time materialise for the Individual in ‘...problems of balancing the psychological day, week or year’ (Sève 1978:342).

Psychological Superstructures:

Finally, opaque reference has already been made in the foregoing to posited mechanisms which enable the vicissitudes of use-time to be internalised. Thus Sève suggests that the dichotomisation of the personality between abstract and concrete for example, may be interiorised and perhaps self-justified in ideological terms. *Psychological superstructures* give effect to this.

Their function is to maintain the integrity and cohesion of the personality infrastructure in the face of use-time contradiction. Sève posits two frameworks of superstructural *control*:

- * *psychologically endogenous (spontaneous) controls that valorise an act in terms of the P/N not of the act itself but of the sequence of acts that may flow therefrom. The rather effective example that Sève gives is the act of getting out of bed, the psychological product of which is never assessed (beyond youth) in its own terms, but rather in the light of that which it gives rise to!*

* *voluntary controls* 'through which a personality attempts to gain control over its use-time'. Such controls articulate rules of conduct, behaviour and presentation in a semi-conscious manner that is voluntary but psychologically ideological. These practices, which are customarily emulative, are seen as primarily exogenous to the personality. In their interiorisation, they are however subjected to particular psychological laws such that the problematical isomorphism between the social formation and personality is ruled out. Thus:

'...the voluntary controls of the personality are not essentially formed through *direct interiorisation* of social institutions and values but through their assimilation as the psychological basis of the abstract personality' (Sève 1978:351).

Spontaneous controls are superstructural in relation to the concrete personality, while voluntary controls are superstructural to the abstract personality.

The balance-sheet on Sève:

It would perhaps now be opportune to draw some preliminary comparisons between Sève's work and other recent thinking on temporality and personality. Two comparisons will be attempted here, the first with what is basically a neo-classical school of thought that also emphasises temporal relations between classes of acts and the need for time economy. The second point of comparison will be with a recent attempt to establish from within marxism a theory of needs which is manifestly distinct from that of Sève's.

The 'New Home Economics School':

The *New Home Economics School*, typified in the work of Gary Becker in the United States⁵, is essentially concerned with the rational choice of a *household* as to the distribution of acts that will maximise *joint utility*. Here, utility is broadly defined to include all consequential family relations. The *numeraire* for this calculation is time. One of Becker's central conclusions is that an important element in this process is to ensure the continuance of a desired relation between commoditised and non-valourised capacities. The very drawing of this distinction marks his work as being comparatively progressive within the orbit of neo-classicism.

Another merit in his work is the way in which it contrives to go within the *black box* of the household to look at intra-familial relations. Unfortunately, the result is remarkably non-conflictual: it

assumes that the structure of P/N of each household member can be brought into some compatible relation with that of all others. The very common features of the nuclear family, including its frequent disintegration, gender inequality in task distribution (sometimes forced, sometimes habituated) and physical and psychological violence, are evaporated in the process of abstraction. Reality suggests that, in the *majority* of cases, interpersonal equilibration of the total structure of activity (whether intuitive or overt) through an agreed calculus of time is unattainable.

The emphasis on contradiction and potential conflict in Sève's hypotheses arising for example, from the noted brittle temporality of abstract labour seems eminently more reconcilable with the evidence than the consensual approach of the American School. As Wheelock notes in relation to Becker:

'(c)ommentators have pointed out that this opportunity cost approach can be problematic because the real world does not necessarily give people the option of making choices about the use of marginal hours, or even total hours' (Wheelock 1990:124).

Another key theme of the School is the central importance of the economisation of time in the selection or rejection of acts. The problem here, which has already been discussed, is that time is conceived solely as that which is measured by the 'clock/calender'. Just as with the wider time-budget approach, this projected economisation of time will remain essentially hollow for so long as different acts are assessed in an unweighted manner against the psychological environment of the participating subject. Sève's projection of a 'psychological' time (more precisely, a phenomenal use-time) which diverges from clocktime is vital here.

The obvious fact that acts requiring seemingly the same expenditure of effort and capacities but performed as concrete and then as abstract labour are differentially valued serves significantly to throw doubt on Becker's approach by undermining the easy coherence of the temporal *numeraire*. This is of course but a minor example of the wider implications of the differential temporality thesis.

Doyal & Gough's 'Theory of Human Needs':

The thrust of Doyal *et al's* work is to establish transhistorical criteria that enable needs to be rationally assessed and met through adequate mechanisms of social negotiation and change. Their first task is then to begin to clear the semantic and analytical ambiguities surrounding their central concept of 'need'. They boldly claim to:

'...reject individualist conceptions of human need which abstract people from their social and historical location and... attack functionalist accounts which reify arbitrary moments of history and result in relativistic conceptions of need' (Doyal *et al* 1984:10).

The clarification follows immediately after:

- * *'needs' are 'goals which in common parlance are believed to apply to all people', which have a physiological base and which are therefore potentially universalisable across culture and history.*
- * *'wants', on the other hand, are culturally specific and specified. They overlap in a tangential manner with needs as defined above but are socially relative and distinct therefrom both in terms of the available mechanisms for their satisfaction and in terms of the resultant social prioritisation of those available mechanisms. Wants thus overlay basic needs and partially obscure them. 'Need' and 'want' so defined correspond closely with Maslow's taxonomy of 'basic' versus 'higher' needs.*

The illustrating example is well-chosen: the 'need' for nutrition has a physiological base; the manner of its assuaging is fully socialised. Custom (or work-pacing) dictates eating times, which often have little to do with physiological requirements. Again, the manner in which food is consumed is to a greater or lesser extent, fully industrialised and therefore historically relative (the now overwhelming tendency in North America to purchase 'ready-made' food). 'Need' is thereby transformed into 'want'. (One may note further that, in certain psychological states, the 'want'- or its inverted form- can completely overwrite even physiological need. To continue with the same theme, this is what is involved *in extremis* in the anorexic nervous state, an extreme aversion to food consumption.)

Further clarification is then offered in terms of the active form of pursuit of need satisfaction. Here, there is a common elision of need with the strategy for its satisfaction. Thus the 'need' for clothing is actually one strategy, one mode of attainment, that secures and satisfies the real need, which is physical warmth and comfort.

These arguments, as to relativity of wants and the strategies for attainment of needs, leave the fundamental question open: how may one define 'basic' needs? Their answer, drawing heavily on the work of Galtung, Plant *et al*, is to define need as that which is a pre-requisite for any given action to be successfully pursued. These pre-requisites are presented in a Kantian form as:

* *survival (the physiological pre-requisite).*

* *autonomy (the capacity for choice, linked to a particular definition of individual 'agency').*

Survival is intended in an active sense to include a given quantum of physical and mental health, and the measure of these quanta is itself historically relative: but the need to define in this manner is transhistorical. Autonomy, as 'the private and public sense of "self"' (Doyal *et al* 1984:16), is learned. Language provides the vital infrastructure, and teaching and other forms of skills transfer the mechanism for this learning. Within this socialisation there is scope for 'infinite' variation in self-definition.

What are these social norms (ambiguously titled 'societal needs') that condition but do not determine the forms of individuality of any given historical epoch? The *material base* encompasses a given mode of distribution and exchange, as well as a structure of group activity, a division of labour, that produces specific '...traditions of problem-solving'. The received norms of *species reproduction* encompass modes of biological reproduction and specific practices for the care and socialisation of infants: of central importance is family structure, '...though with a wide variation of kinship patterns'. There are, finally, *cultural norms* that communicate forms of political authority and legitimisation rules.

One thus arrives through this at a (transhistorical) 'basic human need': to possess the capability of choosing between 'options to meet individual and societal needs'. This need is defined as 'human liberation'. It is nurtured by the infrastructure of learning and rendered concrete through practical application. Learning and the experience of practical application therefore form an integral part of the definition of that need for liberation.

The constraints on the full expression of this need are ubiquitous and have yet to be overcome. First, the design and application of the means of production present a range of problems of social understanding and control. Second, the appropriate social arrangements for optimising basic need satisfaction are lacking (chiefly, techniques for redistributing resources to maximise need satisfaction [including 'incentive systems']). Finally, while the endemic problem of resource constraints continues, the place of 'special groups' within a universalistic structure of need satisfaction remains to be resolved.

The necessary condition for any serious social attempt to resolve these issues is the establishment of a social mechanism permissive of their free and full discussion. Doyal *et al* reflect at length

here on Habermas' 'ideal speech situation', which stipulates universal rights of access to technical knowledge, training where necessary to secure the relevant methodological tools, as well as the ability to discuss in conditions minimally constrained by vested interests. The lesson drawn from this is (another basic need) that '...humans also have *constitutional* needs which stipulate the social rules by which these (Habermas-type) rights and capacities will be guaranteed' (Doyal *et al* 1984:26). These constitutional needs are then explored through Rawls' influential theory of justice.

Obviously, the potential gains to be made for socialism from a claim to consonance with universalistic goals and fundamental human needs are great: the very frequent dismissal especially of marxism as being in the service of particularistic and vanishing interests is among the most difficult to contend with. Doyal *et al's* argument seeks to legitimate both (a variant of) socialism and universalism against the real sectionalism of contemporary capitalism, through the principle of the need for human liberation. This is certainly a laudable venture- albeit when defined in this form, hardly novel.

The manner in which this objective is pursued is however strikingly abstract, as the Authors themselves concede. While this abstraction is certainly not a decisive handicap, nonetheless the emphatic transhistoricism does lend their arguments a bizarre ethereality. It is for example difficult to move from a discussion of the conditions for psycho-physical action to the analysis of that (obviously central) basic need, human liberation, without seeking also some grounding in the historical and material bases that undoubtedly link them: for indeed they are articulated across the broad sweep of history.

To take an obvious example: the principle of democracy, with its 'communicative advantages' to the ideal speech desideratum, is itself among the most important artefacts of Enlightenment, that is, a particular historical epoch. Both its modern connotation (sharply and revealingly different from Athenian antecedents) and widespread currency was crucially underpinned by an unprecedentedly rapid 200-year expansion in the material base. The Authors would surely not contest this historical relativity: nor the contestation that still surrounds the term itself and its diverse institutional expressions, from 'parliamentary democracy as we know it' (Raymond Williams) to a fuller (and still utopic) measure conditioning economic as well as formal political life. Yet an indefinite abstraction exactly typifies Doyal *et al's* usage.

Similarly, the insatiable 'need for human liberation' is surely historically relative, when mapped against this material advance. Its very definition changes with the available material and cultural

resources of the society in which it is proclaimed. Anderson's threefold distinction of private, public and collective goals maps the key social ranges over which Doyal *et al's* 'attainment strategies for liberation' might actually operate. The similarity ends there however. Anderson's terms are explicitly subordinated to the 'curve' of growing material product: he recognises moreover, that in ordinary and even quite extraordinary circumstances, this 'need for liberation' has remained remarkably quiescent.

Is it sensible, furthermore, to subsume a very modern collective definition of liberation with the virtually timeless concerns of personal or familial reproduction under the single, all-embracing notion of 'human liberation'? Surely, the issue of what the capacity to choose is expressed over both changes the nature of the agent making that choice and the criteria by which that choice is ultimately made? Very little is concretely left of a Kantian metaphysic of 'human liberation' when such considerations have been subtracted.

The methodological commitment to transhistoricism is disabling to the very core of their argument. The assumption that needs constitute the theoretical *prius* is, as Sève has successfully demonstrated, unwarranted in current social conditions⁷. Abstract labour substantially inverts the causality between need and action such that acts assume supremacy in determining the mass and dynamics of psychological capital and progress. The generalised relativity of need in contemporary life is implicitly recognised by Doyal *et al* at one point when they say:

'(p)erhaps nothing more dramatically illustrates the distinction between needs and wants- and *the ways in which it can be moulded to serve arbitrary interests*- than public demand for commodities which are known to be manufactured in ways which pollute the environment' (Doyal *et al* 1984:31, emphasis added).

This somewhat ambiguous formulation, suggests that the distinction between needs and wants is subjected to deliberate social manipulation (through, one presumes, the 'marketing' industry). Yet this concession to relativity is quite insufficient. What remains unregistered in their work is the massive formative influence of paid labour, and the conditions that attach thereto, in the development of contemporary personality, including needs. Contrarily, throughout the text of Sève's *Theory of the Personality*, one is feeling towards the artificial and objectively remediable truncation of personality that arises from the structure of work and which constitutes the daily reality of the large proportion of the global labour force.

Doyal *et al's* position is basically that there is some obdurate quantum of need that is inaccessible to social conditioning; that is therefore essentially private and thus transhistorical. This private need-structure essentially takes two variants in their argument. One may denote these as 'higher' or 'lower' level needs (without thereby suggesting either prioritisation or cultural chauvinism).

A higher level of need exists in the transhistorical 'meta-needs' which are clearly intended to be of significance in shaping future modes of politico-economic organisation. As has already been shown in relation to the meta-need of human liberation however, these cannot be rendered of any practical value save in their socially-mediated (that is, historical) forms. Without this understanding, it will not be possible to assess the limits on *liberation*, let alone the form that this may concretely take in different social formations at different times, or then the ensuing possibilities for political organisation.

A lower level of need can be identified in the psychophysical prerequisites for active life. Now, as Sève and many others have observed, these basic needs, which are recognised in Marx and then fairly quickly relativised by him, only become of primary importance when the veneer of luxury is shaved away. Given the current distribution of wealth, such basic subsistence needs continue to be mortally real for a majority of the human population. The likelihood is that this tragic situation will worsen, if anything, over the coming decades, unless massive change in the global economy can be wrought. It is of course the pattern of uneven and unequal development associated with the capitalist mode that has unleashed these (contradictory) forces.

Yet, as a veritable forest of United Nations documentation has effectively shown, simply pointing to the denial of basic need (defined in the most sophisticated transhistorical manner as given levels of nutrition, water quality, freedom from elemental exposure, and so on) achieves nothing in the face of a long term net outflow of resources from poor to wealthy social formations. Abstraction is of course a vital element in any analytical process: the problem arises as soon as the abstract actively denies a structured relation between the form of production and appropriation of the material product and, in this case, the production and satisfaction of need. Doyal *et al's* transhistorical analysis effectively endorses this decoupling. It is simply inadequate to relate need to *material* factors without also recognising the particularistic nature of the material base and its historical relativism.

The nub of the matter is this: if all contemporary material production is (differentially) particularistic, there is by definition a structural opposition to all universalistic claims. Their analysis also suggests that the distinction between (whose?) needs and wants can be socially

manipulated by those same particularistic interests such that wants come to contradict objective criteria of use-value or transhistorical need. Finally, if need/want satisfaction is the key determinant of individual action, then there seems little prospect for progressive change in the advanced capitalist bloc except through an appeal to collective ascetism. This appeal (or threat) has been voiced without outstanding success by ecological *fundamentalists*.

It is thus difficult to see any argument centred on (basic) need as being of practical efficacy in changing precisely those current conditions that give rise to its widespread lack of fulfillment. The circle of logic in Doyal *et al* that leads to this practical conclusion is decisively broken only if the assumption of need primacy is rejected.

This is the great merit of Sève's approach: the pre-eminence given to temporal activity and therewith, differential learning potentialities, decisively subordinates immediate need satisfaction in a larger dynamism of personality development. Through the 'dialectic' of act-need, human needs are endowed with more open-ended mutational capabilities. The limits of this dynamism are inscribed historically through the structure of use-times in the evolution of the social formation. In Doyal *et al's* approach on the other hand, if activity is not motivated by the need to satisfy basic need or by those higher meta-needs, then it is want-driven and determined by social manipulation. In the advanced capitalist nations at least, wherein a tendency for wants to overwhelm needs would likely be most developed, one again encounters in this approach the formidable charge of compatibilism.

Sève's Hypotheses seem therefore quite robust in light of these comparisons. Their historical situation in a broader intellectual culture which was suffused with structuralist marxism is quite evident. Given the fate of Althusserianism as a whole in the subsequent period, it is interesting to note that a recent study of the effects of long term male unemployment on the domestic division of labour (Wheelock 1990) again finds real merit in Sève's temporal theory of acts. Yet no systematic critique of his work has been attempted: critical analysis there certainly has been, but it has been very much *en passant* (Bahro 1978; Burkitt 1991; Leonard 1984; Timpanaro 1975). It would clearly be pertinent to consider these marginal comments at this point, for some of them at least act as substantive corrections to a theory that was always offered as provisional.

This criticism essentially takes two forms. At one level, these authors have illuminated some of the more serious gaps in Sève's account. The second set of criticisms, which are more fundamental, focus on the basic, and largely unarticulated, ontological assumptions that lie behind Sève's personality model.

Sève's model Assessed:

For obvious reasons, the first line of criticism, which seeks to identify those issues which should feature in any full account of the development of human personality but which are largely absent in Sève, tends rapidly to assume the qualities of a listing.

1. For Leonard, Sève overemphasises the personality effects of capitalist 'economic production' to the detriment of the features of childhood preparation for abstract labour undertaken in the family and on the other sites of social indoctrination.

Sève views childhood development as a period of rapid increase in concrete capacities achieved through the characteristic play and experimentation of increasingly structured (socialised) concrete activity. Indeed, the strongly mimetic quality of children's play, with roles being cast from the world of adult labours, is cited by Sève as further indicative evidence of the flow of understanding and personal development from adult to child.

This emphatically concrete orientation to early childhood is indisputably the norm in the richest societies, which have largely (but not universally) abolished child labour. In these circumstances, the extraordinary increase in powers in early years is founded on a very direct relation between act and need (A-N-A). There is then of course an accelerating quantum of vocational learning in the second decade, with adolescence also bringing the development of casual or part-time work.

All of this concrete activity is indeed extremely important, whether undertaken in schools or in the family. For Sève, the decisive revolution in personality development is, though, the so sudden incorporation of the *major* proportion of psycho-physical energy into the labour force. Whatever the concrete capacities built up in the domestic or in (avocational) education, insofar as these are relevant to paid labour then they tend to be assumed. Basic literacy and numeracy, learned initially for concrete activity, fall into this category. There is, in fact, a '...treasure of mundane knowledge and skill... (these) activities become taken for granted ...become socially invisible' (Attewell 1990:430).

Employment and pay is however, geared specifically to abstract capacities (vocational literacy/numeracy; physical stamina unrelated to any kind of athletic competence). These build on and frequently supercede the concrete capacities associated with youth. For example, it is often very difficult for an Individual who has mastered a particular literary or vernacular form such as report-composition even to recall the possibilities of concrete linguistic expression such as those

enshrined in poetry. Yet consciously or otherwise, that poetic capacity will have decisively underpinned their mastery of language and literacy in a long-forgotten mimetic youth. (It is notable in light of this that Sève was for many years heavily committed in struggles over the form of State education in France, including detailed engagement with plans for premature curricular vocationalism.)

Much the same point can be made for familial 'preparation': it is assumed that minimum standards of conditioning to the disciplines of paid labour (*work-ethic* habituation et cetera) are presented with the 'candidate' at the point of recruitment. Where they are not, training or recourse to the labour contract usually suffices. Where a more general crisis of preparation occurs, this usually combines with other forms of labour process disruption and wider cultural experimentation. This combination may threaten the basis of accumulation in that social formation and lead to a withdrawal of capital and/or a resurgence of State reaction. The lack of attention given to these matters in Sève is real enough though, and in that sense Leonard's point is well made.

2. Leonard and Timpanaro also call Sève to account for understating '...the family's *ideological* function in the construction of gendered individuals' (Leonard 1984:100, emphasis added). While Sève recognises that particular familial environments can magnify or ameliorate contradictions generated by abstract labour, this is a marginal consideration in his central emphasis on the capitalist labour process. This reflects a very significant and more general shortcoming in relation to ideology and gender determinations in Sève's work, which cannot be remedied through recourse to those parenthetical 'psychological superstructures'. The role of the family in this process remains undoubtedly central. This is apparent for example in the extreme personal difficulties associated with 'coming out', whatever the form this counter-cultural assertion of identity takes. In the majority of cases, this assertion is directed initially at the family, and only after this trauma is surmounted does the wider social enmity take precedence.

3. Following from this, Sève is criticised for downgrading the importance of domestic labour in the reproduction of labour power. Thus, 'Sève has ignored the division of domestic labour and the entire field of the unequal balance of power between women and men' (Burkitt 1991:128). Leonard rightly observes that Sève holds to a simple productive/unproductive labour duality, founded of course on the biographical distinction between abstract and concrete acts. Given his prioritisation of abstract labour and the prevalent gendered division of labour, this will clearly diminish the importance accorded to issues surrounding household labour.

Sève's references to the relations of household (re-)production are spartan. Analysis of the domestic economy, which is, he observes, internally characterised by unequal exchange and barter, must begin with the study of the material exchanges and division of labour that underpin it. The organisation of domestic economy is, he continues, as historically relative as the familial relations that formalise that activity. Beyond such relativising (which has been a commonplace in marxism since Engels' discovery of Morgan), Sève's main point is that the domicile is in an uneasy 'intermediate' position with regard to the axis of concrete/abstract acts.

This is by no means an irrelevant starting-point, when one considers the sharp inter-War decline in domestic service, then the very substantial incursion of female labour into the workplace in the A.C.Cs since 1945; and the partial mechanisation of domestic labour that accompanied this. The thorough application of such analysis in national survey work would undoubtedly facilitate the exploration of the changing dynamics of domestic life. Such research might also illuminate the interminable debate about the impact of abstract labour on women's aspiration levels and the striking changes in their ideological position that have characterised the post-War period.

These criticisms of Sève are extended in Timpanaro when he writes of the '...inadequate analysis of the various social and cultural sub-groups which contribute (within the general framework of one's class affiliation) to the shaping of one's individual person' (Timpanaro 1975:217). For Timpanaro, these affiliations include race, religion and nation at a minimum.

While there is substance to these allegations (and particularly the last) it is also clear that Sève is well aware of these lacunae in the *Theory of the Personality*. He accords them the 'highest importance' in the development of personality; and he attempts (somewhat ambiguously) to situate their development with social labour in the 'base' of the personality. (If this may be read as meaning the infrastructure of personality, then no indication is given as to what the [necessarily temporal] determinants of these affiliations are, nor how they relate to the overall structure of activity.) The treatment is cursory, but the response is hardly that of a vulgar economic determinist!

In another way, these criticisms are wide of the mark. Sève presents his work quite deliberately as a beginning: where should one begin? Sève is emphatic: with the study of social labour. He declares:

'...the unchallengeable fact (is) that social labour is generally the activity in which the individual is in contact with the productive forces and the most decisive social relations in the last analysis' (Sève 1978:203).

It is of course quite tenable to take issue with the postulate that the 'most decisive relations' for the development of individuality under capitalism are those associated with waged labour. Indeed, such argumentation has become commonplace in recent years, in a wholesale flight from any accusation of economism. In the face of such trends, it is perhaps salutary to recall here some relevant statistical projections produced in 1979 by Rowthorn and Ward. They estimated, on the basis of earlier work by H. Brenner, that a one-million person rise in unemployment in Britain (which was of course only just around the Thatcherite corner) would give rise to the following effects:

** an additional 50,450 deaths through heart disease, suicide and murder.*

** 63,900 extra cases of mental illness.*

** increased crime, with 13,900 prison referrals.*

(Source: Rowthorn B. & Ward 1979 'How to run a company and run down an economy: the effects of closing down steel-making in Corby' *Cambridge Journal of Economics* 3).

Such observations can be complemented by large scale explorations of the relation between work, income, leisure and health. For example, Tåhlin (1989) analyses the results of the Swedish Level of Living Surveys, which are based on questioning of around 6,000 individuals. He finds:

** a strong positive correlation between income (of which the large proportion originates in waged labour) and the structure of leisure activity, with determinacy ascribed to the former.*

** a similar relation between working conditions and health.*

** that '(m)entally demanding tasks have positive effects on mental well-being, whereas physically demanding tasks have negative effects on physical health' (Tåhlin 1989:126).*

** finally, that work 'qualification level' correlates with a particular species of leisure activity, namely, 'cultural and political activities' (ibidem).*

In a similar manner, the empirical work of Kohn et al (1982) established a close unilateral correspondence between work autonomy and substantive complexity on the one hand and general temporal flexibility and density in overall use-time on the other.

These results should not be a cause for great surprise: neither do they even begin to close the debate on the biographical importance of waged labour. The development of empirical personality will always be characterised by a host of cultural and behavioural factors that could themselves be ascribed a final determinacy. Culturalism may find succour in this ascription.

The very real merit of the studies of Tåhlin *inter alia* however, lies precisely in their empirical rooting. For all of the well rehearsed methodological problems of empirical investigation in the social sciences, theory that arises from, or is at least congruent with, such empirical work is infinitely preferable to the circular linguistic relativism of post-structuralist thought, which is customarily somewhat short on empirical referents. At the very least then, these investigations are suggestive of a continuing and significant determinacy for waged work in the biographies of employed individuals. Sève's emphasis, which is a common theme in the long term development of historical materialism and which carries positive implications for the development of the species, is thus empirically defensible.

This continuing relevance of waged labour in an era of apparently proliferating cultural identities is of course not lost on Timpanaro. The parenthesis in the passage reproduced above indicates a certain determinacy: class location and abstract labour decisively shape cultural factors, where the reciprocal determination is and remains weaker.

There are, then, good reasons for prioritising the development of the forces of production and the conditions of abstract labour in the theory of personality. The dangers in this theoretical narrowing are also clear. Whole sections of the population can simply vanish! What, as Burkitt demands, of those who do not work, or those who do not work for wages? Yes indeed, the theory of personality cannot stop at the analysis of waged labour or in the capitalist plant: but it can reasonably and defensibly start there.

4. Timpanaro has levelled another, altogether more substantive criticism at Sève's 'science of biography'. It is, he claims, opaque on the relationship between fundamental biological factors and the psychosocial and psychological processes proper that govern individual development. As Timpanaro notes, Sève does recognise these biological conditions as precursors to human development and as lastingly distinct in their inner logic and evident effects from the psychosocial

and social conditions. Timpanaro's concern is that this understanding remains formal and overlain by the more customary recourse to triumphalism within marxism. Sève displays that '...extreme defensiveness with reference to biologism' which has plagued a marxist engagement with the personal and cultural legacy of sensual existence.

Even a cursory reading of the *Theory of the Personality* supports Timpanaro here. Sève is unduly reductionist to claim, for example, that 'what makes man essentially man in developed humanity is not a natural given in each isolated individual but a product of human activity'. Sève proceeds to relativise the totality of genetics to history:

'(t)ogether with the social relations which it involves the tool replaces the chromosome as the mode in which the experience of the species is stored' (Sève 1978:443).

'Not a natural given'; 'the tool *replaces* the chromosome' - these formulations are indeed far too strong. They reduce to unacceptable levels the wide-ranging and continuing effects of mortality and the biological conditioning of hedonism on personality. Timpanaro is therefore undoubtedly right to criticise such chiliastic claims in terms of '...certain givens of the human condition', which are within all foreseeable circumstances innate to life itself.

Timpanaro also rightly taxes Sève with extreme obscurantism over his deployment of the concept of 'juxtrastructure' to explain the relation between the physiological and personality development. With biology implicated in a juxtrastructural relation with the psychosocial (which is the 'structural' relation of personal development), then the reduction of physiological characteristics to social phenomena is reconstructed, albeit at one sophistical remove. The very notion of 'juxtrastructure', in whatever context it may be deployed, only compounds the already formidable problems of the 'base:superstructure' metaphor.

In reality, Sève's comments on 'psychobiology' remain parenthetical. They simply assume away the more profound cultural ramifications of our biological materiality. This marginality is most clearly evident in his concluding comments, when he observes that:

'...the tendency of the falling rate of progress results from a threefold determination: biological (loss of learning capacity), social... and specifically psychological... If we leave aside the first, *which we are not concerned with*, the second appears straight away as a crucial condition' (Sève 1978:365, emphasis added).

Tautology is no answer to questions of such complexity and profundity to individual and species identity.

This is not however, to suggest that Timpanaro's treatment of biological materiality is especially convincing. Raymond Williams' sustained exploration of the contradictory and truly dialectical nature of this relation between humanity and a differentially *constitutive* nature remains the most sophisticated in the canon. Williams recognises the wide-ranging nature of this relation, in:

'...that intricate and varying set of productive processes, and of the human situations which they realize and communicate, in which the physical facts of the human condition are permanently and irreducibly important' (Williams 1978:11).

This is no narrow definition of production here. In direct criticism of Timpanaro's self-declared 'pessimism with respect to nature's oppression of man', Williams emphasises the extremely positive elements involved in the pursuit of personal goals, which include the concrete forms of work associated with the reproduction of life itself.

'It is not just when staring death or disability in the face that we can question or draw back from revolutionary effort. It is also when sexual love, the love of children, the pleasures of the physical world are immediately and very powerfully present' (*ibidem*).

He makes the same point with even more force in relation to the sensual or intuitive activity which remains crucial to a collective representation of humanity to itself, that is, to the very broad sphere of artistic production.

'Such work can serve societal purposes, of the deepest kind... as "recognitions" (both new and confirming marks) of people and kinds of people in places and kinds of place, and indeed often as more than this, as "recognitions" of a physical species in a practically shared physical universe, with its marvellously diverse interactions of senses, forces, potentials' (Williams 1981:128-9).

The many ways in which sensuality and biology continue to condition individual acts as well as shaping significant areas of collective material and practical productive activity, are clearly understated in Sève. Williams' *cultural materialism* is especially powerful in situating specific forms of production in relation to sensual conditioning. The contrast with Timpanaro is striking. At certain points, chiefly when the influence of Italian idealism is at its weakest, Timpanaro

assumes positions that are close to those of Williams. For example, he talks of the 'stimulus and nourishment' that engagement with the natural systems impart to human activity. What activity does he have in mind here?

'The impact of nature on culture remains very real in the triple sense of the influence of biological constitution on psycho-intellectual character in each individual, of stimulus to scientific-intellectual and artistic activity, and of object for these same activities' (Timpanaro 1975:50).

The activity, and the conception, is strikingly intellectualised and cerebral: but even this limited conception represents Timpanaro at his best on this issue. In the main, *On Materialism* emphasises all that is negative in relation to the biological sphere, that '...external situation which we do not create but which imposes itself on us', as it pursues a pessimistic Leopardian corrective to marxism.

5. Timpanaro also raises certain critical questions with regard to class position and class consciousness. He observes that individuals can move between classes, or more important, misinterpret (and often misrepresent to themselves) an objective class location. In addition, he notes that a given class only rarely engages in struggle with another: the more customary modes of class intercourse are conflictual or collaborationist. Sève's treatment of these issues is, Timpanaro argues, superficial.

What is actually involved here is an extremely complex nexus of practical, linguistic and theoretical problems. The first of these is the nature of the psychosocial process that takes the potentialities of the personality, as decisively defined in the structure of use-time, into a practical consciousness of the world and (relationally) of the individual's position in that social and natural order. In short, it is the problem of the process of coming to subjectivity.

This active, if often subconscious, (mis)representation of class position to self can be related to Sève's projected *psychological superstructures*, and particularly to those emulative *voluntary* controls. The problem is that Sève was extremely ambiguous as to what these consisted of, how they were produced, how they 'apellated' the Individual and what their relation was to the infrastructure, that is, exactly how they were internalised. Here, Sève's theorisation abruptly breaks off.

How then might one most reliably proceed in addressing this point? Timpanaro provides his own answer: what is required is a materialist ethics. Clearly, this is insufficient on its own, for the role of ideology also needs to be explained. Both areas have been and remain theoretical imbroglios in marxism however, so that any recovery and progress promises to be extraordinarily difficult. Meanwhile, in what is clearly a more restricted domain, the *Theory of the Personality* takes marxism a significant step into the very heart of adult personality.

The second issue that Timpanaro's observation raises is equally large, and that is the need to relate aspects of individuality in a systematic manner to the differential set of collectives which constitute contemporary social intercourse. More on this will be said below: for now, it is sufficient to note that this intercourse works at a number of levels, and to register the importance of distinguishing between these. For example, many contemporary labour processes are socialised to such an extent that the capacities of one are utterly contingent on the acts (and then the capacities) of the many that compose the collective labourer. In a specific sense, the basis of (some) skills is no longer coextensive with the individual as such.

This is precisely the criticism of experimental tests of skill levelled by the so-called *situated learning* school (see Attewell 1990:423 *et seq*): that spatial or social abstraction of capacity from the specific context of the workplace is a *non sequitur*. As Attewell observes:

“skills” are viewed as so grounded in the contexts of their use that they cease to be the property of any individual worker (who could not take the skill away) but, instead, reside in the interactive work of the group as it unfolds in a particular setting. From such a perspective, skill is distributed across co-workers and only takes effect in interaction: it is quintessentially *social*’ (Attewell 1990:425).

There is clearly a major issue here as to the definition of skill and its reconciliation with Seve's concept of capacity: this will be fully addressed in Chapter 4. The empirical thrust of the *domain-specific* argument is so strong in specified environments that its overall cogency is irresistible.

Much the same argument can be made in relation to the seemingly confident assumption of individually isolable *acts*. The outcome of a definable subset of acts is likewise concretely dependent on the conjoint acts of a multitude of others. The definition of the act of driving a car includes being able to move from place to place with no physical harm resulting to oneself, to other occupants or to the population at large. Yet as road congestion increases, the probability of a successful outcome to a given journey comes increasingly to depend on what others do.

Likewise, certain forms of collective art or display are inherently transindividual. The intended products are impossible to enact or attain on an individual scale.

Thus both capacities and acts are in part collectively defined and effectualised, and so in larger part are complex needs (the 'wants' of Doyal and Gough). It would indeed be useful to compile an inventory of these collective elements in the lives of individuals distinguished, as Timpanaro rightly suggests, by those varying subgroups whose importance is not to be understated. Interestingly, these comments also provide the crucial empirical underpinning to that 'irreducibly transindividual' element of Althusserianism (Rée 1981): conversely, they form an important component in the accumulating body of critique weighing against the radical individualism of Analytical Marxism.

The degree to which class as a distinct form of collectivity is an active element in this transindividuality is a distinct issue, another dimension along which the inherent collectivity of life under capitalism may be assessed. A strike is a class act that is innately transindividual (though a *hunger strike* is a different matter altogether). A *lock-out*, an act of comparable radicalism on the part of the capitalist, is qualitatively distinct. Running with the wider currents of property and law of the mode of production, it is quite possible for capitalists who are economically unassociated with their compatriots to master-mind and manage the lock-out (though always with the assistance of those wider forces of 'order'). This indicates, however schematically, that the degree of necessary transindividuality for effective action is asymmetrically distributed by class.

Timpanaro's observation that classes only rarely move to active struggle and that conflict or even collaboration more generally obtains, relates to the theoretical move from classes defined 'in-themselves' to classes 'for-themselves'. The latter is of course the sufficient condition for class action, the process of 'coming to consciousness' that builds on the (differential) collective identification outlined above.

It is fair to ask of Sève how an Individual comes to appreciate the organic collectivity of life, including as a subset, that of class, and then to seek the motivational basis for an Individual to act in accordance with (or actively to deny) those collective interests. It must be said that Sève cannot rise to what is admittedly a formidable challenge. On the other hand, Timpanaro's own analysis, with its recourse to discussions of free will and laudatory accounts of the Engelsian Parallelogram, certainly does not get very far either. It is however, illegitimate to seek in a theory of personality, as Timpanaro suggests, answers to the relative situation of those collectivities. Class 'behaviour'

(and one has to be cautious of anthropomorphism here) is incontestably an object of historical materialism, not of personality theory.

There are some further problems with Sève's 'Hypotheses' that are not adequately addressed in the foregoing.

First, there is the undeveloped epistemological framework in which Sève's theory of personality operates. Though Sève goes to such pains to allay charges of functionalism or economism, or perhaps precisely because of this preoccupation, he fails to do adequate justice to the internal relations between the different theoretical objects that he posits.

This is quite surprising, given the indebtedness that Sève acknowledges to Althusser and the central emphasis given in the latter's work to such questions. In Althusserian historical materialism, it will be recalled, the dimensions of synchrony (in modes of production theory) and diachrony (in the theory of social formations) were constantly stressed. The projection of personifications that was linked in a subordinate relation to the mode of production was correspondingly a synchronic exercise: these were the limits on personality that the structure of the mode of production dictated. Sève accepts these personifications as delimiting the structure of personality under capitalism.

The move from absolute determinacy in modes of production theory to relative contingency in the (overdetermined) social formation raised a host of ultimately crippling questions for the Althusserian project. The only effective answer to these sound concerns is to recognise the quasi-stable nature of the capital relation and the coalitions in the ruling classes that shape the productive forces and therewith the scope for contestation and change in the social formation. In other words, it is to posit a theory of epochs.

Though Sève explicitly accepts the overall framework of personifications, the bulk of the *Theory of the Personality* focuses rather on what is clearly a diachronic entity: the biographical forms that inhabit his work are by conception temporal. There is though, no attempt to reconcile synchrony with diachrony. The importance of synchronic thinking, as has already been noted in relation to historical materialism, is the comparative perspective that it gives to the broader ranges of human organisation. This loss is apparent in Sève's work, where there is virtually no reference to pre-capitalist personality structures.

Such comparisons in themselves count for much: is the concept of 'use-time', for example, historically specific to the capitalist period? A comparison with the structural necessities of the feudal mode of production, and the personifications that such necessities posit, would surely reveal much about that which is historically contingent in the theory of the personality that Sève has developed. Is there a sense furthermore, in which the coexistence of modes of production in an internally dominated social formation also reflects in other contradictions within the personality? These questions are left unexplored because Sève does not deal effectively with this potentially useful distinction of synchrony from diachrony.

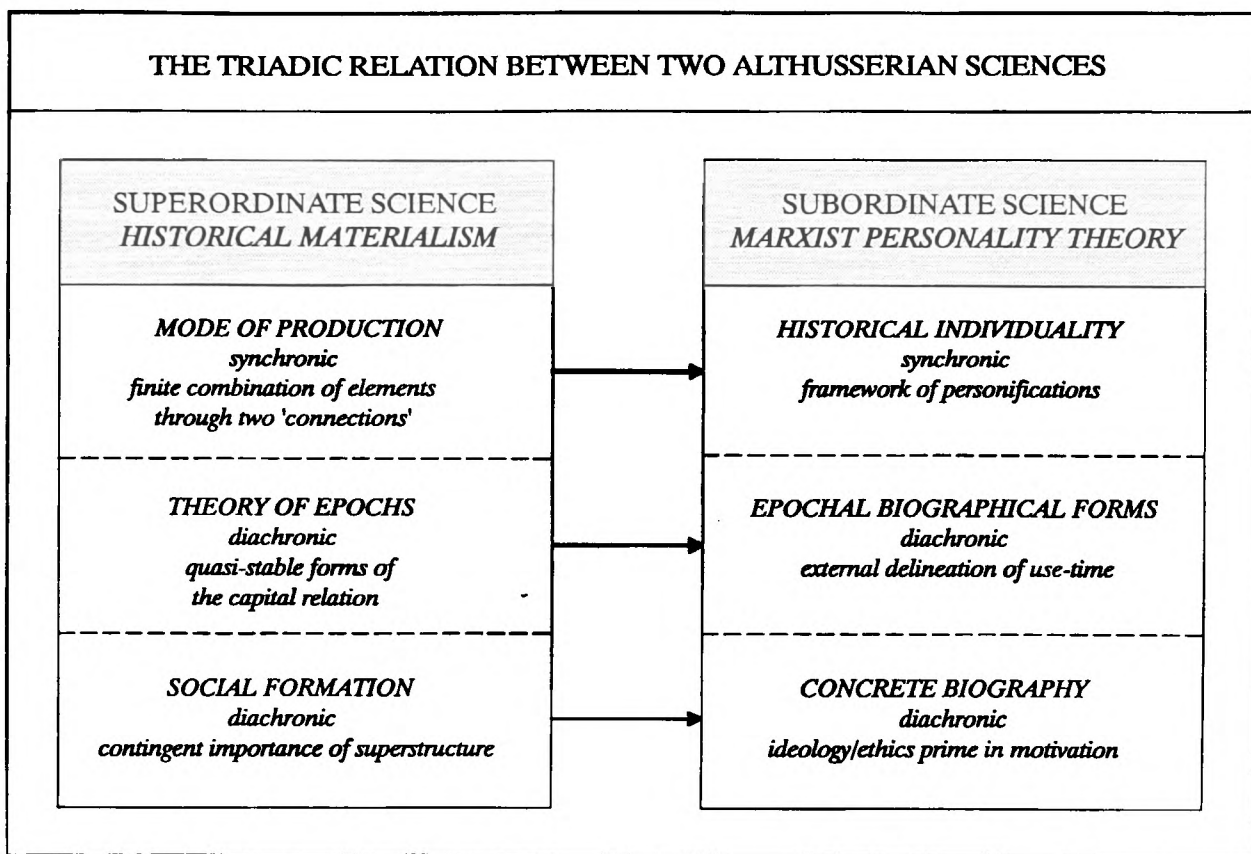
The greatest care has been taken up to now not to name the analysand in Sève's reclining chair. It is at this point necessary to do precisely this. The Hypotheses are suggestive: what one faces is a diachronic entity characterised by dichotomy between abstract and concrete activity. Such individuality has by definition internalised the bipolar world of alienated production and concrete *other*, that characterises personality in developed capitalism. The evidence infers that the patient is subjected to economic exploitation (the abstraction of labour as labour power), but a closer inspection of the structure of use-time would be required to adjudge whether this was a line worker, a middle-ranking bureaucrat or a medical ancillary.

One can immediately observe, however, that this subject is precisely not a concrete individual. Its biographical malleability is bounded by the limits imposed by the personifications of the overlapping modes of production. Concrete individuals are quite able, and indeed do, traverse classes and move among personification structures. In all the examples that Sève deals with, there is an underlying assumption that abstract activity is a relevant and important issue, even if only *in absentia*. There are no intruding non-economic affiliations, as Leonard and Timpanaro observe, and ideology is not allowed to distort the calculus of product:need that underpins motivation. What theoretical status does the patient then possess?

The four-quadrant biographical breakdown that Sève proposes is neither a 'general topology' of personality under capitalism (it is clearly class-specific, for no full time entrepreneur has abstract labour in their current biographies) nor, it is clear, are the differential O.C.U. mappings concrete individuals. The only way to conceive of these proposals is as part of an intermediate *theory of epochal biographical forms*, intermediate that is between the synchrony of personifications and the wide diversity of concrete individuals.

The conceptual concordance here with the treatment of epochs in historical materialism is striking. This invites the exploration of the relation between the two, which is a task that will occupy

the rest of this Chapter. Schematically, the relation between the two sciences of historical materialism and marxist personality theory proposed here can be represented as follows:



There is of course a certain theoretical elegance in positing an isometry in the triadic structures of both sciences in this manner. More important, this model also suggests a potentially robust research agenda.

Within each multilayered science, the scientific object (the social formation; the concrete individual) will be subjected to a differential distribution of tendencies, which work contradictorily for stabilisation or disruption. The relative fixity in the form of surplus value extraction that underpins the theory of epochs may locally constitute a force for stability, elsewhere, in a different structural relation with the social formation, a disruptive modernising hurricane. The epochal biographical forms which are engendered by particular structures of use-time all too frequently contradict the extant personality structures of working people and violate their mores. Yet the continuing pressures of use-time are enduring and relatively indifferent to concrete personal needs: that logic will govern (but not in the pure form associated with personification theory) the transmutation of concrete individuals into new forms.

There is also much to be gained from further study of the relations of super-/subordinacy between the two sciences. This involves closer identification of the modes of transmission and communication between historical materialism and personality theory, and exploration of the rich terrain of differential temporality that shapes the various contradictions in this relationship.

The observation of this epistemological lacuna in Sève is therefore anything but casuistic. Its effects can be seen in the welter of missed opportunities which characterise the *Theory of the Personality*. For example, the treatment of time, which has already been touched on, is strikingly underdeveloped. The distinction that Sève draws between phenomenal and clock time (DT1) is surely of relevance in moving beyond time-budget analysis, but no operational methods are actually proposed.

The second major problem with Sève's work, which is a subspecies of that wider epistemological lapse, is the singular lack of clarity in differentiating between theoretical and historico-empirical forms. This is particularly pertinent in relation to the important concept of dichotomy. One seeks in vain any suggestion of its historical formation or relativity: has personality always been characterised by this schizophrenic break and does the rigidity or porosity of the demarcation between personality sectors change across historical epochs? It is hardly Arcadian to suggest that more or less integrated personality structures may have characterised earlier epochs or modes of production. Yet Sève's recurring difficulty in integrating the real object with the object-in-thought (to use Althusser's clumsy formulation) causes him to obscure such potentially rich lines of investigation. Similar caveats are undoubtedly relevant in relation to the inversion of need and act, though Sève is more circumspect here.

Finally on this theme: when Sève defines the central organising characteristic in the development of personality as the acquisition of capacities, the tendency to learn, he should surely register a cautionary historical relativity. Is this emphasis not itself a relatively modern phenomenon, in its all-important qualitative aspect? That historical upward reach of aspiration and self-consciousness to which Anderson draws attention would suggest that the central imperative to learn is in degree a feature of recent social organisation: so too is the corresponding theoretical registration of that trend.

The third criticism that can be levelled at Sève, for the trend was clearly there when the *Theory of the Personality* was being drafted, is its lack of recognition of the changing structure of the labour force. This may be founded on a workerist *parti pris* or on some other occluding force: but the

emphatic attention given to the worker on the (Fordist) production line simply does not register the massive increases in specialist mental labourers that were the collective reciprocal 'price' of mechanisation at the point of production and of the more general shift to American systems production. As Julkunen observes of Sève's theory:

'...it does not offer means for taking into consideration the remarkable variation which is typical of abstract activity in the circumstances of highly developed capitalism' (Julkunen 1977:15);

...where this *variation* is founded on the substantial 'polarisation of qualification' of extended divisions of labour. What is the overall structure of use-time for the growing numbers of mental labourers, for example? Sève remains remarkably circumspect on this issue and on the wider changes in the labour process that were discernible in the France of the 1960s.

The range of criticisms that have been brought together here in their fullness indicate the formidable problems that may be anticipated in building on a biographical analysis of personality development in the manner that Sève has suggested. Yet the overall perspective on the *Theory of the Personality* must remain nonetheless a positive one. In broader perspective, in terms of the problems that were set out in the Introduction and elsewhere, the positive features of Sève's biographical approach stand out. Julkunen's judgement on Sève's work, as a 'promising preliminary attempt to make a deeper analysis of the use of time' (Julkunen 1977:15), is a concise summary.

NOTES TO CHAPTER 3

1. *The political affiliations of Sève as Central Committee member of the P.C.F. during the 1960s, and his intellectual orthodoxy as the Party's 'official philosopher' thus brought him into direct conflict with Althusser among others: see Elliott 1987:34;192. For a trenchant critique of the ideological twists which Sève's Party loyalties demanded in those neo-Stalinist days, see Ernest Mandel From Stalinism to Eurocommunism 1978:150ff.*

Suffice it to say, while the demands of Party orthodoxy certainly did enervate its subjects in the longer term, the impact of a received culture within a semi-protected enclave such as the contemporary P.C.F. quite often generated useful and innovative work. Indeed, it was some complex of these affiliations that kept Althusser in the same Party for so long, even when his own intellectual trajectory pointed ineluctably away.

2. As Timpanaro notes:

'Sève is quite right to state forcefully that a Marxist science of man cannot base itself solely on the requirement of "generalisation", overlooking the individual (not as a spiritual "person", but as that particular nexus of social relationships which is different from all others)' (Timpanaro 1975:213-4).

3. *The relation between Sève's work and that of the Althusserians is, to put it mildly, ambiguous, complicated moreover, by the political tensions that were evidently there in the P.C.F. Sève is in the first instance highly complimentary, claiming that the publication of Althusser's major works had forced a significant and prolonged reconsideration of the theses that were eventually to become **Marxism and the Theory of the Personality**. Yet Sève also affiliates to something known as 'scientific humanism' as a vain attempt to reincorporate a socialist ethics into both historical materialism and the marxist theory of the personality. This is overtly presented as a strategic riposte to Althusser's ahumanism (which, predictably, Sève interprets as an anti-humanism).*

Interestingly, these apparently wide philosophical divergences seem in retrospect to present few practical problems in the integration of the substantive elements of Sève's oeuvre into the more robust infrastructure of Althusserian marxism. Perhaps Althusser was right after all in his decadent claim that philosophy 'leads nowhere because it is going nowhere' (Lenin & Philosophy 1971:56)!

*The only minor point of interest in what now appears to be an entirely inconclusive and unproductive semantic polemic is the difference in perspective on Marx. A theory of the general forms of individuality is, for Sève as for Althusser, immediately available (with only minor theoretical surgery) in **Capital**. Sève is however, ambiguous as to the relationship between the theory of the general forms and its superordinate science, historical materialism. Where Althusser had projected a rigorous unilateralism on the bases of the structural indifference and transindividual necessities in the social formation that generate personifications, Sève's conceptualisation of a 'juxtrastructure' suggests a higher level of reciprocity. This mutual determination in Sève is constantly in danger of breaking down into theoretical chaos: its projection reflects a wider lack of structural clarity in his **Theory of the Personality** (see below).*

*Sève also claims more from Marx than Althusser would countenance. The former perceives 'in the margins' of **Capital** an unreconstructed but nonetheless legible theory of **biographical forms**, one based fundamentally on the temporal economy of social formations. Thus Marx's mature work contains '...scientifically consistent materials' which could form the 'theoretical foundation' of*

a theory of personality (Sève 1978:111). Certainly, there are passages in the *Grundrisse* that provide support to this hypothesis and that would appear to refute the Althusserian claim. The problem with these, as Althusser was however, correct in observing, is their unsystematised relation as diachronic constructs to the broader (synchronic) sweep of the mature marxian works.

4. 'Reach' is used by Williams here to imply the outermost limits of any significant material efficacy of the species. He defines three classes of space in which 'reach' has a different substantiality. First, there is '...an "external situation" which is beyond human choice or control: the far and middle reaches of our material environment'. This 'external situation' '...modulates, in complex ways, into what is already an "interactive situation", and then crucially, into an area of material conditions in which it is wholly unreasonable to speak of "nature" as distinct from "man"' (Williams 1978:6-7).

At this level, the dualism of a separable natural 'given' and a human activity acting thereon breaks down, a situation that Williams describes as a 'constituted materiality'.

5. The history of time-budget analysis is of some interest: the first substantive time-budget studies were undertaken in the early post-Revolutionary period of the Soviet Union. They were part of a wider effort to systematise and improve the biographical quality of Soviet workers, and in that light, there were decisive links to Soviet Taylorism.

In the post-1945 period, time budgeting has flourished, based on large scale diary-keeping and analysis. This work has been founded on a topology of facts that includes some ninety-six categories, grouped under ten classes:

- * paid work.
- * domestic work.
- * childcare.
- * 'purchasing of goods and services'.
- * private/physiological needs.
- * adult education/training.
- * civic activity.
- * entertainment/social activity.
- * sports.
- * passive leisure.

It is symptomatic of the poor philosophical underpinning to this work first that there are quite so many and so muddled forms of activity: second, that the classes under which these are gathered and analysed for biographical purposes do not reflect the fundamental importance of temporal ownership or direction. Adult education and training, for example, encompasses on-the-job training (sector I_A activity) alongside of more critical appropriations, which clearly locate in sector I_C .

6. Jameson, in Miliband & Panitch (eds) (1990:101-4), provides a brief overview of Becker's work. As he notes, the basically neo-classical framework adopted by Becker employs a familiar implicit assumption: that maximisation of the aggregate household utility function is constrained by the given allocation of resources. These resources are defined in a wider than customary sense to encompass the total stock of capital (including given human capacities) and the resources of affective and cultural relations. Temporal economy (the objective function) is couched in terms of the reproductive times of each productive resource in the household asset portfolio.

The ceteris paribus framework remains however, generating a number of clearly reactionary observations.

*7. The assumption of need as a starting point for analysis of issues of individuality and ethics is nonetheless a very common one in radical thought: see inter alia Agnes Heller's 1974 work, **The Theory of Need in Marx**. Perhaps more insistently than any other British commentator, Kate Soper has systematically pushed for needs to be taken seriously in a marxist-humanist framework. Her 1985 article, 'A difference of needs' in **New Left Review** 152, makes the case in a clear manner: the thread continues to the 'politics of need' in Soper (1991).*

*Soper's positioning on humanism is, it should be stressed, quite subtle. She has recently suggested that what she terms 'anti-humanism' (more properly, a recognition of structural indifference) must constitute a cornerstone of humanist ethics: a precursor for effective action, as it were. This is by no means a bizarre proposition. Plekhanov (1976) had followed an analogous line of reasoning, though of course the semantics differ radically. For Soper's recent comments on this, see her 'Postmodernism, subjectivity and the question of value' in **New Left Review** 186, 1991.*

CHAPTER 4

THE TEMPORALITY OF FORDISM RECONSIDERED

'In all these ways- by the division of labour; the supervision of labour; fines; bells and clocks; money incentives; preachings and schoolings; the suppression of fairs and sports- new labour habits were formed, and a new time discipline was imposed' (Thompson 1967:90).

The central task of this Chapter is to reappraise the transition to modern industry from the standpoint of a materialist personality theory. This will be a selective task which will hardly exhaust the rich analytical potential that the works of Althusser and Sève opened up. The partial nature of this empirical investigation is further bounded by the limitations in the historical record itself.

There is also a deeper motivation here. The theoretical research agenda for this Chapter, the verificatory task as it were, is to illustrate and thus cement the underlying relations of the two scientific objects, historical materialism and personality theory, as proposed in Chapter 3. Particular emphasis is given to exploring that underlying theme of systemic contradictions that characterise the movement of their component elements. These epistemological relations order empirical analysis: *contra* Althusser, they categorically do not remove the necessity for careful historical analysis. More positively, the extent to which theoretical abstraction enables an effective appropriation and redefinition of the real object is an indication of the worth of any theoretical system. The analysis of the development of Fordism as the first historical expression of the epoch of modern industry undertaken in Chapter 2 provides the essential starting-point in the current investigation.

What, then, are these questions?

A. Can one be more precise about the exact nature of that non-correspondence between handicraft-oriented personality and the massified worker of River Rouge that, in their distinct ways, both Balibar and Gramsci pointed to, as a major obstacle to the transition to modern industry? This question invites the practical exploration of the dynamic relations of these two Althusserian sciences (DT3).

If non-correspondence effects do indeed constitute a substantial developmental barrier, then the historic nature of the achievement of deep mechanisation in the United States is thrown into sharper relief. Reciprocally, the root causes of atrophy in other social formations that failed (then) to make that ultimate transition are also clarified.

B. What function can be attributed to mechanisation in the wider restructuring of temporality and capacities that the transition catalysed? Balibar's notion of levels of intermediation is significant here. One would expect the development of the means of production to display qualitative change over the course of the Fordist transition, with labour power being increasingly peripheralised from the object of labour. Is this hypothesis valid?

If the evolution of machine production ran according to the dictates of Taylor and Ford, one is entitled to ask: 'where are the trained gorillas?' This theme highlights, in short, the magnitude and development of capacities.

C. What theoretical status should then be attributed to those sterling efforts made during the Progressive Era to redefine the ideologies of work and domestic life of workers? The considerable resources sunk into *Americanisation* programmes, it will be recalled, were primarily directed towards incorporating the continuing waves of immigrants sucked in by the labour-hungry economy of the United States. What level of systemic challenge did these workers present? Ultimately, what is the relationship between ideological production and the development of the infrastructure of the personality?

These questions have been posed in a manner that invites consideration of many of the key methodological propositions of both Althusser and Sève. The problems that they raise will either substantially validate the project of a marxist theory of the personality or consign it to an early end: in that sense, they are indeed an *acid test*.

'Non-correspondence' revisited:

The basic problem of non-correspondence can now be restated with greater clarity. First, non-correspondence operates at the theoretical level of epochal forms of production and epochal biographical forms. At the synchronic level, it will be recalled, a complete dominance is assumed (the superordinate mode of production is predicated on adequate personifications). Neither time or internal contradiction are relevant considerations in analysing the topology of modes of production. In concrete biography, conversely, non-correspondence effects are

overdetermined, smothered, by the particularities of personal identifications and ideologies: that panoply of reactive states that psychological theory takes in the form of 'subjectivity' as its legitimate scientific object. There is a corresponding occlusion of non-correspondence in the social formation, where DT2-type effects dominate the historical development of the body politic. The effects of non-correspondence are there but appear again as prismatically dispersed. This suggests that non-correspondence effects are dominant at the *intermediate* theoretical level. The symptoms of onset of non-correspondence are temporal and spatial.

On the temporal axis, non-correspondence is manifested in a general condition of *anisochrony* between the development of epochs and the pre-defined pattern of use-times. This DT3 disjuncture reflects the differential evolution of instances across more than one (Althusserian) science. In spatial terms, non-correspondence between a changing economic geography and the pre-given locational distribution of the productive forces results in a sustained redefinition of the locus of production and of the supporting infrastructure of commodity circulation. Geographical mobility or dispersion also directly impacts on the structure of use-time in specific ways. Dislocations of space then combine with and accentuate temporal contradiction.

What is the evidence in the historical record to support the hypothesis of a generalised temporal fissure in the transition to modern industry? The line to be traced here stretches unevenly from pre-capitalist temporality to Ford's Detroit, wherein the mechanical organisation of the labour process is fully established for the first time.

It is widely asserted that the total time allocated for (non-domestic and domestic) labour in pre-capitalist modes was shaped by a relatively fixed annual volume of tasks that were worked through in locally differentiated and largely concrete forms of labour. With a comparatively low pace of change in the productive forces, the total necessary time associated with this given bundle of tasks also remained quite static and predictable. This temporal regime has come to be known (following Thompson 1967) as *task orientation*.

The seasonal and other natural variations in intensity of such work lent labour a '...characteristic irregularity' (Thompson 1967) which continued into the earliest industrial processes. A traditional, largely agrarian community defined for itself (albeit within a broader superstructure of coercion) the allocation of tasks over the working year. The longer term work pattern was of '...alternate bouts of intense labour and of idleness'. In task orientation, non-subsistence activities assume the status of residuary acts.

Considerable integration of the domestic and other economies typified the structure of use-time in pre-capitalist societies. As Henderson *et al* observe:

‘...there was relatively little division between work and everyday life, between producer and consumer, between household hierarchy and the production hierarchy’ (Henderson *et al* 1982:120).

Julkunen also notes the ‘...integral interplay of work and play’¹.

In the early capitalist *putting-out* systems, the capacity of (skilled) workers to control workplace and product quality in textiles production was circumscribed but still clearly present. The relative autonomy of mining teams in (*hand-got*) coal extraction was similarly to continue into the twentieth century (Marglin 1976). Again, in the iron foundries of the Black Country, team organisation typified. The wage was tied to the productivity of the team and the master puddler crucially mediated between workteam and capitalist (Hopkins 1982). Given that textiles, mining and metals manufacture were together to constitute virtually the sum of English industrialisation in the first half of the nineteenth century (Anderson 1976), the labour control problems that this autonomy presented clearly articulated the new mode of production with the wider social formation. The issue of control was accentuated by the continuing availability of concrete labour options that largely neutralised the threat of dismissal:

‘in the early development of manufacturing industry, and of mining, many mixed occupations survived: Cornish tanners who also took a hand in the pilchard fishing; Northern lead-miners who were also smallholders; the village craftsmen who turned their hands to various jobs, in building, carting, joining; the domestic workers who left their work for the harvest; the Pennine small-farmer/weaver’ (Thompson 1967:71).

Neither piecework payment or oligopsony in the distribution of the product (merchanting) were successful in overturning the task orientation and process/product control of these essentially pre-capitalist forms of labour. The serious problems that resulted for early capitals are recurrently adverted in the commercial failure and despairing proclamations of even the most innovative in the employing class²: in short, the base of accumulation was extremely fragile. In light of this, the task of imposing a new discipline of time assumed the status of a survival imperative for the capitalist *arriviste*.

One would anticipate, on the basis of the work of Rey and the French historians, that this imposition would be no easy task. Their studies, to recap, suggest that:

** the breadth and degree to which a new temporal structure could be secured would reflect the overall (articulated) balance of modes of production within the simultaneity. In the first instance, the coalitions of interest between the emerging bourgeoisie and the powerful feudal interests will tend to be precarious and provisional: the orientation of the State will also be unpredictable. In addition, the primitive nature of inter-industry trade and the underdevelopment of the market will diminish the extent to which the disciplines of the law of value are imposed on individual capitals and the personifications.*

As a result, localised factors, whether sectoral or spatial, will assume great importance: early capitalist expansion is exceptionally uneven and experimental.

** the prefigurative experiments in modes of surplus value extraction would not necessarily be either rapidly or consistently eliminated by the operation of the law of value: enclaves of primitive practice may be expected to endure for so long as the calculus of commercial advantage (risk; profit marginality, *et cetera*) or legal/national restraint dictates. As a result, in the early stages of capitalist transition, different forms of temporality endure side-by-side over relatively long periods of time: the contradiction of non-correspondence is not readily resolved.*

The historical record seems to confirm these hypotheses. There was thus no single or enduring response to the problem of temporal anisochrony in nineteenth century Britain. In the first instance, the key strategic development in the capital relation was the formation of a proliferating network of central workshops, commencing in textiles from around 1770. This was coupled with a deepening of the division of labour founded on expanding workshop scale (manufactories). These manufactories were in themselves hardly new: water-powered serial production establishments can be traced back to the fourth century³. Neither (*contra* Marglin) were the new central workshop or manufactory conditions immediately or uniformly to rupture pre-existing temporal norms. In post-Revolutionary America:

‘(t)he factory did not necessarily demand more intensive work than the farm or the artisan shop. Country mills operated irregularly even in good times... In the Lowell mills ...the work pace in the early years was ...”leisurely”’ (Brody 1989:34)⁴.

Significant changes were nonetheless taking place that would, eventually and in combination, impact on the relations of production. First, a formidable new structure of (non-)choice was being constructed for the wage-earner in the early-nineteenth century, as Thompson observes.

‘Enclosure and the growing labour-surplus at the end of the eighteenth century tightened the screw for those who were in regular employment; they were faced with the alternatives of partial employment and the poor law, or submission to a more exacting labour discipline’ (Thompson 1967:78).

Workers’ reliance on paid labour was to grow sharply over the nineteenth century, especially in the decades of the mid-century. This new economy was essential in breaking with dual (agrarian) work practices. As the concrete labour alternatives were progressively closed off through the lateral expansion of capitalism into pre-capitalist terrains, so the threat of unemployment, a relatively new cultural artefact, became progressively more personally ruinous. The impact of this revolution in the property connection was further accentuated by the explosive growth in population over the century.

The generalisation of labour power and the ensuing cheapening in reproductive costs were in themselves enough to demarcate the relations of production in the new factories from their historical antecedents. It would appear that, in some sectors and spaces, these changes were sufficient to provide the basis for much tighter labour disciplines. One manifestation of this was an extension in the length of the working day (ASV₁). This was particularly pertinent in textiles production.

With a high preponderance of female and child labour, coupled with deep (often familial) divisions of skill and control, textiles production was exceptionally sweated. The ‘normal daily hours’ (those that were codified) were typically 06.00-20.00, with seasonal and cyclical variation (Bienefeld 1972). In cottons though, as Lazonick (1978) records, the average duration of work was maintained at an extraordinary 13.5 hours per day, and 74.5 hours per week through to the 1850s. This mode of hyper-exploitation was however, geographically isolated to the great industrial towns of the north-western uplands and Yorkshire. It was also almost unique in sectoral terms, as the striking concentration of the numerous Parliamentary inquiries on the Industry illustrates.

It was only in mining in the mid-Century that any comparable extension of the working day was forced, and then the origins lay in cyclical pressures and in the early exhaustion of fields.

If textiles and mining were apparently idiosyncratic, what was the typical situation in relation to work duration? Bienefeld's still seminal work indicates unequivocally that the 10-hour day was typical for artisanal and most skilled industrial labours from the late-18th century in Britain and much of Europe (though not for the United States [Brody 1989:8]). With the passage of the 1847 Factory Act, which was specifically directed at the textiles sector, the statutory limit on the work-day of women and children was set at ten hours: subsequently (until 1872-4), the maximum customary ceiling on the working day for most male labours regardless of skill also then settled on twelve hours minus two hours of rest-time⁵.

In general, '...the dominant finding is the great stability of the normal daily hours of work in most industries' (Bienefeld 1972:80) over the period to 1850.

Bienefeld's findings do of course, relate primarily to industrial and other sectors where labour was more or less formally contracted. It must be recognised that the labour of the majority of the working population went unregulated: the industrial labour force was still dwarfed in the 1850s by agriculture and domestic service. Hopkins estimates on the basis of Census material that 1.5 million people worked in 1851 in mechanised trades, compared with 5.5 millions elsewhere. For women in the domicile, there was little remission from domestic labour, whether that be the work of familial reproduction or outworking. It is difficult to imagine, however, any significant lengthening in worktime arising from the introduction of central workshops or manufactories.

These first phases in the expansion of capitalism do not seem, then, to have effected any decisive changes in the total mass of worktime. What about the degree of porosity in the working period itself (ASV₂)? This is after all the aspect that Edward Thompson chose to emphasise in his famous 1967 Article. His conclusion was unambiguous: he clearly believed that an historic new level of temporal compaction had been effectively attained by the mid-Century. Subsequent research has thrown considerable doubt on this conclusion in terms of both its timing and its degree.

Certainly for the first half of the nineteenth century, temporal compaction seems to have been rare. Where the evidence points in that direction, it is the relatively marginal nature of the trades so affected that is striking. Bienefeld identifies compression through the erosion of mealtimes as being significant in bookbinding, tailoring and dressmaking- hardly the sea-change that Thompson requires to support his case. Again, for the second half of the century, there is very little evidence indeed for intensification through compaction of the workday, beyond cyclical or specifically sectoral pressures.

Perhaps, then, Thompson's temporal revolution targeted the porosity of the working week as a whole? Evidence to support this proposition is not easily found either. As Reid (1976) and Hopkins (1982) note of Birmingham, the great manufacturing centre of the nineteenth century, a general flexibility in the scheduling of working hours over the week continued right up to the 1860s in this City of proliferating workshops. Most notably, the practice of 'Saint Monday' (the *ex officio* extension of the weekend to encompass Monday) continued through the mid-Century⁶: indeed, more than continued, as Hopkins has observed.

'It must be emphasized that St Monday was not merely a survival of earlier practices still being observed by the small minority of workers in domestic industry: in Birmingham large numbers of industrial workers were still engaged in small workshops in the 1860s and therefore were subject to St Monday, while even those in larger workplaces were affected by it' (Hopkins 1982:55-6).

The proportion of the labour force engaged in the practice of Saint Monday was often substantial, as Hopkins continues:

'...one employer in 1864 had only about 40 or 50 workers in on a Monday out of a total work force of 300 to 400... In one large foundry the casters were getting to work for the first time in the week towards midday on Tuesday' (*ibidem*).

Particularly effective opposition to temporal discipline was to be found in the skilled trades, wherein the reliance of the masters on what were still essentially guilded labours continued through the nineteenth and well into the twentieth century.

It was rare for women to enjoy this kind of temporal flexibility: Saint Monday was markedly a male preserve. One potential access route was provided when the wife acceded to the male master's economic estate on his death. Yet the transfer of *coverture* rarely extended to the economy of time, for the liberated abstract labour time was customarily taken up by domestic economy commitments. This dual economy applied at all skill levels. Reid reports the appreciation of lax temporality on the part of a press-woman in a button workshop: 'coming in late in the morning suits me best, because of getting the children's breakfast' (Reid 1976:92). In this light, the fixing of work to the hours of paid labour (that is, introducing temporal *dichotomy*) could actually serve to open up residual time, however minimal that might initially be. Thus, the experience of largely unskilled factory labour could actually be liberating, as Brody notes of the early dichotomisation of use-time among female cotton mill workers.

‘By physically concentrating production, the factory ruptured the age-old intermingling of life and work- as the Lowell girls filed out of the factory gates, the day became “entirely their own”’ (Brody 1989:30).

Hopkins points to analogous effects in the factory system as compared to the hyper-exploitation of outwork labour, where there was no protection for wife or daughter from the absolutism of the economic patriarch. Thus:

‘...life was better for women in the workshops and factories subject to inspection than in the domestic workshops which remained’ (Hopkins 1982:65).

How these observations resonate with contemporary arguments!

The process of ‘freeing’ workers in the form of labour power was then insufficient in itself in enforcing a new general economy of time: the evidence, anecdotal as it is, does not indicate any general ratcheting up in ASV., as reflected either in a lengthening in the workday or intensification in worktime. Amassing workers and imposing Babbage principles in an extending division of labour, which are the decisive technical imperatives of both the central workshop and manufactory, did not in themselves succeed in rupturing task orientation. As has been shown, many of the largest manufactories were as prone to porosity of labour time as the earlier workshop networks. In short, the temporal performance of the workforce to the mid-century remained highly erratic.

The essence of the problem lay in the very structure of the productive forces themselves. The nature of surplus value extraction in the extant systems of production was still recognisably anthropological: an economy mediated by identifiable human agents operating within a constellation of productive forces that exhibited but minimal qualitative change.

To overturn this required establishing a new depth and breadth in machine-assisted operations, therewith shifting the emphasis of exploitation to relative surplus value extraction. As Mackenzie notes, the ‘...preceding organizational changes created the “social space”, as it were, for the machine; and ...the limitations of those changes created the *necessity* for it’ (Mackenzie 1984:486). Locating this shift historically is not easy: great controversy surrounds both the data and its interpretation.

The evidence of stasis in capital-labour ratios is clouded in the more general fog of nineteenth century statistical immaturity: but there does seem to be scope for an overall, provisional judgement. In the first instance, there was a steady rise in capitalisation in Britain in the century to 1850, enabling a sevenfold increase in aggregate output. Growth rates in the latter fifty years would then seem to have averaged around 3%- very strong in broader historical terms. There was however, no comparable rise elsewhere (Bairoch 1982; Saul 1969). This macro-view is supported by in-depth regional analyses. Brody for example, highlights unpublished research on 'industrialising Massachusetts' showing that '...fixed capital (tools and machinery) per worker remained static' between 1820 and 1850 (Brody 1989:31, *n.83*). In the case of the United States, the incentive to boost plant size and concentrate production in terms of scale cost reductions was minimal (James 1983).

There was then in the U.S. a most abrupt and remarkable gear-change, signalled by a significant reduction in the relative price of Department I output from the mid-Century. James identifies a relative price fall in constant capital commodities of some 20% between 1860-1900 compared to overall prices. The organic composition of capital began a substantial rise from the 1870s. Over that decade, plant size increased very rapidly and that rise continued, albeit at a slower rate, to the First World War. Analysis of census data reveals a rise in capital-labour ratios of over 150% between 1850-1890, with a big push in the 1880s. The tempo of exploitation in the manufacturing sector followed suit after a considerable lag. As a result, U.S. total output converged on British levels over the years 1881-85 (James 1983; O'Brien 1988; Saul 1969).

The establishment of primitive line systems in agriculture and soap production, the generalisation of Bessemer steel smelting and early continuous flow chemicals production all date from this remarkable period: and so too, of course, does methods study.

What of Britain? At the mid-century, the British economy had established a seemingly unassailable trading position. As late as the 1880s, British manufacturing contributed nearly 23% of world production (Bairoch 1982). Yet one is approaching through the closing decades of the nineteenth century the famous British *Climacteric*: that decisive weakening in competitive energy that eventually brought British productivity increase to a standstill from 1900 to the First World War. There are many interlocking aspects to this then-unique experience, and obsolete temporalities played their part. This general historical impasse permitted the continuance of increasingly antediluvian forms of temporality: and these antiquated forms then contributed (in a subordinate determination) to that progressive degeneration.

It would appear that as late as the 1860s, the forces of capitalist production were still strongly expansionary. The West Midland region, with its singular contribution to British value-added, again provides the exemplar. The vertical increase in application of steam-powered machinery at the time has been widely recounted⁷. Yet neither company or plant size increased on a scale comparable with the United States. This is an important point of divergence. Regardless of the attempts made by Sabel, Piore, Zeitlin and others to write an alternative history of the nineteenth century emphasising the technical vibrancy of industrial districts of small capitals, it is still a defensible generalisation to claim that large plants played a pivotal disciplining role in the tightening of production norms.

As Reid notes, the 'influence ...which large manufacturing units could exert' was 'far out of proportion to their numbers' (Reid 1976:n.52). Potentially, as the United States was demonstrating, the temporality of large manufacturing plants was of a quite new order. This was important to surplus value extraction in its own right. A wider perspective reveals a decisive significance. The influence of large plants, manifest in an increasing precision of production and delivery times, radiated out into the wider circuits of capital *via* the property connection in the mode of production. Efficiently managed large plants thus imparted a general impetus to the productive system as a whole⁸.

It was precisely this quite new interconnection of islands of mechanisation with a by then substantially developed infrastructure of workshops that constituted the second profound index of the specifically capitalist nature of the factories of the late-nineteenth century. This is when capital assumed a relative hegemony in the social formation: the real history of capitalism as a dominant mode of production begins at this time.

Commercially viable mechanised production presupposes a number of factors, including, as has already been indicated, a temporally disciplined labour force. The very operation of the machine can conversely, enforce higher densities of time on its operators: this is exactly the inversion that is captured in the notion of intermediation. It is striking that British capital was unable to pursue this development to anything like its ultimate conclusion.

At one level, there was a widely shared perception of the 'need' for smoothed worktimes in machine operations. This consensus was far from limited to capitalists and their more immediate apologists in government and the academy (Nyland 1986). The bargaining around Saturday afternoon working illustrates that many workers were also persuaded of a degree of (objectively) necessary temporal compression in machine working (Reid 1976).

The transformation in temporality that began in Britain in the 1870s is further illustrated by a sharp fall-off in (but not elimination of) Saint Monday observance towards the close of the Century. It is also visible in the very rapid destruction, the pressures coming in from a number of quarters, in traditional holidaying and feast-days. The quite extensive holidays enjoyed by (male) workers across the skill spectrum represented something of an historical hangover from an antepuritan religious past. They were however, staunchly defended and formed another component in that noted task orientation of pre-capitalist personalities. In the industrial sector:

‘(d)ays were taken off at Christmas, Easter and Whitsun, and firm outings were common ...the total time taken in holidays (including fair days and religious holidays) being about three weeks’ (Hopkins 1982:61-2).

Albeit that most (though not all) of this time was unpaid, it is symptomatic of the overall force of the movement in temporality that began in the latter-nineteenth century, that this right to reproductive time was greatly reduced. By the turn of the Century, a majority of the industrial labour force could anticipate but four (paid) Bank Holidays per annum. This condition was to continue to the late-1930s. Yet it is the limits of this process of temporal rationalisation that are especially interesting. Even where large scale operations were established, as in Black Country iron smelting, temporal norms were hardly revolutionised up to 1914 (Hopkins 1982): a degree of task orientation prevailed that would have been deemed extraordinary across the Atlantic.

Very considerable restrictions on output typified British engineering into the twentieth century. Piecework payment was clearly an interim distributional measure in inducing a shift from task orientation to a new biographical structure. The worker still retained considerable control over norm determination and discretion over final output levels. This was especially important where the disciplines of scientific management were absent- as they were in British industry at the time. Revealingly, the coverage of piecework payment systems grew from 10% to 50% of the British engineering labour force between 1886 and 1914 (Lewchuk 1984).

Lewchuk perhaps provides the decisive indication of how British capital failed to seize the opportunity provided by mechanisation and the shift to relative surplus value to overturn task orientation. Over the First World War, the fundamentals of scientific management were becoming well known in Britain. Both the Government and the Federation of British Industries looked with interest on aspects of the American systems, even indicating an acceptance of union negotiating rights on conditions of work. Yet the Engineering Employers’ Federation (E.E.F.) in particular adopted a deeply hostile position. The E.E.F. rightly perceived the considerable

disruption to plant operations and to wage determination in particular that any sustained adoption of Taylorism would entail. As a result:

‘...labour was allowed control over the pace of work. The sharing of managerial authority was quite inconsistent with American systems’ (Lewchuk 1983:360).

Temporal laxity thus formed one aspect of the broader failure of British capital to maintain the pace of the transitional period. A number of other symptoms of accelerating lack of surety can readily be identified that have subsequently become familiar refrains. The trend in major innovations indicates a rapid fall-off in dynamism towards the close of the Century. The slothful pace of change in organisational structure in Britain remains an underrated aspect of that exhaustion of innovation. The transatlantic gap in capital centralisation was opening up, especially after the Great U.S. Merger Wave of 1898-1902. The temptations of involution into a protected Empire-space were also powerful, as registered in accelerating imperial investment. In overall terms, the record on British investment speaks volumes. Net Domestic Fixed Capital Formation as a share of net domestic product constituted *less than 60%* of that of the United States over the closing quarter-century. The implications for labour productivity would be progressively debilitating, as the estimates below confirm.

*BRITISH AGGREGATE & PER CAPITA LABOUR PRODUCTIVITY GROWTH RATES
FOR THE INDUSTRIAL SECTOR (EXCL. BUILDING) 1847-1913:*

CYCLE PERIOD	AGGREGATE GROWTH RATE % PER ANNUM	GROWTH PER CAPITA % PER ANNUM
1847/53-1854/60	3.5	2.4
1854/60-1861/65	1.7	0.6
1861/65-1866/74	3.6	2.4
1866/74-1875/83	2.1	0.9
1875/83-1884/89	1.6	0.2
1884/89-1890/99	1.8	0.4
1890/99-1900/07	1.8	0.2
1900/07-1908/13	1.5	- 0.2

Source: Saul 1969:37

The striking negative outturn for the early years of the new century is even more remarkable when one considers that purchases of capital equipment over the period 1890-1906 were running at twice the (relatively inadequate) trend rate (Lewchuk 1984)!

What conclusions may be drawn from this overview in relation to both the non-correspondence thesis and the theory of personality?

One may observe first that non-correspondence in its temporal aspect was an important determinant in the search for new control structures in nineteenth century Britain. The task orientation of British workers added a margin to costs that would become increasingly unbearable as the forces of competition grew. With neither form of ASV extraction particularly efficacious in this respect, capitalist innovation came to centre on mechanisation. Yet here, the British personifications of capital were too weak to follow the new basis of accumulation to its logical end. British capitalism entered the twentieth century with a workforce that was still partly unrestructured.

A comment on Thompson's very important 1967 analysis may be appropriate here. One can indeed see, on a global scale, a very substantial temporal reconstruction of personality from the task orientation of pre-capitalist forms of individuality to a new structure of time use. In Britain over the latter years of the nineteenth century, the terrain of struggle over time was clearly beginning to shift in the manner that Thompson suggested to temporal concentration and away from issues of total mass (Thompson 1967:85): but the dating of this shift is illuminating. In Thompson, it is inferred that the decisive changes were effectively 'internalised' in the British labour force a generation on from the Ten-hour Movement.

'The first generation of factory workers were taught by their masters the importance of time; the second generation formed their short-time committees in the ten-hour movement; the third generation struck for overtime or time-and-a-half. They had accepted the categories of their employers and learned to fight back within them' (Thompson 1967:86).

There is of course a certain dramatic imagery surrounding the concept of generational cohorts of workers which makes the chronology rather vague. If one dates the culmination of the Ten-hour Movement as its formal statutory victory in 1847 and assume (perhaps generously) a fifteen-year generational succession, the inference must be that by the mid-1860s, much of the work of temporal restructuring of the British labour force had been effectively completed.

As the foregoing makes clear, Thompson's observation is premature by some decades. Furthermore, as has already been intimated, the British social formation was in specific ways quite unable to pursue this reconstruction to its socially necessary conclusion. Thompson does acknowledge these limits to the destruction of task orientation in Britain. For example:

'we may doubt how far it was ever fully accomplished: irregular labour rhythms were perpetuated (and even institutionalized) into the present century' (Thompson 1967:90).

The ineluctable conclusion is also there:

'(i)t is, in some sense, appropriate that the ...illustration of the capitalist ethic should come, not from (the) ...Old World, but from the New- the world which was to invent the time-recorder, was to pioneer time-and-motion study, and was to reach its apogee with Henry Ford' (Thompson 1967:89).

Exactly: the British history does not, ultimately, provide the complete empirical foundation for understanding that temporal revolution that Thompson correctly identified. British capital failed to complete the experiment⁹. Such caveats are, however, largely smothered in the overall presentation of Britain as the paradigm of a new order.

The second observation is that a given contradiction of non-correspondence can in certain circumstances be epochal in duration and regional in scope. The forces pressing for resolution of contradiction may simply be suspended by a variety of counter-tendencies. In Britain, the DT3 contradiction between available personality structures and a growing new mode of production is visible over more than a century from 1770: and it was not to be locally decisively resolved even then.

Analogous contradictions are to be found at the spatial and sectoral level. The process of capitalist industrialisation does not in any sense act universally in either of these dimensions: it is both fitful and uneven. The manner in which the large mechanised plants of the 1870s interacted with existing workshop networks has already been adverted. Sometimes, the workshops were annihilated: as frequently, these small capitals were captured in new relations of subordinacy. More rarely, small firms continued to exhibit a substantial independence on the margins of the economy (Samuel cites cabinet-making and clothing [until the 1930s] in this regard). Idiosyncratic forms of temporality continue to characterise such industries, as Whipp's (1987) analysis of English ceramics production well illustrates.

Small capitals were not left unchanged by these encounters, of course (that accelerating temporality), but they often did survive into the longer run. The dynamics of that process of capture form the very substance of combined development (Samuel 1977): the resultant structural form Dahmen calls a Development Block. In light of the subsequent processes of concentration and centralisation of capital, the temporality of that entire branch of production was increasingly likely to be set from a cohesive centre- whether a dominant individual capital or an oligopoly.

In many sectors of production however, mechanisation was and often remains clearly inappropriate. Both the workshop and the manufactory as organisational artefacts continue to exist to the present. It is an open question as to how deeply mechanical or automated processes will eventually be driven into these interstices of the value chain.

Third, a comment in relation specifically to personality theory: the phase of non-correspondence that has been discussed here essentially involved a struggle over the definition of the rights of ownership of labour time. The biographical legacy (the historical form of personality) was one of task orientation- a perspective on work that defined labour duration in terms of a finite number of discrete tasks: volume of work then dictated biographical commitment. This orientation, the historians have shown, broke many an erstwhile company: it was vital in determining the rhythm of the early expansion of capital.

Yet what was the precise nature of the new (American) temporal regime? At its simplest, abstract labour in the new form of biography was to be characterised by set overall duration, with a volume of tasks within that time that was potentially infinite. The struggle over time then increasingly emphasises the compression and compaction of task times (RSV). Secondly, RSV extraction (temporal intensification) permits historic (and stepped¹⁰) reductions in the mass of the contracted working week. In short, task orientation gives ground to a regime of *task plasticity-temporal rigidity*. This transition can be seen in retrospect as the greatest restructuring of the balance of concrete:abstract labour time (Sève's use-time) ever undertaken.

The British managerial failure in relation to this project is epitomised in the stance taken by the Engineering Employers' Federation in relation to scientific management in the early twentieth century. The E.E.F's defensive position was to hold a strong line on the wages front: but the substantial involvement of (especially skilled) workers in determining output levels went largely unchallenged. A Fordist company might instead proclaim a very decent wage for a gruelling day's work- with the work itself never-ending. In this context, mechanised intermediation is designed

to ensure that work times are clearly externally set. When mechanisation removes the *intrinsic* anthropological barriers to accumulation, the development of this new economy of time in subsequent epochs is characterised by continuous innovation to meet the barriers to that regime thrown up by class conflict.

On Sève's theory of personality: the extended demolition of task orientation and the imposition of temporal rigidity provides a clear pointer to the historical *relativity* of temporal dichotomy. The sundering of work from concrete activity had, as may be expected, dialectical effects on the overall pattern of use-time. Its overall sweep was undoubtedly to fix times to different species of activity with an unparalleled rigidity: to demark work (now characteristically waged labour) from domestic labour and leisure. Yet the contradictory effects were there, reflected with particular ambiguity in the changes that resulted in the lot of the female labour force.

Dichotomisation is, then, historically bounded. The division of use-time as reflected in Sève's four-quadrant representation is uniquely applicable to capitalist biographies.

This brief exegesis has already provided suggestive evidence on the principles of non-correspondence and differential temporality. It has also confirmed the importance of dichotomy as a characteristic biographical feature of the personification of the worker in the capitalist mode of production. The most striking feature of this analysis is, though, the accelerating deepening and broadening of the means of production in the context of a combined and uneven pattern of development.

The Application of Machines:

Ultimately, application of the mechanical principle was vital in continuing the push to transform worker porosity in the transition to capitalism. The logic that governed this investment in new forms of dead labour was always, however, complex.

For Marx, as Mackenzie has observed, there was a dual aspect to the tendency to mechanise the labour process. The most important calculation saw mechanisation as providing a (sustainable) base to productivity improvement. Insofar as this continually reduced the socially necessary time for production of subsistence goods, then the proportion of RSV in the working day would grow.

Yet Marx also recognised the value of machinery for capital in the war of position with labour. Ure's 1835 monograph, *The Philosophy of Manufactures* is always cited in this context, not least

by Marx himself; machinery providing a 'deliverance' from the 'intolerable bondage' of skilled labour. With the 'refractory hand' of skilled labour stilled, the way was open to application of the Babbage Principle¹¹ and conceivably, through the local restructuring of the balance of class forces, to an increase in absolute surplus value too.

This second perspective on the machine is clearly treated by Marx as something of a local or transitory phenomenon (Adler 1990; Mackenzie 1984). Though in *Capital* Marx had judged it quite possible to write an entire volume dedicated to such applications since 1830, it is strikingly not a task that he took on for himself! Also, as Adler notes, '...Marx promises only *a* whole history, and not *the* whole history, and then he does not propose to go back very far' (Adler 1990:n70). In fact, Marx's emphasis on the self-propelling nature of modern industry places the onus decisively on relative surplus value as the long run strategy.

It is then curious that so much work in the marxist tradition has gone subsequently into exploring the second set of machine applications, memorable and historiographically valuable as so much of this work has been. Robert Ozanne's 1967 history is justly among the most well known. The study pertains to the introduction of pneumatic moulding machines at the Chicago agricultural machinery producing plant of the McCormick Harvesting Machine Company (to become International Harvester). The machines were unproven and actually increased casting costs compared with manual processes by producing a higher proportion of defective parts.

This was however, a price that McCormick was quite willing to pay, since its skilled iron moulders had long acted as an obdurate *wage vanguard*. Mechanisation in the mid-1880s enabled all ninety-one moulders to be sacked and replaced by unskilled labour: their union branch was also destroyed with their work. As though to underscore employer motivation, the technical inefficiency of the machines was so great that they were scrapped within three years of their introduction.

Skilled workers were particular targets of Ure-type mechanisation. They often played a militant role in the struggle over labour process control, frequently resisting skill dilution and instigating strike action. Such local episodes as McCormick recall the great human cost that was exacted where machinery imposed a rapid skill reduction on them. By the same token, however, their disproportionate influence in the Unions and political parties of labour ensured that these events entered the oral and written histories of their time.

It is in this sense perhaps unsurprising that events such as those at McCormick should have been so extensively studied in recent years. The loss of dignity and control that these aristocrats of labour suffered evoke a basic humanist sympathy; and moreover, they are sufficiently documented as to permit sophisticated investigative techniques. This humanist sympathy motivated the research effort in an area that Marx attached only secondary importance to. The resonance is apparent in the polemical force of such work, but it is arguable that this very powerful structure of feeling in itself tended to occlude broader perspectives and understandings.

Since the publication in 1974 of Braverman's enormously influential work on labour process change in twentieth century America, this view of the machine largely coalesced with the so-called 'deskilling' hypothesis. The notion of deskilling emphasises the deliberate deployment of mechanisation and other control devices in the labour process in order to degrade the quality of labour power. Braverman's work in turn stimulated a vast outpouring of case study material, much of it focused on engineering¹². What, then, is the overall balance of evidence in relation to deskilling? Deskilling is by definition a relational concept: there is always a *status quo ante* from which the historical study runs. In Braverman and many whose work was influenced by him, the reference point is clear, to the 19th Century 'artisan ideal' (Elger 1979). Braverman's declared intent was to establish the overall rationale for mechanisation by attempting to read its effects in changes in the structure of skills. In this endeavour, it is clearly vital that movements in the *aggregate* composition of skills are registered; or at least, that compositional movements in sectors/occupational classes may be related systematically back to the totality of workers' skills. A partial perspective is theoretically ruinous. Yet this is precisely where the deskilling approach leads. It takes as its skill *numéraire* a minor and decaying segment of the (pre-industrial) labour force, and it focuses on occupational strata which have endured significant and potentially atypical labour process change. These affiliations fundamentally skew the assessment.

What, then, is the available picture with regard to the relationship between machinery and skills in the transition to capitalism? While there is a degree of contradiction between the three extant research methods¹³, the mass of accumulated material has permitted Form (1987) and Spenner (1979;1983;1990) in particular to draw three very pertinent conclusions. First, the overall judgement: '...many early factory workers remained skilled despite technological change. Mechanization most affected unskilled labor' (Form 1987:34). Form's conclusion draws on a review of all then-available historical studies and therefore cannot be lightly discounted. It is worth considering here in a little more detail the structure and evolution of skills in four key industries over the Nineteenth Century: textiles; siderology; mining; and engineering.

As has already been observed, textiles was the largest single industrial employer over the first half of the nineteenth century. What was the skills base of textiles production and how did early mechanisation impact on that skills structure? For weaving, the core of the labour process, schematic evidence suggests that skill levels were not high. Marglin (1978) cites evidence collected by Duncan Bythell:

‘...cotton handloom weaving... was apparently a skill quickly learned. A British manufacturer testified before a parliamentary committee that “a lad of fourteen may acquire a sufficient knowledge of it in six weeks”’ (Marglin 1976: n.10).

Similarly with woollen weaving, labour force records indicate the ‘...apparent ease with which... women replaced male woollen weavers gone off to fight Napoleon (which) suggests that woollen weaving too was not such a difficult skill to acquire’ (*ibidem*). In fact, the general density of skills in textiles has continued for much of the subsequent period to remain at a fairly low level. Elger recounts an historian of unionism in cottons to the effect that ‘few occupations “in the cotton” are intrinsically skilled in the sense that their adequate performance necessarily requires any long preliminary training’ (Elger 1979:75). This concept of *intrinsic skill* will be discussed further below.

What, then, was the dynamic of skill change over the Century? Obviously, the history is in detail extremely complex: there were spatial shifts in production; movements in internal hierarchies (including those arising from the erratic application of the Factory Acts); and changes in technique towards capital-saving machinery and away again. All of these were of signal importance to the working population and the Masters and impacted on the controls on skill structure. The overall judgement is though, again relatively clear. Form cites Freifeld’s work in this regard:

‘...through most of the nineteenth century, mule spinners remained skilled aristocrats of labor, retained their wage advantages over the less skilled, and continued to supervise production and monopolize knowledge about it’ (Form 1987:34).

This relative stabilisation was maintained notwithstanding two generations of very significant investment in machines of increasing sophistication. As has already been indicated, machine operations themselves required little by way of complex capacities. The differential was, then, actively reconstructed by skilled workers assuming new regulatory functions in step with the evolution of the means of production¹⁴. ‘In effect’, as Form concludes, ‘spinners learned new skills in response to the new technology, while laborers remained unskilled’ (*ibidem*).

In metalworking, puddling, blowing and rolling certainly did require the highest levels of judgement and handling skill: a powerful apprenticeship system enforced a rigid internal structure in the workteam. The effect of this, as in most such cases, was to construct a highly disciplined Babbage-type hierarchy based on age strata, where control lay in the senior workers' hands. Skills were distributed accordingly.

The rapid increase in capitalisation towards the close of the Century did wrest certain planning and apprenticeship training functions from skilled workers, but many substantive elements of skill remained, particularly those pertaining to production control. Especially in the United States, these highly important residual skills were pushed into an increasingly specialised set of niches such that the overall mobility, and thus discretion, of labour was seriously undercut. Yet these changes also opened up steelmaking functions in the division of labour that had been previously closed to outsiders: these posts were generally classed as semiskilled. 'In this case the skilled maintained their skills while the unskilled were upgraded to semiskilled machine operators' (Form 1987:35).

Mining was, as Marglin makes clear, a radically different case. In *hand got* methods, British workteams were organisationally flat and assumed complete authority in extraction (*responsible autonomy*). Colliers were multi-skilled with little by way of task specialisation. There was a strong culture of 'craft pride and artisan independence'. Notwithstanding the method changes (*longwall* and *composite longwall* systems), the quantum of skill remained at comparable levels over the long run.

In engineering, skilled labour was able to defend an internal skills hierarchy and maintain its relative privilege, at least to the closing decades of the nineteenth century. As in textiles, this was an active, constituted process. Thus:

'...the transformation of skills... before the mid-century (from millwright to more specialised fitters and turners) was followed by a long period in which, with expanding markets and a tendency towards labour-using investment, the newer categories of skilled worker were able, on the basis of powerful collective organisation, to sustain wage differentials and job controls which militated against the control of capital' (Elger 1979:74-5).

The overall picture, confirmed with evidence from the leading sectors of nineteenth century capitalist industry, does not at all clearly point to deskilling as a generic tendency. The specific content of skilled labours certainly did change in the early phases of capitalist accumulation: but (as class-for-itself) the crafted population was able, in varying degrees and through different routes, to reconstitute its occupational privilege along new lines as the century proceeded. The capacity to act as a sub-contracting *conduit* between master and worker was particularly important in this regard. Thus, in Samuel's judgement:

‘...nineteenth century capitalism created many more skills than it destroyed, though they were different in kind from those of the all-round craftsmen’ (Samuel 1977:59).

Second, the portrayal of an arcadian craft *idyll* was less than comprehensive as a depiction of the structure of skills in the transitional period. As observed, the rudimentary nature of the textiles skill-base ensured ease of entry: displacement of warring men by women in the Napoleonic period was both rapid and large-scale. By 1808, women constituted 50% of the weaving labour force (Lazonick 1978). On their return, however, the male spinners rapidly reinstated their patriarchal authority. As factory working expanded over the mid-Century, it was the *paterfamilias* that mediated the ensuing restructuring of the labour force, greatly to his advantage. As Marglin notes:

‘(w)omen and children, who by all accounts constituted the overwhelming majority of factory workers in the early days, were there not because they chose to be but because their husbands and fathers told them to be’ (Marglin 1978:37-8).

These kinds of ‘artificial sex-barriers’ (Marglin) were common: perhaps more intense in textiles than in other industrial trades but no more so than in the dual agricultural economy. These practices provided one of the key bases of labour force segmentation that maintained guilded and craft labours. The systematic application of seniority principles in multiskilled workteams similarly enforced definitions of status and skill that excluded very large numbers of workers. In the United States, the growing wealth of master craftsmen over the eighteenth century was to lay the basis for their transmutation into capitalists: here, the artisan thesis very rapidly flips over into the antithesis of journeyman exploitation at the hands of those very same artisans.

Braverman's ‘incipient craft nostalgia’ (Coombs 1978) was thus anything but unproblematical. It sees but the pinnacle of an idealised labour force and not the unenviable lot of subalterns that underpinned it. In truth, artisans probably constituted a minority of the labour force even at the

apogee of their economic influence. Form's review of research into occupational structure in 'early U.S. and European cities' finds that artisans and skilled workers constituted 25-54% of male household heads, while unskilled workers made up 25-50%. As he notes, the methodology of these studies skews the count away from the latter, missing up to 40% of the population of the male unskilled and excluding women and children entirely.

The particularism of the artisan was, as Adler (1990) observes, one of the key reasons why Marx castigated Proudhon in his advocacy of handicraft labour: the condition is inherently non-universalisable and so readily issues in 'rural idiocy'¹⁵.

Finally, it is worth recalling the very substantial shifts in occupational structure that characterised first Britain in the nineteenth century, then latterly the United States, and universally in the transition to capitalism thereafter. The explosive growth in the industrial labour force led and drew from the expulsion of surplus labour from agriculture. The structure of farming skills is particularly unclear, though it evidently varies considerably between different ownership and extractive regimes. It is, though, unlikely, that the average skill level was comparable with that of the industrial worker or that those expelled through agricultural centralisation would have been among the most skilled.

That the overall quality of skills in the population at large seems to have been approximately maintained in the face of a massive and continuing influx of relatively unskilled agrarian labour again strongly indicates that early capitalist labour process change did not, in fact, carry a strong deskilling element. *Proletarianisation* of (non-capitalist) labour did not automatically connote the downgrading of skills.

What is the evidence from the epoch of the establishment of modern industry? The expanding volume of data enables increasingly confident and generalised conclusions to be drawn over this decisive period. The results are, at first sight, surprising in light of the more infamous projections of the likes of Taylor and Ford.

With regard to British mechanisation between 1870-1914, research indicates that the effects on skills was mixed. In textiles, limited deskilling does seem to have occurred, but this was atypical across industrial production as a whole. In metalworking, chemicals, electricity and gas distribution and machine maintenance, traditional skills were redefined but in large part carried forward, while some enhancement took place in formerly unskilled work. Taylorism (or locally, the *Bedeaux* system) was largely restricted to non-craft industries, chiefly chemicals and textiles.

Direct forms of capitalist control (with a rationalised role for supervisory staff) emerged most clearly in the newer industries (brewing; government services) where the effective *tabula rasa* in relation to skills and workers' organisations enabled quasi-Taylorist methods to be introduced. These new industries were established entirely on the basis of unskilled/semiskilled categories of labour. In the United States, scientific management was most frequently deployed in smaller companies wherein probably a majority of production workers continued to be employed up until 1900. How did these methods impact on the structure of skills? In Form's estimate, the internal stratification of the workforce- and the role of the artisan/skilled worker in that fragmented workforce- remained largely intact.

Yet there is a consensus that sees this period as demarcating the shift to a new relation between capital and labour in the structure of the productive forces: Braverman's view on this was echoed even by those who otherwise took a very qualified view of his work. Thus, Elger acknowledges the 'major but uneven advance of the practises of intensification of labour and of deskilling' (Elger 1979:80) evident at the turn of the Twentieth Century. Where, then, are the ramifications of these labour process innovations in the record of the structure of skills?

The impact of labour process change was felt as much by middle and supervisory management as by skilled workers. The skills outcome of scientific management and Fordism was, as Form rightly observes, to subject '...both workers and middle management to more centralized control'. This loss of control was probably the single most significant aspect of skill loss associated with Taylorism.

What one faces, therefore, is a *reconstruction* of skills around a changing locus of control, where this process was unevenly distributed by sector, location and size of firm/plant. This unevenness reflects the halting progression of scientific management and Fordism through the economic system in the early decades of the new century. Vallas (1990) notes the size differential. Small firms are historically characterised by a more substantial quantum of worker discretion and autonomy. Conversely, the large multiplant firms with a developed infrastructure of unionism and shop stewards exhibited the clearest evidence of deskilling among manual workers. It is of course, in just such circumstances that the new methods of modern industry took hold. Even here though, the impact was hardly unequivocal. Braverman himself observed that the process of deskilling in such environments typically took the form of a skills *polarisation*. There are elements of upskilling in relation to the command structures of the Fordist plant that to a degree offset the eclipse of skill in conventional line working- albeit that Braverman read the overall trajectory as ineluctably downward.

These contradictory effects can only be captured, however, at the level of sector and firm-specific case studies and precisely not at the aggregate skill level. Compositional and demographic factors, moreover, particularly in the United States, again mitigate the aggregate deskilling impact.

The growing numbers of workers subjected to line working methods were often drawn from a renewing population of first-generation immigrants. This was a source of labour power with typically no previous experience of industrial work and lacking any appreciable skills that capitalism could utilise. Statistically, then, the impact on aggregate skills of line working remains unclear. Even where labour process change reduced worker discretion (and thus deskilled), absolute compositional shifts in the labour force produced unanticipated results.

Citing from David Stark's work on engineering skill trends, Spenner (1983) poses an interesting example of this. In 1880, the total U.S. population of qualified engineers amounted to 7,000 persons of highly crafted status. Quasi-Taylorist restructuring of engineering over the ensuing four decades was intense, as the quality of both machine tools and metals improved. Additionally, a well defined employer strategy sought to remove many of the entry barriers that maintained the crafted nature of the labour process (Meiksins 1984). In consequence, the degree of autonomy and status of the typical engineer fell considerably to 1920, and to this extent, the original population of 7,000 artisans was indeed deskilled. By that time, however, the total stock of engineers had increased in line with the overall expansion of the sector to number 136,000. The skill level of a 1920 species of engineer still very considerably exceeded the social average: thus the overall impact of this compositional shift on the structure of skills was, if anything, markedly positive.

To repeat: the expansion of modern industry did indeed impact on the structure of skills, especially in the United States, though in a univalent manner. It was the *degree of control* exercised by skilled labour that was uppermost: and this is consonant with a Ure-type perspective. The conclusion is then, that:

'craft workers lost control over the organization of production in the factories, if not control over their own work. Insofar as this loss diminished job complexity, craft workers lost some skill' (Form 1987:38).

On the balance of class forces:

‘...by World War I, managers had drastically reduced subcontracting and centralized their control over production’ (Form 1987:36).

As has been indicated, compositional shifts explain some of the reskilling offset that maintained the overall quality of labour power in face of this attack on craft. This is not, however, anything like a full explanation for this restructuring. There is an important definitional issue surrounding the very concept of *skill* itself. Indeed, it was one of the great merits of Braverman’s work that it succeeded, through its great polemical force and engagement, in pushing this issue back on his contemporaries’ research agenda¹⁶.

Braverman clearly saw discretion in conception and execution as the single most important dimension of ‘skill’; and this position was put in increasingly direct terms by his followers (Attewell 1990; Vallas 1990)¹⁷. Yet the adequacy of this autonomist definition of skill is, to put it mildly, questionable.

Spenner’s (1983;1990) two-dimensional approach has assumed the status of a ‘seminal analysis’ (Vallas 1990) in skill studies. *Autonomy-control* relates the ‘discretion or leeway available in a job to control the content, manner, and speed with which tasks are done’; while *substantive complexity* ‘refers to the level, scope, and integration of mental, manipulative, and interpersonal tasks in a job’ (Spenner 1990:402-3). That there is significant internal correlation between these dimensions (as high as 50-70%) is problematical but not insuperable.

Broadening the concept of skill to encompass the elements of substantive complexity (physical and mental effort; dexterity; task variety) clearly shifts the perspective on deskilling towards a more localised frame of reference. As Spenner notes:

‘in the deskilling literature, there is far more consistent evidence of deskilling with respect to the effect of technological change on levels of autonomy-control than on substantive complexity’ (Spenner 1990:404).

When skill is defined singly as autonomy-control (typically in deskilling theory), the impact of Ure-type skill restructuring is magnified out of proportion: there is a tautological element here which has served only to obscure the real merits of the deskilling case (Vallas 1990:387).

Thus, deskilling is not a tenable *overall* explanation for the trend in capacities in the labour force in the period of establishment of modern industry.

Spenner's comment also indicates something about the motivation to mechanise, and its ensuing impact on the quality of labour power. The trend in control skills can be treated to a degree as a cipher for the impact of Ure-type machine applications. (Obviously, other factors weigh more or less contingently in the calculation: the degree of organisation of labour; the size of the reserve army of labour *et cetera*.) For the transitional period, the *localised* episodes of deskilling do assume some significance as a motor for the introduction of machinery.

As Form notes, there is an implicit inversion of the classical marxian determinacy in the relations/means of production couplet on this score. Marglin's approach in particular is categorised as a *power theory*, a problematic of control contestation, bearing more on Weberian than marxist themes. Albeit that Form displays only an approximate grasp on the marxian perspective¹⁸, the point is well made. Marglin's reading inverts the causality in the economic instance such that the relations of production come to determine the evolution of the means of production.

Yet the period that Marglin was analysing was precisely a prefigurative, transitional epoch. In the conflict of early capitals with task oriented workers, the question of control over labour power naturally comes to play an (historically) exceptional role. It is then quite legitimate for Marglin to seek to explain the trend in the productive forces over this antenatal period in a *politicised* theoretical framework.

Such an approach becomes increasingly illegitimate as the relative position of the capitalist mode expands in the social formation. Theoretically, capitalism more than any other mode of production purges productive relations of extra-economic considerations. Albeit that this tendency will never be perfectly realised, the direction is clear. One would expect a progressive shift in the framework of economic decision-making towards calculations based on *efficiency* (the increasing pressure to reduce socially necessary labour times) and away from such power-based considerations.

In relation to mechanisation, Ure-type explanations accordingly become increasingly inadequate in explaining underlying accumulation trends within the conditions of modern industry. This is exactly why Marx argued that such politicised mechanisation was of secondary, indeed transitory importance: that the balance would tilt towards accumulation based on productivity enhancement; and that mechanisation would be directed primarily with this end in view. This is reflected in the changes in the structure of skills recounted above. The attack on craft assumes historically a stepped mode: where a strategic quantum of control over the production process is effected by capitalists (or increasingly, managers), the emphasis of mechanisation shifts.

In this light, it is appropriate to turn directly to consider the quality of the stock of machines over the transitional epoch.

The evidence suggests that the means of production exhibited little qualitative change in the increasingly rapid development of manufactories. Furthermore, many early machines, as Lazonick's work on the variability of the self-acting mule and other textiles applications in the face of climatic and production variations demonstrates, were hardly flawless. Samuel's meticulous (1977) study identifies numerous examples of such imperfect machinery, from pin-making devices (1824) through to pottery machinery (1880). From this later period, the McCormick study itself illustrates *en passant* the great fallibility of early generations of machinery. In the main, as factory working grew, capital utilised and emulated¹⁹ the practices and skills of older industrial techniques, including craft and artisanal processes. This anthropological model of technical conception severely limited, at a number of points, the capacity for mechanisation.

Later vintages of machinery displaced the labours primarily of the unskilled. When skills were devalorised, as for example in printing and construction, the machines required significant (new) skills in their operation. Often, when the operating requirements of new machinery were particularly incalculable, skilled workers were set to work on them on a contingency basis. Their breadth of understanding was required to interpret the unexpected and to take rapid corrective measures. Once the parameters of such machinery had been gauged, the operating responsibility was passed to semiskilled workers.

As the quality of the technical infrastructure improved around the turn of the Century, that more systematic appropriation of scientific labours in a modern conception of innovation already noted began to shape the direction of process change. A certain uniformity now characterised the *trajectory* of mechanisation.

This was an historically new phenomenon that washed through the continuous flow and bulk industries as much as through the rapidly growing Department II sectors in the U.S. from the 1880s. Two factors were crucial in enabling this historic shift in the technical base:

** the increasing temporal-spatial density of the capital relation and the building of vertical Development Blocks in leading sectors that this densification made possible.*

** the paper simulacrum of production flow characteristics derived *inter alia* from the proximal observation encouraged by scientific management (Rosenberg 1981).*

There was indeed a certain objectively necessary sequencing to this, as the iterative development of the Ford Motor Company through crafted teamworking to scientific management to line working well illustrates.

What then was the direction of process change? Again, the analysis of Ford undertaken in Chapter 3 provides a valuable marker. The key technical objective in the Ford revolution appeared to be to reduce the circulation time of capital. Form provides further support to this argument:

‘the new technology mechanized mainly the unskilled jobs of material handling, loading, and the moving of ore, molten metal, and finished products from one part of the plant to another’ (Form 1987:35).

This recalls Coombs’ (1984) analysis, which similarly highlighted the transfer system blockages in manufacturing. Form’s observation indicates, however, that this conclusion may be generalised across a number of Department I industries too. The question naturally arises: why intervene at this point in the overall structure of the labour process?

First, there is the issue of the degree of maturity of the capitalist executive function. Capital had been drawn in the early phases of transition into those sectors (particularly transportation) which involved reducing the turnover time of capital (Rosenberg 1981). There were methodological lessons to be drawn from this historical experience, as well as from the technical systems so developed, that could and were applied to intracapital problems in the internal transfer of the objects of labour. The inverted temporality of the *Platzarbeit* system, wherein non-productive transport time exceeded productive time, was a natural target in this incremental approach. Such innovations as progressive work layout and mechanisation of part carrying were specifically designed to address just this.

Second, the characteristics of incrementalism and pragmatism in even the most planned of innovation processes need to be recognised. Capital was constrained by available technical understanding in applying the mechanical principle to the forces of production. The stochastic element is noted by Adler:

‘(t)he vector of mechanization is less determined by desires to remodel work requirements than by opportunities and constraints created by the accumulation of scientific and technological know-how’ (Adler 1990:808).

As he further observes, this stock of increasingly formalised technical understanding was applied primarily to the instruments of labour and not (customarily) directly to replace the worker. The very etymology of that most studied mechanised instrument, the machine tool, reflects this truth. *Contra* the radical science movement, the evidence simply cannot sustain an *embodiment thesis*, in which the objective of mechanisation is held to be to incarnate worker dynamics in machine form, so expressly expelling living labour from the process of production. The rupture of the anthropological base serves only to reinforce the *efficiency* element in the form of mechanisation.

It is important to note just how far the argument has travelled from Braverman’s singular cult of the artisan and autonomism. The machine economy grew parasitically from the practices and methods of pre-capitalist labour. Machine conception and design was shaped- sometimes radically- by this bequest. This was but a transient phenomenon: the objective trend was towards a quasi-independent dynamic of mechanisation and eventually, automation. A new temporality unique to the means of production then emerges. This temporal asymmetry in the forces of production is appropriated theoretically in the concept of DT1 contradiction between the means and relations of production.

The quasi-independence of mechanisation that demarks modern industry affords capital a new freedom from the ‘limiting base of artisanal know-how’ (Adler). The economic necessity for this is the increasing tautness of the law of value, and the strategic objective is the need for ever-increasing levels of labour productivity (RSV/ASV_2).

The arguments presented above have been formulated with the need to link mechanisation and skills very much in mind. With regard to the development of individuality, these skill changes are the most significant *traces* left by mechanisation on the historical record. Clearly, there is a conceptual relation between skill and Sève’s notion of ‘capacities’. The psychological products of changes in (especially abstract) capacities are, after all, one of the key themes in his inverted schema of the personality infrastructure. Given the centrality of this concept, it is then striking that Sève does not attempt anything like a substantial definition of capacities or a critical engagement with prevailing debates over skill. This is regrettable, for a number of entirely avoidable theoretical problems issue from this studied ambiguity. There are, as Form (1987) notes, four leading contenders in the race to capture the concept of skills and its relation to the

individual. These go philosophically much wider than Spenner's dual definition (autonomy-control/substantive complexity) and merit attention insofar as they help to situate Sève's own work:

1. The *craft-artisanal* paradigm: in this perspective, 'human nature' necessitates a balance of physical and mental skills if psychosocial development is to be sustained. The identification is clearly with an arcadian (and certainly pre-capitalist) world of labour *roundedness*, but this appropriation of a stylised past is then generalised ahistorically as an absolute condition of skill development and retention. Modern industry, with a deep division of labour, *ipso facto* violates the *idealist* prognosis. With this one-sidedness, the basis of skill evaporates and virtually all contemporary abstract labour becomes degraded.

Here, skill is essentially borne by the Individual.

2. *Human capital/market valuation* theories: in a human capital perspective, the individual's capability in performing tasks of defined complexity is the benchmark of skill. Again, skill is located solely in the person and consciousness of the individual. The connection is, however, clearly made between the given stock of capability and the necessary biographical learning that precedes and enables the construction of these skills. This temporal commitment is recognised in differential supply prices (wages) for different qualities of labour power.

Market demand theory holds that the differential price of the variety of labour power is related to the level of demand for particular labour 'services'. Such demand is then portrayed as the only real legitimisation of skill. There is, Form observes, no direct connection in either of these to job-related skill requirements.

3. The degree of *routinisation*: job skills are inversely related to the level of routinisation and extent of specialisation, which are held to correlate with task simplicity. That this elision is unacceptable is easily shown: Form observes that preparation for specialisation may be more or less extended and that the routines may be direct and short or complex and long. There are many cases where deep specialisation leaves considerable scope for, indeed demands, non-routine or highly complex activity (as in the contemporary medical team).

4. *Autonomy/management*: skill is here founded in the degree of autonomy/task improvisation or the extent of management of people and resources. Again, Form highlights certain exceptions that suggest the incompleteness of this line of argument: janitors are largely autonomous and

perform a variety of tasks, but these diverse tasks are customarily simple. The labour of supervision, on the other hand, is often less complex than the tasks of the supervised. These managerial arguments often appear tautological and, as with market demand theories, simply issue in recognitions of the *status quo*.

Significantly, Sève draws from each of these distinct and contradictory interpretations of skill in his work. For example, he appears to embrace the routinisation/specialisation argument in his comments on detail labour in line working conditions. There are also references to aspects of autonomy, as for example in his glowing depictions of factory working practices in the ‘actually existing socialist’ states. In the main, however, as in his discussion of the relative indifference of the social formation to individual learning requirements, Sève leans towards a human capital-type argument. It needs to be emphasised again, however, that Sève simply fails to explore the subtleties in the relation between capacities as personal artefacts and marketed skills. Perhaps Sève was content with Marx’s own parenthetical remarks on the matter, which anticipate, in a number of ways, human capital theory but which deal, as Devine (1989) notes, with the value of labour power and not with wage determination. To advance further on this important issue, a somewhat wider search of the marxist literature is required. The work of Paul Adler (1988;1990) is arresting in this regard.

Marx’s view of skill, Adler suggests, is founded on a notion of *socially necessary training time* (S.N.T.T.). Skill is then defined in a ‘technical (use value)’ sense as ‘...a set of capabilities whose magnitude can in principle be measured by the required training time (formal and informal, but socially recognized)’ (Adler 1990:806) necessary for their consolidation. With S.N.T.T., Marx refers the value of a given quality of labour power temporally back to the benchmark of simple labour. Adler highlights the importance to Marx of distinguishing value from price in relation to labour power. Referring to Marx’s brief and provisional discussion of the ‘commercial worker’ (clerical labour) in volume three of *Capital*, Adler notes three strategies by which the use value of labour may be restructured:

** an enhancement in ‘instructional efficiency’ that reduces the S.N.L.T. of training. This ‘...does not imply any reduction in real capabilities, but only a change in the market economy’s yardstick for measuring them, since shorter instruction times would reduce the “human capital” claim for higher wage rates’ (Adler 1990:791). This is analogous to a divergence between the organic and value compositions of capital arising from productivity change.*

This is not an unimportant point. Considerable force is being exerted in the training system, itself not an inconsiderable component of the economies of the A.C.C.s, to attempt to drive down times and prices for programmes of learning, particularly through technical change (that is, RSV).

** the establishment of universal education, and its subsequent qualitative improvement, expands aggregate capabilities and opens up professions like clerical work to new segments of the labour force. This increased competition drives down wages and devalorises the existing stock of skills. Alternatively, the employment of workers accustomed to lower levels of subsistence permits wages to be capped and labour prices again diverge from value.*

** a deepening in the division of labour reduces the average quantum of skill required of each worker in the context of collectivisation of the labour process.*

As Adler emphasises, the tendency for prices to converge on (S.N.T.T-derived) values is at best a long run characteristic. The derivation of exchange values for labour power is among the most culturally overdetermined of all market processes. Thus, ‘...institutional, political and ideological realities can swamp this economic determination of skill’ (Adler 1988:4).

It is immediately obvious that the first two avenues of value of labour power restructuring concern devalorisation or value/price movements. Only the third instance refers to deskilling proper- an emphasis somewhat divergent from the interpretation of Marx by Braverman *et al.* Even here, the contraction in range of skill can be countered by a corresponding deepening, as in the development of formalised technical understandings in modern industry.

The shortcomings of this approach are evident in the constantly invoked but never explained rider that this is a technical, use value-orientated explanation. Exchange value is the obvious alternative reference point, and one that has been taken up in other marxist interpretations of skill. There is merit in the S.N.T.T. approach, a point which will be returned to below.

Devine (1989) presents a more comprehensive restatement of the marxist position. Again, the starting-point is the benchmarking of complex to simple labour, but the first important observation is that an additive model (in which *skilled labour* [S] is merely simple labour [P] plus the addition of an increment of simple labour time delivered through training [T]) cannot explain the hiring of skilled labour. Assuming perfectly validated exchange of values, the capitalist would then remain indifferent as to the different species of labour hired, choosing either S units of skilled

labour or (P+T) units of simple labour. This is patently unrealistic. Devine therefore insists that the *value-creating capacity* of skilled labour must be some *multiple* (m) of simple or average labour: an argument that is hard to resist on logical grounds.

The value actually created (V.C.) by worker 'X' may be defined in the following manner:

$$VC_x = m_x VCC_a d_x i_x$$

...where i_x = the intensity of labour of worker X (the ratio of hours of labour undertaken to labour-power hired or the inverse of porosity);

VCC_a = the socially average value-creating capacity;

m_x = the non-negative multiple of average value-creating capacity of worker X induced by training; and

d_x = the duration of the working period for X.

The component ($mVCC_a$) refers to the capacities element in value creation, while (d_i) relates the temporal rhythm of the workplace. It is notable that (d_i) can be reconciled directly with the forms of surplus value extraction outlined in Chapter 2. In terms of value extraction, intensities of labour are only relevant when they diverge from the social average (when $i = 1$). What factors then determine m_x , the value-creating multiple? Adler's observations regarding S.N.T.T.s are clearly important, as Devine recognises when he refers to instances of the *supply-side devalorisation* of 'skill'. Yet the capacity to create putative exchange-values is not in itself decisive. It is the act of exchange itself that validates the capitalist's decision to employ labour-power under the conditions specified in the labour contract. Where commodities cannot be sold, or cannot be sold at their value, then a given proportion of labour time '...turns out to be wasteful *ex post*'.

These hypotheses provide space for what Devine classes as *demand-side devalorisation*, confirmation or change in value-creating capacities induced by realisation problems. The parallel here is with the historical development from concrete to abstract labour, of which the abstraction of skills forms but one part. As Devine notes, labour is not 'directly social': it is mediated and commensurated through the trade of exchange-values²⁰. These demand-side phenomena can overwrite all supply-side factors, including S.N.T.T.s. Thus:

‘...even training that raises a worker’s use-value productivity may not help boost exchange-value productivity. It is not uncommon for a worker with an advanced degree to find that, despite long years of blood, tears, toil, and sweat, her or his product is valued at a rate similar to that of a worker with less training’ (Devine 1989:124).

It should be noted that there is no scope in the use-value approach for such phenomena, nor for a systematic exploration of the implications of unemployment.

What theoretical relationship then exists between this understanding of skills and Sève’s conception of abstract capacities? Abstract capacities are directly equivalent to value-creating capacity: when the bearer of those capacities is hired, then, in the abstract, the terms of that hiring are based on that capacity. (This pertains primarily to the conditions of surplus value extraction and not necessarily to the wage.) At this point, the process of value creation begins and capacities are transformed into skills. The labourer enters the ‘hidden abode of production’ (Marx), wherein the acts that flow from those capacities ($c_1 \longrightarrow a_1$) are guided by the length and intensity of the working day. In Devine’s model, this is where a worker’s value-creating capacity is condensed into value creation.

The labourer’s skills remain yet strictly provisional (concrete skill), for they await the ultimate test of the transformation of produced use- into exchange-values, of the sale of the commodities at value in the market. The repercussions of failure on this score will otherwise inevitably feed back in terms of a fall in the value creating capacity of that species of concrete labour and then in the form of the next round of labour hiring.

In terms of a structuralist assignment rule, skills pertain to the economic instance in historical materialism, while capacities are the specific province of the theory of the personality. There is considerable overlap in the content of skills and abstract capacities: but they are not coextensive. All skills have to be located in the capacity space of the individual, but not all abstract capacities will be hired (concrete skill) or be valorised as abstract labour. An hypothetical example may help to illustrate this. Assume that some technical change in the labour process effectively eliminates market demand for that concrete skill. At one level, that of the social formation, the value of those skills falls abruptly to zero, as labour contracts are not renewed: they are, for all practical purposes, erased from the system.

Now consider the individuals who have sunk time in their biography in acquiring the capacity associated with those devalorised skills. The personal ramifications of devalorisation will manifest

in a reduction in P/N and potentially in a motivational crisis. This example illustrates the fundamental causal superiority of skills over capacities. It also highlights the distinctive nature of the evolution of concrete skills and value-creating capacities. These are two quite distinct processes governed by variables the determinants of which draw from two Althusserian sciences.

There is a further, distributional aspect here: how was the S.N.T.T. that underpinned these evaporated value-creating capacities funded? Had the initial training been employer-funded, then there will be a rapid devalorisation of a part of the human capital stock. There have been arguments put in recent years that the 'investment in human resources' should be formally captured in new accounting methodologies. Where this is attempted, the ramifications of such devalorisation will be formally reflected in the accounting ratios of such capitals, with generally negative implications for loan status *et cetera*. Where training is paid by the labour force, the worker is then liable for the financial costs of this accelerated amortisation. This model of worker accumulation of concrete skills is, as Adler notes, akin to petty commodity production (Adler 1990:n.62).

The assignment of skills to historical materialism and capacities to the theory of the personality is useful insofar as it avoids a widespread taxonomic confusion which even Adler is unable to avoid. Thus at one point he refers somewhat ambiguously to 'workers' skills' as distinct from 'job skill requirements'. Logically in terms of value creation, there can be no sustainable distinction along these lines. Skills are marketed phenomena: abstract capacities are the psychological mirror of skills. In the long run, the two concepts are commensurate. This commensurability is the source of the value of (concrete) skill studies to the theory of the personality, where they act as the best currently available surrogate for capacities. It needs to be recognised, however, that short run changes in the exchange-value of concrete skills will enforce a multiple adjustment in capacities and their associated psychological product.

To summarise on this brief analysis of the implications of early mechanisation: machines grew (and the organic metaphor is entirely appropriate) from the pre-given forms of working of an artisanal base. Towards the close of the nineteenth century, the quantitative improvement in methods and reliability transmutes into a qualitative leap, as the anthropic principle in machine conception and production is superceded. Henceforth, the accent of mechanisation shifts, from a Ure-Babbage problematic of power to the pursuit of RSV (and secondarily, ASV₂).

The implications for the structure of skills are complex: proletarianisation and compositional shifts imply a significant degree of fluidity in the distribution of skills in the nineteenth century

labour force. Yet the conclusions are surprising in light of the powerful arguments of the deskilling school. In aggregate, the evidence points to a relative stability in the structure of skills in the period of transition to capitalism. The importance of this overall stability to the theory of the personality is then that the psychological quality of the labour force was absolutely maintained over this period. This finding is based on the commensurability of skills and abstract capacities and the pivotal role of such capacities in the infrastructure of the personality.

Finally, it is recognised that the short run relationship of skills:capacities is anything but straightforward. While the long run skills stability identified above is a key research finding, it is clearly unsatisfactory that the best available measure of capacity should be based on the (surrogate) index of skills.

'Americanisation' - the role of ideology:

These brief exegeses on task orientation/use-time and mechanisation/skill, which illuminate key issues at the very centre (the infrastructure) of the personality, have emphasised the need for empirical validation. The source of such validation comes through very strongly from historical materialism, particularly from the contradictions in the generalised (capitalist) commodity form of labour power, in the labour market and in the labour process. At first sight, it is remarkable that the structure of the political economy can provide so rich a mine of biographical source data. Indeed, one can anticipate, and fairly quickly disregard, a charge of *economism* here, for the core hypotheses of Sève's work have been quite clearly sustained in this examination.

Theoretically, the concepts of epochs (modern industry) and epochal biographical forms (task plasticity) are associated with an intermediate mode of analysis in terms of the structure outlined in Chapter 3. One is still a very great distance at this analytical level from apprehending the concrete biography in its concrete psychosocial environment, the social formation. When couched in these terms, the achievement so far assumes a modest dimension. There is then an understandable impatience in some quarters to move from what may be considered as arid abstractions directly to the analysis of the consciousness of that concrete individual. Such a commitment is greatly encouraged in current politico-intellectual conditions, wherein the *cult of the superstructure* has assumed hegemonic status. This theoretical move to the concrete individual customarily pivots on ideology.

Traces of such an approach can be found in Gramsci's analysis of Fordism. He assigns some weight to the curio of Prohibition for example, in improving labour discipline in the context of an ever more rationalised productive order: likewise with the exhortations to workers to adopt monogamistic sexual norms. These discrete measures of indoctrination have been brought together under the comprehensive rubric of *Americanisation*. Clarke (1990) has noted the ambivalence in the Third International, and in Gramsci's own writing, in relation to these phenomena. The explicit ascetism in the image of the Fordman resonated with a certain anti-hedonism in the International: witness Gramsci's description of the 'Bohemian layabout'. Taylorist time-and-motion methods similarly connected with the activism of the *Time League* in the early post-October period of the U.S.S.R., with its commitment to building a collective consciousness of timesaving among the revolutionary workers. The terminus of this movement under Stalin was of course the extreme voluntarism of Stakhanovism!

Clearly, from the marginal comments already made in Chapter 2, such a perspective, seeking some unmediated relation between the personality and the social formation via ideological appellations, is little short of anathema. The historical achievement of Fordism as the first epochal form of developed capitalism had little to do with ideological exhortation and all with the liberation of mechanics from anthropomorphism and the establishment of a new structure of use-time. As the disastrous irony of Stakhanovism to the person of Stakhanov eloquently attests, this position is founded on both theoretical and political considerations. That Gramsci sought to combine such methodologically inappropriate entities in his analysis is more a reflection of the pioneering nature of his work and his general preoccupation with ideology and the State than a systematically argued position.

The potential ramifications of *ideologising* are strikingly evident in more recent work. Henderson and Cohen's analysis of the evolution of the relations of production (Henderson *et al* 1982) provides by contemporary standards a moderate illustration of the effects of 'ideology in charge'. Influenced by the work of Lefebvre, they propose an analysis of *habituation mechanisms* founded on the ideological *conditioning* of labour power. They distinguish two levels at which such conditioning may operate:

* *exterior conditioning, the '...overt moves by capital directed against labour, and normally at the point of production'.*

* *interior determination, which includes elements of culture/ideology that '...become accepted and transmitted, or even generated, by the institutions of proletarian culture itself'.*

Habituation traces the combined impact of these two conditioning processes on the collective behaviour of the labour force. There are some extremely acute observations that carry their argument towards its conclusion: but it is in their overall reading that the chronic shortcomings of this methodology become so apparent.

A tendentious survey of the history of conditioning programmes in the maturation of capitalism indicates that the primary source of contradiction in the relations of production is the challenge posed to accumulation from virgin workforces. They emphasise the recurring problems of inducting economically marginal populations into capitalist labour norms and the potential disorder posed by the evolution of countercultures in these circumstances. Systemic opposition comes from immigrant populations; from the young workforce; and from populations in new capitalist *spaces*.

It cannot be denied that demographic instability has played an important function in determining locational patterns and (sometimes) in shaping social change, though it is important not to overstate this²¹. What, though, is the antithesis to this argument? It surely follows that habituation processes were in large part successful in integrating the *core* labour force (which customarily constitutes the *majority* of workers in the labour force) into the logic of capital. This inference is strongly present in their observation on a largely habituated British labour force.

‘By the turn of the (twentieth) century, Britain had in large measure developed a working class of two or three generations’ standing, and it was not until the 1950s that British capital had to confront the spectre of a first generation working class again’ (Henderson *et al* 1982:128).

As the schematic of the structure of use-time in transitional Britain presented above clarifies, this categorical assertion simply cannot be empirically supported. Temporal laxity was neither at the turn of the century or through the *belle époque* decisively overcome.

Their conceptualisation of labour process control and skill is, furthermore, remarkably non-contradictory. Final victory in the relations of production is really never in doubt, in the ‘...increasing elimination of workers’ job control effected by Taylorism and Fordism’. Again, skill studies yield results that are far from unambiguous on this score. In the United States, some significant shift in control (polarisation) does seem to have been effected through deep mechanisation: but skill bases were nevertheless maintained on a changed footing through this.

Yet this carelessness with the empirical evidence belies a deeper theoretical confusion. The analysis of exterior conditioning, with its focus on changing temporal rhythms in transitional labour processes, is basically on target: it traces the attempted imposition of a new structure of use-time. The non-contradictory manner in which such changes are seen to be registered in the consciousness of the labouring subjects of this analysis is noteworthy, however. Where is the distinction between skills and capacities, itself an unstated but nonetheless enduring source of class conflict, for example?

What then follows is a review of internal conditioning efforts, including 'work-orientation', religion and moralism, language training and the structure of workers' community life. Under the rubric of work-orientation for example, they analyse the self-regulatory regimes developed by skilled workers. Citing Hobsbawm's study of the British boilermakers' union, Henderson *et al* note the 'strict penalties for members who produced bad work', while '...conscious and systematic slacking generally produced considerable moral indignation'. In the attack on 'workers' community life' go the planned communities of New Lanark, Saltaire and Bournville.

The efficacy of such initiatives has been so great as to generate a 'decomposition of working class culture', a fundamental reconstitution of the centre of consciousness in the 'privatised family' and its increasingly commodified infrastructure. (Paid) work assumes a purely instrumental status in an emerging *social factory*. In many ways, this section is very closely modelled on Thompson's (1967) argument, an association that will be explored further below.

Where does this leave the concrete individual? Caught in a vice between socially regulated changes in use-time and a total loss of oppositional identities, the worker as an unique causal entity theoretically *disappears*. This is a problem that has been encountered before: a species of compatibilism. The theoretical combination of exterior and interior conditioning forms a circle of argumentation that *should never be completed*.

What is then decisively rejected in the study of (the contradictions in) use-time adaptation is precisely this casual synthesis of an ideological problematic with a theory of epochal temporality. The importance of ideology is in no sense negated in this separation: quite the reverse. Ideological systems are complex and dynamic precisely because they must address a contradictory personal reality. As Therborn notes:

'...the psychic structure underlying our conscious subjectivities is not monolithic... but rather a field of conflicting forces' (Therborn 1980:79).

What precisely is this underlying *psychic structure*? Synchronically, it is nothing other than the limits set by the historically given form of individuality. Dynamically (under capitalist relations), the infrastructure of the personality is beset by contradictions generated by the structural indifference in the development of the productive forces to the personality. The problems thus presented in use-time management are both the primary cause of, and the delimiting factor in, the development of this underpinning psychic structure.

These contradictions in the infrastructure of the personality lie at the root of the 'protean' nature of ideology itself. The relatively fragile quality of contemporary personality development requires a multiplicity of ideological systems²². The concrete individual will be appellated in differing ways at different points in the development of the biography. The 'voluntary superstructural controls' that Sève identified mediate the process of ideological selection. The theoretical completion that Henderson *et al* attempt instead generates an indefensibly functionalist (mirror-image) perspective on ideology and culture.

As already noted, the logic of Henderson and Cohen's work follows that of Thompson (1967) quite closely. Thompson moves from a fascinating horological analysis to an account of the long and uneven expansion in the market for timepieces as the foundation-stone for introducing a rationalised time-economics; then to an audit of use-time change in the early phases of capitalist supersession. The influence of this work is seminal in the evolution of virtually all subsequent work on the transformation of temporality in the transition to capitalism. It is, in short, a work of excellence. As in Henderson *et al*, the problems begin when Thompson turns to tracing the 'internalization' of the new temporalities '...within the evolution of the Puritan ethic'.

Unlike Henderson *et al*, Thompson is justifiably hesitant in ascribing unqualified sway to these internal regulators in the personality of the worker. The final assessment is there, however, in a rhetorical questioning:

'But how far did this propaganda really succeed? How far are we entitled to speak of any radical restructuring of man's social nature and working habits?' (Thompson 1967:91).

The response, while by no means unequivocal, is nonetheless confident:

'I have given elsewhere some reasons for supposing that *this discipline was indeed internalized*, and that we may see in the Methodist sects of the early nineteenth century a figuration of the psychic crisis entailed' (*ibidem*, emphasis added).

The reference is to Thompson (1980). This ‘internalisation’ is then clearly related to the class-constituting theme at the centre of *The Making of the English Working Class*. Anderson (1976:34ff) pointed to the many contradictions in this logic of *making*. One can see the problems of compatibilism and functionalism reproduced on a different plane in this argument. Where the underpinning changes in use-time are fused with wider ideological and political changes (in the emergence of a class-for-itself), the same unpleasant surprises are uncovered. That Thompson’s diagnosis of the rise of temporal plasticity was premature by some decades has already been noted. Anderson makes much the same point in relation to the formation of the working class *in toto*:

‘(t)he English working class was not “made” by the 1830s in the simple sociological sense that it was still far from being predominantly a labour-force operating genuinely industrial means of production, whether in factories or other technical complexes. “Machinofacture”, in fact, was much slower to spread even in the Victorian economy than has traditionally been thought’ (Anderson 1976:45).

Considerable damage has then to be done to the historical record for this thesis to be in any way upheld. Anderson’s impatient rhetoric is entirely understandable:

‘...if the same class could be made by the 30s, unmade after the 40s, and remade during the 80s, how ultimately satisfactory is the whole vocabulary of making itself?’ (Anderson 1976:47).

As the functionalist problems in Henderson *et al* and Thompson illustrate, any attempt to combine a theory founded on ideology and culture directly with an analysis of temporal structure faces severe difficulties. Further analysis of these compatibilist problems also indicates the theoretical superiority of use-times over ideology and ‘conditioning’ in causal terms. This is, as should by now be apparent, a complex argument. It is one, however, that is at least supportive of the research findings of Kohn *et al* (1982) on the psychological impact of different aspects of abstract labour.

Ideology and culture exist independently of individual consciousness, in an established set of intellectual labour processes and in an accumulating material legacy. One has only to contemplate the concentration of dead labour in the library systems of the advanced capitalist states to recognise this. The *efficacy* of a given ideological system is, however, clearly dependent on the degree to which it connects with the psychic structure of concrete individuals and groups:

how well it appellates them and synthesises biographical change with movements in the social formation. That connection is filtered through superstructural psychological controls, which express in turn the contradictions in the personality infrastructure. The role of ideology in the theory of personality, then, is clearly a subordinate one in relation to the deeper structures of use-time.

There is as has already been noted, a certain theoretical mutuality in this relation between biography and ideology. As the example of Henderson *et al* illustrates, a form of 'subjectivity' that is completely habituated (as their core workforce by inference is) only necessitates a unitary ideological superstructure for its (simple) reproduction. The reductionism affects both sciences symmetrically. It is then little short of a *coup de théâtre* on their part to attempt to reintroduce class conflict on the back of an exogenous supply of uninitiated industrial innocents.

Conclusions:

This Chapter commenced with three questions that together constituted an acid test for Sève's theory of personality. Drawing together the highly disparate evidence to enable inference to be made in relation to these has been no easy matter. This is primarily because the categories that Sève proposed have not to date formed a legitimate or agreed object of historical study. Consequently, one has necessarily been driven at various points to use surrogate series that are analogical to these core concepts but which also at another level remain distinct from them: this approach is clearly unsatisfactory.

Some useful connections have nonetheless been made. Principal among these are:

- * *that the changing structure of use-time is visible in the slow but accelerating process of formalisation of abstract labour times in Britain over the course of the nineteenth century.*
- * *that the challenge posed by a more fluid conception of working practices under task orientation to capital in its infancy was severe. This generated tensions in the transitional coalition of the dominant estates/classes.*
- * *that the task of completing this historically significant project was to fall to the personifications of capital in the United States as the British political economy atrophied towards the Climacteric.*

- * *that dichotomisation of the personality progressively deepens over the course of this transition: it is an historically bounded phenomenon.*
- * *that the decisive element in the move to modern industry was provided by mechanisation. Higher productivity, based on ASV_2/RSV extraction, provided the sustainable base to accumulation, rather than an increase in worktime.*
- * *that mechanisation is increasingly motivated by capitalist efficiency criteria. The evidence does not point to a systematic attack on skills, though control was more of an issue in crafted and guilded trades.*
- * *that while the definition of skill is problematical, a reading based on Socially Necessary Training Times (S.N.T.Ts) looks theoretically promising.*
- * *that devalorisation effects (value/price movements) assume greater significance in this reading than do deskilling effects.*
- * *that skills are categorically distinct from Sève's concept of capacities even while there is some commensurability between them.*
- * *that the quality of the labour force measured in terms of the stock of capacities seems to have been maintained through the proletarianisation and polarisation of the labour force in the transition to modern industry.*
- * *that ideology played a relatively minor role in hastening the transition from task orientation to task plasticity.*
- * *that there are severe theoretical problems in assimilating a theory of ideology to an analysis of use-times and epochal biographical forms.*

In light of these highly provisional explorations, then, Sève's theoretical framework seems to have stood up remarkably well. One is still left with only a partial window on the changing biographical structures of working people over this period: but the view generated from the evidence on use-time and capacities is certainly suggestive of a more complex reality than a thesis of absolute immiseration or deskilling would suggest.

A number of questions remain over Sève's reading of the overall development of workers' biographies in the subsequent period. Julkunen queried Sève's judgement in this regard when he highlighted what he saw as the 'remarkable variation' in abstract labours in the period of maturation of modern industry itself. Tracing the development of the contemporary forces of production, and the attendant biographical ramifications is the central task of Chapter 5.

NOTES TO CHAPTER 4

1. *It would be unwise to understate the intensity of labour in agrarian production, which as Williams (1985) notes, was already being decisively colonised by quasi-capitalist forms of wage payment and property separation by the mid-eighteenth century. The social structure of English villages is typically rigid and triadic, namely '...the gentry; the small entrepreneurs; the uprooted poor. The inequalities of conditions which the village contains and supports are profound' (Williams 1985:102). Yet, the signs of a relative freedom are visible for craft labours: and the temporal porosity for even the dispossessed in their daily, backbreaking labours was powerful and real.*

It is also worth noting the value of this intermingling of work, family and community in the pre-capitalist social formation to capital in its early precarious growth period. As Henderson et al inter alia note, '...the task of physical reproduction is carried out by the traditional community at an enormous saving to capital' (Henderson et al 1982:131).

2. *As Brody notes:*

'in his diaries, one country-mill agent, N.B. Gordon, accepted laconically the lack of punctuality and irregularity of his workers. He did "enter his dissent" against Election Day ..."being one spent in a useless & worse than useless manner;" nevertheless Gordon "could not peaceably work the mill as all hands seemed determined to have the whole day"' (Brody 1989:35).

3. *On the historical lineage of the 'power-driven, mass-production, assembly-line factory' back into antiquity, see A. Trevor Hodge 'A Roman factory' Scientific American, volume 263:5 November 1990.*

4. *The vicious discipline that characterised unskilled British textile working was atypically representative of the imposition of a new space-time economy. As Thompson has shown (Thompson 1980), much of this violence was quite arbitrary to any technical requirement of production itself.*

5. *In the account of the political economy of time and evolution of the wage nexus presented here, the accent is on long run developments: the corollary of this is that the rich political history of worktime agitation is abridged. Brenner & Ramas (1984) provides an excellent overview of this history in relation to the development of gender divisions in the labour force. The strategic considerations that underpinned the agitation of the Short-Time Movement from the 1830s are indicative of a high level of political creativity:*

'(t)he strategy was to reduce the adult working day indirectly, through legislation that would fix the hours of child labour in such a way as to make it impossible for adults to work longer hours' (Brenner & Ramas 1984:43).

As they note, this approach was founded on a close understanding of the interdependence of labours in factory working. The 1833 Act was carefully framed to maintain flexibility in adult labour. The response of the Movement was to push for 'restrictions on motive power' and to attempt to limit the workday for those under twenty-one years: this was greeted with universal hostility from the bourgeoisie and Parliament. For the 1840s, the reformers focused their efforts intensively on the question of women's labour, a turn which met with some success.

6. *As Hopkins observes:*

'...it was said that an enormous amount of time was being lost not only by unpunctuality in coming to work in the morning and beginning again after meals, but by St Monday- "a licence which is often extended to a part of Tuesday also"' (Hopkins 1982:55).

The observation on Tuesday comes from no less a source than the 1864 Children's Employment Commission!

7. *It is recognised that the sharp rise in steam power applications was very unevenly distributed across sectors of production and impacted in distinct ways on the overall structure of the labour process. Machines were often deployed in one locale but not others, reflecting the balance of class forces, as Samuel has graphically described. In the 1870s, for example, improved power looms were rapidly incorporated in plants in northern English carpet-producing areas while they were excluded from Kidderminster, in recognition of strong worker resistance. Mechanical typesetting techniques were introduced in the provincial press, but the London workers succeeded in holding the status quo. Similar episodes mark metal-stamping and shoe and boot assembly.*

8. *The viability of intensive mechanical operations presupposed and enlarged on an already emergent (spatial and temporal) pattern of industrial activity. In the interlocking trading structure that results, one can clearly trace a pattern of progression not dissimilar to Dahmen's projection of Development Blocks. The presupposition to intensive production is apparent in the litter of failed or stalled experiments in the early years of capitalism. Brody again provides the telling example:*

'...the Boston Manufacturing Company (1813) soon built in Waltham, Massachusetts, an integrated textile mill that showed the country a fully realized example of modern mass production. But no other industries were able to emulate the Waltham-Lowell model; it remained sui generis for another half century' (Brody 1989:31).

The workshop networks were a necessary condition for large plant operation. A certain spatial density of capitals is required before intensive mechanisation can yield its full fruits: Bairoch's work indicates that high densities were early achieved in Britain, then in the United States and (later in the nineteenth century) in parts of Germany. In this sense, there is some validity in Sabel et al's theoretical elevation of the role of small capitals in occidental capitalist industrialisation. There was irony in this linked development too, for the workshop networks were customarily seized by their contracting necks and reduced to a bracing dependency at the hands of their large firm customers.

9. *What has here been identified as an historical failure on the part of British capital (an aspect of the Climacteric) is treated in an altogether different manner in Whipp (1987). In the first of four criticisms that he levels at Thompson's 1967 Study, he asserts that '...Thompson gives far too much weight to the ability of employers to develop "a greater sense of time thrift"' (Whipp 1987:218). He cites the accreting forms of work-organisation and managerial pragmatism (including the noted British antipathy to scientific management) as examples of a long-term tendency for multiple and theoretically irreconcilable forms of temporality to endure.*

The implications of this approach are twofold:

** that there is no identifiable long term trend in temporality akin to the temporal compaction projected by Julkunen and Sève: and that there is no normative basis for preferring the ramifications of one temporal regime over another.*

** that the Development Thesis that (via the law of value under capitalism) propels sociotechnical emulation is very weak or non-existent.*

Whipp thus castigates Thompson for undue determinism. He observes that:

'...control of time in relation to work was not established once and for all as phrases such as "the familiar landscape of disciplined industrial capitalism" imply' (Whipp 1987:219).

This is somewhat ironic, given the terms of Thompson's own engagement with Althusser on this score!

Whipp's argument fails because one is then unable to distinguish any causal structure in his account. There are numerous times circulating within a social formation with- it would appear- complete mutual indeterminacy. Thus, times coexist within and between sectors and localised areas with no long run competitive tendency to rationalisation at all. In consequence, there is no epochal assessment of trends in time use (whereas there are quite clear and universal tendencies in the historical record).

The problem with Thompson's analysis is not that it is overly deterministic (which it certainly is not) but that the structure of determination, as Anderson observed, is ambiguous. Thompson's growing suspicion of Althusserianism at the time was itself probably unhelpful in this regard.

10. For the classic discussion of the dynamic of worktime reductions, see Bienefeld 1972. Nyland (1989) contains useful international comparisons, plus a theoretically very interesting discussion of the impact of scientific management on temporality. Clearly, his perspective differs from that proposed here, insofar as he sees Taylorism as the bridge to modern industry.

11. 'The master manufacturer, by dividing the work to be performed into different processes each requiring different degrees of skill and force, can purchase exactly that precise quantity necessary for each process; whereas, if the entire work is executed by one workman, that person must possess sufficient skill to perform the most difficult, and sufficient strength to carry out the most labourious of the operations into which the art divided' (Babbage 1832: cited Adler 1990:n.38).

*12. The literature is extensive indeed. See the Bibliographies in Spenner (1983) and Vallas (1990) for full references. The most influential first generation works on deskilling are Braverman's own (1974) work; Burawoy M (1979) *Manufacturing Consent*; Edwards R (1979) *Contested Terrain: the Transformation of the Workplace in the Twentieth Century*; and Zimbalist A (1979) *Case Studies on the Labor Process*.*

13. Vallas (1990) distinguishes these three empirical levels as:

- * *aggregate studies for all trades (in the United States, based almost universally on the seminal 'Dictionary of Occupational Titles').*
- * *national/regional studies based on occupational sectors.*
- * *qualitative studies at the firm/occupational level (including specifically, case studies).*

14. MacKenzie cites the work of Lazonick in this regard. On the introduction of the self-acting mule, the skilled and inventive spinners of Lancashire:

'...developed a strong union, achieved standardized wage lists that protected their wage levels, and kept a fair degree of control over their conditions of work' (MacKenzie 1984:196).

15. Adler emphasises the importance of the separation of labour power from the means of production (the property connection) in the skill reconstitution of crafted labour. His conclusion on crafts is though, akin to that proposed here. Thus:

*'Marx would agree that the separation process attacks the status of craft- a concern, however, proper to that small **minority of the working population** which may have ever claimed the status of craftsman' (Adler 1990:799-800, emphasis added).*

16. As Adler quips, *'...(t)he literature is populated by almost as many skill concepts as there are authors'* (Adler 1988:3).

17. Attewell makes the point when he observes that:

*'...skill and autonomy often go together empirically, but to make control/self-direction and skill **logical equivalents** can lead to distortions' (Attewell 1990:442).*

*His citation from Crompton and Jones' 1984 work **White-collar Proletariat** following immediately on the above illustrates the matter very effectively. For Adler (1988), Braverman's skill concept is twofold, embracing both autonomy and task complexity. The two axes are then brought in 'close correlation' in **Labor and Monopoly Capital**. Close but clearly not equal correlation: the aspect of control is given such emphasis in Braverman that it totally occludes issues of task complexity.*

18. Thus, 'power theory' '...reversed the causal direction between the forces and relations of production' (Form 1987:33) that Form identifies as a hallmark of marxism. There is some confusion on his part here. The 'causal direction' that he is referring to is of course that between the means and relations of production that, together with the objects and instruments of labour, constitute the forces of production.

19. See Rosenberg (1981) for a fascinating exposition of Marx's own views on this. Early attempts at a range of mechanical applications drew rather too heavily on the existing anthropological structure and too little on mechanical principles, sometimes (unwittingly) with comic results: Rosenberg 1981:23-4 provides the ultimate exemplar, the two-footed steam locomotive!

20. There is an 'important limitation' registered here. The *ex post* valuation of (abstract) skills can, Devine notes, produce a 'unidimensional' measure of skill. Given, however, that 'most commodities are produced not individually but by collectives ...we often cannot measure the skill coefficients of individual workers' (Devine 1989:124). The stronger reality is that the transindividuality of which Devine speaks is an **intrinsic feature** of many modern labour processes; indeed, a tool of industrial and commercial restructuring in the contemporary period. The tone of the passage that follows presages some of the extreme individualism yet to come in analytical marxism. 'This limitation does not seem severe, but instead appropriate, where exist synergy effects and externalities among the different labours' (Devine 1989:125). The notion of 'externalities' is plainly individual-centred and insufficient as a descriptor of transindividual effects (see Chapter 5 below).

21. Therborn is emphatic on this. His argument is couched in terms of a divergence between what he terms 'subjection' and 'qualification'. The concept of 'subjection' captures a mode/structure of dominance while 'qualification' refers to the stock/distribution of skills required in the productive forces. There are then, in his analysis, two possible forms of contradiction between them:

* '...the subjection of the... dominated population... may for some reason change in form or strength while the tasks for which the new members have to be qualified do not change, or change in a different direction' (Therborn 1980:46).

* 'there may be a change in the qualifications needed or given, while the forms of subjection do not change accordingly' (*ibidem*).

The former scenario, which parallels the emphasis of Henderson *et al* on youth and marginalised populations, tends to produce 'underperformance, dropping out, or riots'. It is the second, a relative

overqualification, that can generate forms of organisation and identification for which the existing structures of domination are by definition ill-prepared, that poses 'potentially revolutionary implications of social transformation'. One may also note the similarities in the arguments of Henderson et al with Marcuse's position in the mid-1960s on this point. Historically, the consent of core workforces in the status quo cannot be assumed.

Therborn's argument is consonant with the overall hypothesis presented here: that the trend in abstract capacities is a key benchmark for the qualitative development of personality, and that this is a necessary condition in turn for establishing a new mode of production and a higher level of civilisation.

Regrettably, Therborn is also persuaded by Braverman's degradation hypothesis, leading him to suggest that deskilling is being used to ratchet qualification level down to a tightening subjection threshold. Here, both subjection and qualification are seen to be moving in the same, downward direction.

22. Therborn identifies four transhistorical dimensions to his 'Universe of Ideological Interpellations':

- (1) 'inclusive-existential ideologies', identifying 'what life is, what is good and bad in life, what is possible in human existence, and whether there is life after bodily death'.*
- (2) 'inclusive-historical ideologies', which define for individuals and collectivities their membership of specific 'social worlds' and fix the terms of such membership. Such 'worlds' include 'tribe, village, ethnicity, state, nation, church'.*
- (3) 'positional-existential ideologies', which 'constitute subject-forms of individuality' by defining particular positions in the 'existential world' in relation to gender, place in the life-cycle et cetera.*
- (4) 'positional-historical ideologies', which define the place of individuals, families and collectivities in the range of social worlds defined in (2) (Therborn 1980:23-5).*

As Therborn observes, a given ideological system will frequently draw on more than one of these dimensions. Contemporary nationalism for example spans inclusive-historical and positional-historical ideologies, identifying the cultural space of the 'nation' and the terms of citizenship, while also 'constituting subjects of a position within an international system'.

The rootedness of (especially positional) ideologies should also be recognised in the constituted materiality of the productive, including cultural, economy. There are occasions where Therborn does seem to veer towards ideological self-referentiality.

CHAPTER FIVE

THE MATURING OF MODERN INDUSTRY

'The new complex of productive forces is automatic production control or automation; the principle of work organization now in embryo is known as the recomposition of tasks. The combination of these two lines of development has unleashed the most shameless propaganda about the liberation of man in work. It is certainly possible that automation does contain possibilities which will eventually... lead mere operative work in production to disappear. But one thing is sure here and now. These possibilities will have no chance of being realized unless capitalist relations of production are abolished' (Aglietta 1979:122-3).

The dissemination of scientific management and Fordism across the A.C.C.s promoted forces of economic reconstruction and growth of a vitality without historical precedent. This process continues unabated to the present. The incursion of these forms of modern industry into the economies of western Europe and then the Pacific Rim has also catalysed wholesale social change. Of particular interest here is the epochal change in biography that has been characterised as the shift from task orientation to temporal rigidity. Again, the relationship between the form of the machine, the relations of production and human capacities, acts and need lies at the core of these changes. Many of the dimensions that govern these come immediately from the formulation of the abstract (value-creating) capacities of labour which are central to personality development. These may be summarised as:

- * a definite and evolving form of transindividuality which socially relativises key aspects of personality even as it disciplines labour power.*

- * a long term tension between increasing biographical dichotomy (as now encoded in legal standards and collective agreements) and the systemic requirement for ever-greater levels of factor productivity. The ensuing problems for capital issue in a growing experimentation with sophisticated forms of work scheduling that more or less invade other sectors of the biography.*

** a secular increase in labour density and intensity, issuing at particular times and places in unsustainable depreciation rates on workers.*

** an overall stabilisation in concrete skill levels, with indications of acceleration in supply side devalorisation and demand-related compositional shift in workers' tasks over time.*

Overlaying these important changes are continuing deep inequalities in the distribution of biographical resources across the labour force.

These dimensions form what is essentially a parallel social history. As has already been intimated, these crucial biographical changes issue from an economic base that is both relatively indifferent to personal development needs and superordinate to and determinant of individuality. This structural indifference intensifies under Fordism as production is freed from the pre-existing anthropic harness. The pace of change quickens, with emulation and mutation of the economic base proceeding at an ever faster rate. Consequently, important variations in the form of modern industry from the classic U.S. model are coming through from this.

Yet, a reciprocal determination is also visible, with new biographical rigidities posing problems for capital at particular points in the cycle of accumulation. In fact, a combination of such problems convinced many commentators from the early-1970s on, that the demise of the Fordist epoch was imminent. One has to say that the diagnostic stage is becoming rather protracted, as the patient simply refuses to lie down. Yet, given the centrality of the political economy to the development of individuality, it is important to reach some assessment of the main lines of progression in the productive forces and of the particular implications that such changes may hold for contemporary personality. Is a new epochal biography being constructed from the incubus of *flexible specialisation*?

The Deepening of Fordism:

It is not intended in any sense to offer a detailed history of the deepening of Fordism over the decades of the mid-Century: extensive extant research makes any such attempt superfluous. Instead, specific aspects of that process which are of particular relevance to biographical change will be highlighted. The maturing of Fordism was of course as much a qualitative as a quantitative development, and one which peculiarly centred on mechanisation.

To commence with the quantitative aspect to mechanisation: historically, the significant challenges to capitalist authority came, as has been indicated, from the skilled artisans, who were also in the vanguard of defence of the pre-capitalist biographical form of task orientation: primitive mechanisation tended therefore to accentuate Ure-type considerations. Its locus was the site of direct material transformation, a preoccupation that continued into the twentieth century with the early narrow interpretation of scientific management (as Taylorism) as a regulator of skill and activity at the work-station.

With the rapid increase in understanding of mechanics and the accompanying improvement in metering and measuring, the need to address the physical integration of work-stations became increasingly urgent: recall the valorisation anomaly of the *Platzarbeit* system. The Line was the first great experiment in this direction. At a stroke, the massing of labour typical of manufacture found an equivalent and adequate control response in a new generation of transfer machines. The mechanisation of transfer was pursued in a number of forms, by 'fixed conveyors from one point to another, by dead-line (rollers, slides), steered line (cranes, locomotives), and live-line (overhead conveyors, belts, chains)' (Walker 1989:64). The demand for such devices necessarily induced the production of new forms of capital goods. Thus, the relative and absolute levels of output of such machinery provides one index for the penetration of Fordism in the wider economy.

Coombs has attempted to gauge the relative importance of the distinct subsets of capital goods over time by categorising Department I output from the machinery sections of the Censuses of Production of Britain and the United States. First, he distinguishes between *primary* and *secondary mechanisation*.

** in primary mechanisation, the 'main technical feature of manufacture that was subject to continuous improvement was the speed and scale of transformation' (Coombs 1984:679). This was necessarily the dominant type of accumulation of dead labour through the nineteenth century and took the form, as has been shown, of a steep increase in application of steam power. Coombs also cites 'changes in steel quality, lubrication techniques, ball bearings' as contributing to this phase.*

* *secondary mechanisation is characterised by '(t)he combination of systematic work organization, interchangeability of parts, and specific machines for the more efficient movement of workpieces' (ibidem). Coombs highlights the continuous flow and assembly line industries as pioneers of secondary mechanisation.*

Unsurprisingly, given the macroeconomic and social problems highlighted in Chapter 2, the penetration of the new systems was halting in the interwar period: a point returned to below. By 1947 in the United States, the value of capital goods output associated with secondary mechanisation stood at 10.8% of total production. For the United Kingdom, the 1954 proportion was 15.2%. From 1947, a sharp rise in Department I output associated with transfer systems is then discernible. Each generation of Fordist capital goods also embodied increasingly sophisticated systems of self-regulation. Coombs cites, at the most basic, mechanical sensing of product entry and automated activation. Walker is more expansive: he notes the increasing imbrication of transfer systems (powered by small electric motors) within transformation machinery itself.

The development of this *Hard Automation*, which is largely task-specific and relatively inflexible, commences historically very rapidly from the onset of secondary mechanisation itself. As Hirschhorn observes, many of the technical changes that enabled Hard Automation came through from the development of primitive feedback mechanisms in a chemical industry that had moved very recently from batch processing to continuous flow (Hirschhorn 1984:41ff). These mechanisms were rapidly generalised over the mid-Century. Thus such automation already comprised around 30% by value of secondary mechanisation output at the time of the 1947 U.S. Census.

Finally, a new species of capital good is identified by Coombs as being associated with *tertiary mechanisation* in the post-war period. The technical aspects to this phase are: the increasing use of computer control devices leading towards computer integrated manufacturing; the development of robotics; and the associated attempts to incorporate advanced machine sensory and self-correction devices.

Coombs' findings are partly reproduced below:

THE HISTORICAL TREND IN COMPOSITION OF CAPITAL GOODS OUTPUT

The United States 1947-1972: percentages of total output by value

CLASS OF CAPITAL GOOD	YEAR					
	1947	1954	1958	1963	1967	1972
<i>A. Mechanical Handling</i>	3.6	2.8	5.8	5.9	5.9	6.1
<i>B. Continuous flow</i>	6.6	7.1	6.9	7.2	7.3	6.9
<i>C. Hard automation</i>	0.6	0.8	0.6	1.7	2.2	2.4
<i>D. Control</i>	3.4	4.2	4.2	13.9	14.8	16.2
<i>(A+B+C+D) AS % TOTAL</i>	14.2	14.9	17.5	28.7	30.2	31.6

Notes: '(A+B+C)' sum to give totals for secondary mechanisation: 'D' represents tertiary mechanisation.

Britain 1954-1979: percentages of total output by value

CLASS OF CAPITAL GOOD	YEAR						
	1954	1958	1963	1968	1972	1975	1979
<i>A. Mechanical Handling</i>	2.9	3.3	5.1	5.8	6.9	8.1	8.4
<i>B. Continuous flow</i>	10.5	10.1	8.5	7.6	7.8	7.6	7.0
<i>C. Hard automation</i>	1.8	1.9	2.5	2.7	2.6	2.6	2.8
<i>D. Control</i>	0.7	1.6	4.1	7.2	14.0	11.4	14.1
<i>(A+B+C+D) AS % TOTAL</i>	15.9	16.9	20.2	23.3	31.3	29.7	33.3

Source: Coombs 1984:686-7

Coombs contends, moreover, that investment in primary mechanisation in the post-1945 period was increasingly conditional on (and therefore subordinated to) secondary mechanisation.

There are major difficulties with the data as presented. For example, the share of machines produced does not directly imply economic significance in use. Certain machines (or integrated machine systems) tend to catalyse a more thoroughgoing restructuring in production practices, or even in the temporal rhythm of a wider contracting network. In other words, this approach understates the conjoint impact of the real appropriation and property connections, a factor of some significance in the assembly industries.

There are also specific problems in terms of relative price movements between different types of mechanisms. Over the post-1945 period, the cost of electronic metering and control devices rose relative to the sensing and activation mechanisms of capital equipment. This has the effect of increasing the relative share of expenditure *pro rata* given over to control equipment. From the reliable batch production of microprocessors since the mid-1960s and the shift to digital processing, that trend has been reversed.

Furthermore, the period since the 1970s has seen a significant internationalising of capital goods production (with the German and latterly, Japanese economies assuming remarkable ascendancy in machine tools and many other key sub-markets).

There has been a commensurate and rapid weakening in both the British and U.S. capacities, especially in advanced machine tools. To the extent that purchasing of more sophisticated branches of control machinery will then be differentially understated from the later Census figures, then the growth in expenditure on tertiary mechanisation will also be underestimated.

These figures are nonetheless quite remarkable. They indicate, after a slow start, a dramatic shift in the direction of equipping and in the target of mechanisation towards transfer-related, and then control technologies, and away from the work-station itself. This is literally the historical process of embodying Fordism in the infrastructure of the real appropriation connection. For Coombs, the durable nature of the boom over these years can be at least partly related to the sustained impetus given to Department I production from the simultaneous expansion of capital goods associated with both secondary and tertiary mechanisation.

‘This overlapping of two sets of hardware diffusion processes and their interconnection is the real strength of the capital goods industry expansion that characterises the upswing’ (Coombs 1984:695).

Yet, the relative price of capital goods compared to consumer goods rose by 1% per annum over the 1960s and early-1970s (Glyn [1990]; also Lipietz [1986]). This differential is explicable in terms of the rapid growth rates achieved in much of Department II over the same period.

It would perhaps be appropriate now to consider some of the qualitative evidence relating to this period of maturation. The impact of Fordism as the first developed form of modern industry was mediated through key sectors and the growth of associated Development Blocks: vehicles production and consumer durables in particular set the pace for productive efficiency. As has already been noted, there were, and there remain, sectors and niches in which the new methods were of little commercial relevance (uneven development). As the lessons of Ford working spread, moreover, so rapid innovation enhanced and altered the formidable value extractive capability of mechanised production.

The experience of General Motors (G.M.) in bending Fordist mechanisation to its reading of market conditions has already been adverted in Chapter 2. With the increasing reliability of output from engineering contractors (itself a partial product of the assemblers' much tighter grip on quality standards and delivery times), G.M. was able to subcontract on an extensive scale. The flexibility that this yielded was accentuated by the decision to deploy 'semi-special' machine tools, which could be retooled to meet limited changes in output specification (Tolliday & Zeitlin 1986). These adaptations enabled G.M. to launch and maintain an integrated range of cars targeted at different classes of purchasers- a profitable market segmentation that Ford was long unable (and unwilling) to replicate.

Over the 1930s, in the face of weakening demand, G.M. further boosted part interchangeability. This was achieved by centralising design and '...styling variants around a limited number of basic interior platforms and body-shells, with distinctive "skins" placed on each' (Tolliday & Zeitlin 1986:6). In short, cosmetic product change (*kitsch*) assumed strategic ascendancy at G.M. and then at Ford and Chrysler.

Tolliday & Zeitlin also trace the halting development of Fordist techniques in the western European economy. Here, the heterogeneity of the national car markets permitted only limited adoption of mass production systems until the 1970s. Even the U.S. corporations' transplant operations had to be adapted, as the experience of Ford in Britain strikingly illustrates. Local manufacturers, including Citroën and Fiat, were courting commercial failure in their determination to replicate the production conditions of Ford. The relative immaturity in European development of management functions (including those classically associated with

scientific management) gave rise to quality and scheduling problems. Further, European labour traditions and practices were so radically different to those of the United States that Ford's relentless drive to soldier labour power and to construct new reward systems was simply inappropriate: piecework payment continued to be important in European labour relations.

These difficulties were compounded by the chronic lack of a unified market-place. Country-to-country distinctions forced manufacturers to continue to carry product ranges that were too wide to permit mass production on the classic Fordist model. These blockages certainly did not stop the likes of Renault, Agnelli *et al* from repeatedly trying to implant Fordist methods in this infertile soil and thus steering perilously close to 'malinvestment' (Dahmen) in their dogged indifference to market conditions: but the adaptive forms of for example, Austin and Morris were altogether more commercially successful in the interwar period. Thus from the outset, Fordism was adapted to geographical idiosyncrasy and to product market variability: it was, as has been widely noted, a strategy led by mass marketing (*inter alia* Elam [1990] Tolliday & Zeitlin [1986]).

There are at least two ways of viewing these developments. One interpretation holds that these cultural variations on a 'pure' Fordist model actually vitiate the concept of a Fordist epoch in principle. This is the perspective adopted by Williams *et al* in their cogent polemic against the flexible specialisation thesis of Piore & Sabel. They contend:

** that the mass production principle as developed by Ford had very limited applicability beyond its birthplace. The subsequent development of mass production methods, led by the imperatives of product differentiation and dispersal of production and risk, reflect this historical specificity.*

** that mass production is of commercial relevance to only a confined (if 'substantial') group of ('assembly') industries (Williams et al 1987:420-1).*

There is substance in their claim that mechanised assembly line working was uniquely suited to the production of 'complex consumer durables'. In this category they identify cars, electrical goods and electronics. The inclusion of electronics puts their narrow definition under immediate strain, as they concede, since it clearly permeates the output of both consumer and producer goods. Yet in this interpretation, Fordist practices left at least two major areas of the manufacturing economy untouched: the continuous flow industries, classically chemicals, materials processing (steel *et cetera*) and food production; and 'simpler consumer goods', including clothing and furniture.

A survey of British production methods, undertaken by New and Myers in the mid-1980s, is cited in support of this proposition of a narrow relevance. This found that ‘...31% of plants in the sample used assembly lines and only half of those were mechanically paced’ (Williams *et al* 1987:421). There is also the evidence presented by Littler in 1985 suggesting that only 0.7 million workers in Britain laboured directly on the Line, and 1.4 million people in factories of mass production, out of a working population of 20.4 millions (Littler cited Sayer 1986).

What is one to make of this argument? As has already been noted, the importance of large plants, wherein scientific management and Fordism were most systematically applied, in accelerating labour times goes far wider than their immediate commercial significance might suggest. The lateral and vertical networks that emanate from the large plant/firm sector continually press speedup and rationalisation on whole sub-sectors of the economy (*via* the property connection). In automotives and white goods, this impetus profoundly shaped the development of the engineering industries as a whole.

Even if one accepts that *mass production* had limited sectoral applicability, Fordist reorganisation of the real appropriation connection went far beyond this. It is worth recalling Glyn’s observation on this.

‘It is true that the assembly line (applicable only to a small proportion of manufacturing) is too narrow an image for the principles of the Fordist system of production; Taylorist splitting up of tasks plus mechanization can and has been applied much more widely’ (Glyn 1990:n.4).

Glyn is generally unsympathetic to arguments for a Fordist epoch, but his observation is absolutely consistent with the approach adopted here. The productivity successes of the core Fordist sectors in the post-1945 period lent them an exemplary status that other allied industries were only too willing to follow. There was thus an intertwining of contractual linkage and ideology in for example the relationship between U.S. automotives and steel or glass which shaped the latter’s development to a high degree. Such industries emulated Fordism in the evolution of collective bargaining, job definition, production planning and task allocation- the classic freight of scientific management (Scherrer 1991). Analogous trends can be found, to greater or lesser measure, in parts of agriculture and in industrialised building where sequencing and/or parts standardisation were much in evidence.

Another way of looking at this is to focus on the spread of the labour processes typically associated with Fordist industry. Doray reports the results of a large scale survey of work practices undertaken in France in 1978 by Molinié and Volkoff that is indicative of the extent of routinised labour. They found that 4.1% of the total labour force was employed on assembly lines. Occupationally, this accounted for 13.4% of semi-skilled and 8.6% of unskilled workers, engaged primarily (as Williams *et al* suggest) in Department II production. A further question sought to register the extent to which labour was routinised. Here, some 23.9% of skilled workers, 44.2% of semi-skilled, and 39.3% of unskilled workers undertook labour that involved 'repeating the same set of movements or operations'. This equates to 16.5% of the working population and still understates the magnitude of routinised labour.

Clearly, many routinised labours, in construction for example, have only marginally been subject to the attentions of modern industry: the two phenomena are evidently not coextensive. There is a correspondence, however, that suggests that the ramifications of Fordism extend a long way beyond the mechanised line itself into the working lives of a significant proportion of the labour force as a whole.

The fulfilment of the Taylorite promise of optimisation, with mechanisation targeted at the breakpoints in the process of production (initially, the transfer systems), is precisely, historically, where the Ford model came from, as was noted in Chapter 2. Coombs' work suggested a mutuality and then an increasing subordination of transformation site-related investment to the strategic acquisition of transmission and routine assembly equipment. This colinearity between primary and secondary mechanisation in intensive accumulation subsumes both scientific management and the *Ford way* in a single, increasingly integrated framework. The image of a *technological web* (Coombs) is not inappropriate as a descriptor of the real appropriation connection of the Fordist epoch. The narrow definition offered by Williams *et al* misrepresents that history.

The variability of the Fordist organisation of production at both the product market and international levels is also amenable to a different interpretation. The technical triumph of Fordism was that it succeeded in constructing a machine economy that was at last adequate to the task of managing the agglomerations of workers that were the product of the transitional manufacturing period. This is the rupture with the anthropic principle that heralds a new flexibility in configuring the productive forces and the growth in the phenomenon of the collective worker. Much has been made of the increasing structural rigidity of the Fordist Development Block, not least by Regulation School theorists as a central plank in their explanation of the

general slowdown in accumulation since the 1960s. In the hands of such authors as Robin Murray, this proposition can assume an incontestable status. One is thus informed that:

‘(t)he central fact of the present era of capitalism is that Fordist production (mass production of standardised goods, using specially designed machinery, production lines, and a semi-skilled workforce)- began to run out of steam in the 1960s’ (Murray 1985:29).

The adaptive mutations in social organisation and technical capacity that accompany its promulgation suggest rather the opposite: a tremendous developmental charge. The very rapid improvement in quality of capital goods, coupled with a continued thrust to product differentiation, are not easily reconciled with Murray’s unsubstantiated characterisation of Fordism as ‘specialised machinery producing standardised products’.

‘Use it or lose it’- the utilisation problem:

The reasons for the sharp deceleration in growth rates from 1973 are extremely complex. The hypothesis, often repeated in the literature of the Regulation School, that there was some absolute exhaustion in the capacity of the Fordist productive base to deliver increasing rates of surplus value, is controversial: this is a contention that will be analysed at some length later in this Chapter. To attempt to link this supposed phenomenon directly with changes in profitability and investment associated with the slowdown in the 1970s is even more hazardous. Glyn’s (1990) statistical analysis is acute on this issue. He suggests:

- * *that a slowdown in labour productivity growth rates (peak on peak) is evident for the late-1960s and/or early-1970s for most of the A.C.C.s, though there are interesting exceptions, notably Britain.*
- * *that the sectoral level data reveal a slowdown that has its roots most clearly in non-manufacturing sectors- notably construction, but also (in West Germany) in chemicals and metallurgy: clearly, sectors that had not then been intensively Fordised.*
- * *that productivity levels in the manufacturing sector of European economies and of Japan still lagged between 50-66% behind the United States’ frontier in the late-1960s. There was, in short, significant remaining potential for ‘catching up’.*

** that the trend in the ratio of output:capital in manufacturing in particular, was generally downward over this period, especially in France. The Regulation School, Glyn suggests, would attribute this effect basically to systemic blockages in the Fordist organisation of the productive forces. Glyn's analysis offers little support to this thesis. He finds that most of the slowdown is attributable to a falling away of utilisation levels, a symptom in turn of macroeconomic problems, and of an accelerating reduction in standard worktimes (excepting the United States).*

These macroeconomic difficulties compounded the basic utilisation problem. There was then a compounding general rise in distribution costs associated with inventory-building and storage facilities.

Glyn concludes that 'the social problems of securing work intensity' are 'more plausible candidates' for causing a recession in animal spirits and thus the slowdown, than any intrinsic technical constraints associated with Fordist methods of production. The *blue-collar blues* of the late-1960s were manifest in rising absenteeism rates, increasing class conflict at the workplace and in a steady degeneration in output quality. Many of the labour control devices of Fordism were then turned back on management at this time in blocking productivity increase.

From the Regulation School itself, Lipietz (1986) confirms the fall in output:capital ratios. Interestingly, he observes that the post-War rise in technical composition of capital in France would have been much steeper were it not for the extension in utilisation of capital achieved through multiple shift working. Between 1957 and 1963, the volume growth in the fixed stock of capital was apparently 5.5% per annum. This figure rises steeply to 9.7% when the effects of increasing shift working are discounted. This trend to increased shiftwork continued thereafter, but at a reduced rate and with diminishing efficacy. Thus between 1963-1970, the contribution of increases in shiftworking to holding up the output:capital ratio is estimated at 0.6% p.a. and at 1.2% p.a. over the period 1970-74.

Intensive utilisation of highly mechanised plant is vital to accelerated depreciation. Threats to such working can come from a number of quarters. Ford's vulnerability to I.W.W. agitation has already been noted. Workers rapidly came to the same recognition. As early as 1936 and the industrial action of a relatively small number of key automotive workers in the United States, the interdependence of Fordist production had been turned against capital by a class that was learning the structural regularities of the new epoch. If large plants were particularly susceptible to industrial action, which they were, then the costs of that action were commensurately high.

As the high levels of growth post-1945 pressured the reserve army of labour and emboldened greater industrial conflict at the metropolitan centre, the temptation to explore plant relocation to the periphery of the A.C.C.s grew. Yet here, specific problems were often encountered which have a ring of historical familiarity to them. Oberhauser (1987) reports the difficulties encountered by Citroën when it relocated plant to Brittany in the early-1960s. The 'hard working, relatively docile', non-unionised *paysans ouvriers* that constituted 80% of the workforce in 1961:

'failed to adapt to assembly line production. During Citroën's first year of operation in Brittany, one third of the workforce had to be replaced. The adjustment proved difficult for peasant farmers who were used to independent work and the outdoor activity associated with agricultural production' (Oberhauser 1987:451).

This is a clear reminder of the continuing relevance of temporal non-correspondence at the periphery, whereat the shock of proletarianisation still awaits. These peasants were fundamentally still task orientated in a social formation that for long retained an unusual degree of structural heterogeneity. The language of Citroën management is, though, indicative. The Company, in common with many other large firms, had been persuaded, not least by the French State, to explore a peripheralisation option. The attractions of low wages and a greenfield site are manifold, as successive waves of peripheralisation have illustrated (most recently in western Europe with the identification of Iberia as a production base by German and U.S. auto-assemblers in the context of the Single European Market). The option is, though, not a simple one: the problems of labour integration and staff retention being an important manifestation of this. The so-called *Southern Strategy* of U.S. car producers is somewhat distinct insofar as it utilises the desperation of the *discouraged worker* who is already proletarianised, rather than bringing new cohorts into the labour force.

Crucially in the Citroën case, there was never any question of restructuring plant to accord with biographical development. The peasants must adapt to the machine...

In other instances, mechanisation failed to disrupt the old handicraft/artisan particularism. Machines were introduced too hesitantly in particular sectors or locations to pose serious challenges to the pre-given structure of skills; and the competitive pressures on firms were too weak to force more determined strategies.

The macroeconomic importance of worktimes under Fordism is evident from the studies of Glyn and Lipietz cited above. This is an issue with a fascinating history of its own, and one with direct implications for the structure of biographies. It is now appropriate to consider this, alongside the other sharp lines of biographical change over the Fordist epoch, in rather more detail.

Fordism & Temporal Rigidity:

A. Efficiency, output and labour times:

As observed in Chapter 2, scientific management gave strong encouragement to fatigue research. This sought to explore the relationship between the length and porosity of the working day and week and the volume and quality of output. As Nyland emphasises, this relationship is actually, in the medium term, three-way. In the twentieth century and under conditions of task plasticity-temporal rigidity, abstract labour (and much abstract activity as well) takes place against a backdrop of steadily increasing work intensity. The studies do nonetheless provide illuminating evidence on the dimensions of a generalised conflict over labour times- for so indeed it has been.

Initially, the incidence of fatigue research was sporadic. Institutional backing was forthcoming from the state and (to a lesser extent) employers only when the First and then the Second World Wars necessitated the absolute maximisation of output. In these conditions, fatigue researchers were given unprecedented access to plant records, and powers to vary work practices and durations in those factories that were decreed to participate in the study process. The research findings were impressively uniform. These were, in sum, that:

- * *a reduction in daily worktimes from twelve to ten hours increases hourly and daily output.*
- * *reducing worktime from ten hours to eight similarly raises output except for certain machine-paced labour processes.*
- * *reductions below eight hours raise hourly output but not sufficiently to compensate for output lost through reduced total hours. (This ratio, of the additional flow of output ensuing from a reduction in worktimes as against that lost over the labour time given up is termed the 'offset'.)*

More precisely, these results would vary depending on the type of labour being studied. Machine-paced labour was least variant with changes in daily work duration: autonomous labours conversely displayed greatest flexibility in terms of work intensity (Nyland 1989:48-9).

In the United States, the Ford Motor Company was well placed to take advantage of the increasingly firm evidence on offset. As Nyland (1989:142ff) notes, the Detroit plant had been the subject of a government study of the effects of introducing an eight-hour day. The 1920-22 depression had also caused Ford to reduce the workweek from six to five days: the resulting lesson of a 100% offset was not lost on the Company.

In 1926, the 5-day, 40-hour week was introduced as a new standard in Ford plants- much to the surprise and dismay of competitors. As with Fordist wages though, this measure quickly rippled through the Development Block and out to other 'rationalising' industries over the interwar period. Union pressure in for example the building trades and garments industry was also an important 'bearer' of the new, lower workweek norms. By 1928, over 400,000 workers in 270 establishments were on 5-day weeks.

The universalisation of the five day, forty hour standard came with the depression of the 1930s and the decisive intervention of the state. The National Industrial Recovery Act (N.I.R.A.) was a direct result of widespread agitation over unemployment, led by the aggressive tactics of the new Congress of Industrial Organizations union bloc from 1935. N.I.R.A., a centre-piece of the Roosevelt New Deal, encouraged employers to negotiate minima for wages and maxima for worktimes with unions, on pain of legislative decree. The new standard was permanently secured in 1938 with the passing of the Fair Labor Standards Act.

These temporal reforms were to remain the unique experience of the United States in the Interwar period. Competitor economies in Europe were not to emulate the U.S. precedent until after the Second World War. Indeed, as Pronovost indicates, evidence suggests that worktimes actually increased somewhat in the immediate post-War years. Very substantial reductions did occur, though, over the latter-1950s and 1960s (Pronovost 1989:83-4).

The forty hour workweek was not to be generally attained in the advanced capitalist bloc until as late as the 1960s: five day working is still only applicable to 66-75% of workers. The formal working hours exclude time taken in travel to and from the workplace, moreover; overtime; and abstract labour undertaken at home. With these secondary acts added in, the 'amplitude' of the working day opens up again to approximately nine hours on average (Pronovost 1989:49-50).

This was hardly the terminus of worktime reduction. Against the backdrop of a secular rise in work intensity, the emphasis in fatigue study shifted to the structure of the working week and year. Here, issues of rest and recuperation assume priority. On attainment of the eight-hour workday, ‘...short breaks during the day and reductions in the length of the working week have generally proven more effective modifications for attaining a high degree of offset’ (Nyland 1989:50). Similarly, once the five-day week becomes established, increases in paid holiday entitlements⁷ serve as the most frequently utilised means for re-establishing sustainable levels of energy expenditure against the backdrop of continuing densification.

Pronovost also gives a comprehensive estimate of the legal working maxima and customary weekly worktimes for the Advanced Capitalist and the (then) Comecon states for the mid-1980s. This is reproduced for the major capitalist economies below:

LEGAL & CUSTOMARY WORKING WEEKS: MAJOR O.E.C.D. ECONOMIES

COUNTRY	LEGAL PROVISIONS	COLLECTIVE AGREEMENTS	
		RANGE	AVERAGE
<i>Belgium</i>	40	36-39	
<i>France</i>	39	35-39	39.05 ^A
			38.85 ^B
<i>West Germany</i>	48	38-40	39.25
<i>Italy</i>	48	36-40	
<i>Japan</i>	46	40-48	41.75
<i>Netherlands</i>	48	36-40	38
<i>Spain</i>	40	38-40	
<i>Sweden</i>	40	35-40	
<i>United Kingdom</i>		35-40	39.12 ^A
			37.07 ^B
<i>United States</i>	40		

Notes: (A) manual workers (B) non-manual

Source: Pronovost 1989:51; abridged.

The history of worktime contestation is one in which state intervention and collective bargaining are decisive: hence the broad variances between legal maxima and negotiated workweeks. This politicisation of worktime issues continues to the present. Thus, the moves to establish 35-hour workweeks in engineering in key E.C. economies have been entirely led by the Unions. Nyland rightly sees this process as another example of market failure. As he observes:

‘(t)he vast majority of employers normally reduce standard schedules only as a result of national or industry-wide collective bargains which they have to obey, or as a result of the enactment of a new legal standard by the state’ (Nyland 1989:77).

In the German economy, such *contractual* reductions accounted for approximately 90% of the fall in working hours between 1960-89 (Neifer-Dichmann). The absence of such conditions conversely, as in Japanese company unionism, coupled with the underdevelopment of welfare ideologies in the state apparatus, has left Japanese workers vulnerable to intolerable working hours (Itoh 1992; MacShane 1992). These national differences can be more readily observed when one looks at longer (yearly) worktime horizons and discounts for paid holiday and other leave time. Neifer-Dichmann provides comparisons for manufacturing employment as at 1990.

WORKING WEEK & YEAR & HOLIDAY ENTITLEMENTS, SELECTED A.C.Cs

COUNTRY	AVERAGE WORKWEEK (HOURS)	WORKING DAYS OFF		AVERAGE ANNUAL WORKTIMES (HOURS)
		ANNUAL LEAVE	PUBLIC HOLIDAY	
<i>Belgium</i>	38	20	11	1,748
<i>France</i>	39	25	11	1,755
<i>Germany, F.R</i>	37.7	30	12.5	1,648
<i>Italy</i>	40	31 ^A	8	1,776
<i>Japan</i>	---	7.9	14	2,143
<i>Netherlands</i>	39	32 ^B	7	1,732
<i>Spain</i>	40	22	14	1,800
<i>United Kingdom</i>	38.8	25	8	1,769
<i>United States</i>	40	12	11	1,904

Notes: (A) includes 5 days of negotiated leave over and above formal annual leave.

(B) includes 8 days of negotiated leave over and above formal annual leave.

Source: Neifer-Dichmann 1991:512; abridged.

The anomaly of Japan is truly striking. Indeed, Itoh contends that these figures if anything *understate* the extent of difference. He identifies two amplitude effects that accentuate relative worktimes in Japan. These are:

- * *that 'service' or 'home task' activity ('over-time work often performed without record or payment') is significantly more widespread among all strata of Japanese workers than in other A.C.C.s.*

- * *that commuting times in the highly congested urban areas are greatly in excess of other European or U.S. metropolitan areas (with '[t]otal commuting time of three hours a day or more' customary) (Itoh 1992:204).*

The resulting inequalities in use-time are as stark.

'Thus, the annual total of free time for workers was 1858 hours in Japan in the middle of (the) 1980s, 426 hours (23%) less than in the US, 545 hours (29%) less than in the UK, and 838 hours (45%) less than in West Germany' (*ibidem*).

The deleterious psychological impact of such extended worktimes will be examined below. It should be emphasised, though, that the Japanese case is in many ways exceptional. Elsewhere in the A.C.C.s, the pressure to reduce formal worktimes has continued.

The shift in focus in worktime change towards the workweek and workyear over recent decades was founded on the notion that the eight hour workday was in some sense an irreducible minimum. This threshold was defended in terms of both efficient working of plant and machinery and of worker *motivation*: as Neifer-Dichmann rather directly puts it, the 'incentive to moonlight'. In this view, these alternative scheduling responses were based on the need to maintain a core mass of plant operating time.

The issue of the forty hour week is much more controversial. Nyland certainly sees permeability in existing workweek norms. He cites supporting evidence from Britain in the early 1980s showing attainable offset below that threshold. The Study, undertaken by the Policy Studies Institute, was large scale, taking in a number of industries and plant sizes and types. It found that offset was attained initially by 'closing up the pores of the working day and by speeding up the pace of work' (reduction in V through ASV_2). In some of the more ambitious firms, the workweek changes triggered a second round of (RSV-type) efficiency improvements.

The recurring emphasis is on worktime reduction acting as a stimulus to deeper change in the productive forces. The conclusions of Neifer-Dichmann's study of the effects of worktime reduction in the German Federal Republic in the post-War period seem to confirm this tendency. With every major round of worktime restructuring, the proportion of total investment targeted at rationalisation of the productive forces grew. This effect was most apparent in the metalworking industries, where the pace and intensity of worktime reduction was greatest. One signal implication of this process is of course to encourage the saving of labour-power: capital intensity grows. Her summary provides unequivocal support to the modernisation hypothesis.

'Working time reductions are indeed spurs to rationalization; this is as true today as it was in the past' (Neifer-Dichmann 1991:516).

Both the German and British results have been corroborated over recent years by a number of studies undertaken in other European economies.

If the elasticity of modern industry is beyond doubt in this regard, the limits do also have to be drawn. In many ways, Nyland understates these. First, for any given change in scheduling, there will usually follow a transitional restructuring interval before offset is attained. The customary response of capital is to raise non-standard worktimes over this period: there are a number of ways in which this can be pursued.

The evidence presented by Lipietz on France suggested that shiftworking played a major role in holding up operating ratios in the latter-1950s. In the 1960s in the German Federal Republic, reductions in worktime took place against the backdrop of near-full employment. Operating times were maintained here primarily by increasing use of overtime (Neifer-Dichmann). In the 1970s, the emphasis shifted to attempts to adjust other aspects of non-standard working time: in this, shiftworking was again pivotal. These varieties of immediate response usually add disproportionately to the wage bill and are therefore anything but unproblematical. There is moreover, evidence to suggest that the exploration of the plethora of *Alternative Work Schedules* (A.W.S.) may prove insufficient- in certain circumstances- in attaining the necessary offset.

Much of the experimentation around A.W.S. is motivated by this imperative of reinstating pre-given operating times in the cheapest manner possible in the context of falling standard worktimes. (Neifer-Dichmann's analysis of the 1990 collective bargaining round in German metalworking makes this employer strategy very plain!) The overall intent of such *time drift* is to negate the real reduction in the actual working week. This is a peculiarly modern form of

extraction of ASV_t in the context of absolute and tightening limits to worktimes. Underpinning these essentially reactive changes in scheduling is a familiar and legitimate concern: that reductions in worktimes might feed through into a falling level of utilisation of the capital stock. In Germany, worktime reductions impacted quite significantly on operating ratios for plant and machinery over the 1980s. 57% of a large sample of metalworking firms reported a reduction in extent of capital utilisation over the period 1984-89. This trend was clearly related to lower worktimes and thus illustrates the potential limits of A.W.S. as a strategy for dealing with tighter standards. Indeed, this reduction occurred at a time of 'intensive efforts to dissociate working time from operating time' (Neifer-Dichmann 1991:518).

The Confederation of British Industries has voiced its opposition to any further structuring of worktimes in a hostile commentary on the European Community's *Draft Working Time Directive*. Its objections to the new Directive, which would cover length of the workweek, shiftwork practices and Sunday working, centre on the defence of A.W.S. options. Citing the (significant) differentials in annual worktimes between the E.C., Japan and the U.S., it rather excitedly observes that:

'(a)t risk are many of the arrangements introduced in recent years to boost productivity and secure competitiveness ...(a)ll European enterprise is at risk and must beware of needlessly generating (*sic.*) an uncompetitive cost burden' (Confederation of British Industries 1992:11).

The importance of relative worktime issues is underscored in Japan, where average monthly worktimes in manufacturing *increased* by about nine hours between the mid-1970s and 1982 (Morris-Suzuki 1994). The case of Toyota is typical: in late-1991, the Company proclaimed an increase in annual working duration to 2,300 hours. In establishing European operations in England moreover, the Company '...fought hard to maintain a working hours differential, especially with the German car industry'. This differential working is 'the equivalent of five extra weeks production for English Toyota over German Ford' (MacShane 1992:27). These worktime agreements for the new plant cut directly across the local collective bargaining agreements and speak volumes for the desperation of unions and the state to reach for significant inward manufacturing investment in a degenerating British political economy.

To summarise, then, the exceptional productivity of the Fordist epoch has permitted very substantial reductions in daily, weekly and annual worktimes. Given the centrality of abstract labour in workers' biographies, this is an important development. The rapid falls achieved first in the United States and then across Europe, were eufunctional with accumulation, as the fatigue

studies clearly indicated. Yet with few exceptions, capital remained unwilling to recognise the dynamic of worktime change in anything but a reactive manner. Of course, when output:capital and labour productivity rates begin to fall, as they did generally from the 1970s, the added pressure on accumulation presented (in the short run, at least) by reductions in worktime becomes increasingly intolerable to capital.

Yet the compensatory element remains as the exploration of offset spurs structural change and the attainment of long run efficiency savings. The continuous modernisation strategy of the core German industries is available- but it is only one of a number of strategic options being pursued in the global political economy. Even in Germany, the limits on worktime reduction are sharply drawn.

B. Densification- ever-harder work:

As Nyland emphasises, there is no absolute ergonomic balance to be struck between the intensity and duration of abstract labour, simply because of the relentless trend to increasing intensity (densification) of labour; a development that shows no apparent sign whatsoever of levelling off. The studies that Nyland marshals in support of this proposition are comprehensive and, as an offset, persuasively unequivocal. Frank J. Poper's assessment of the relationship between labour times and intensity systematically reviewed 1,677 work studies over the Century: Edholm's study of British workers' energy expenditure covered all key occupational classes and appraised workers' labour intensities in relation to their overall energy intake and effort in all spheres of their lives, again over the broad sweep of the Century².

This secular increase in intensity of work is equally applicable to both physical and mental labours. Citing Edholm's conclusions concerning the development of physically demanding labours, Nyland observes that:

'(t)he evidence on the food intake and effort demands of the coal industry, for example, show that British coal miners of 1924 could not have undertaken as much physical work as miners in 1952. This was, in short, because the quantity of food consumed by miners in 1924 was so low it could not possibly have provided the energy output demanded of the miner in 1952' (Nyland 1989:58).

That energy expenditure in abstract labour has increased is a finding that can be generalised across most occupational classes. While these overall changes have little bearing on the

determination of differentials in value creation (since they are generalised and therefore *disappear* from the value creation equations), they do affect exchange-values by driving S.N.L.T.s down. These increases in labour intensities are of macroeconomic significance for the period under study. Thus Denison's study, quoted by Nyland, indicated that labour intensification was the third most important source of increase in U.S. national income per worker hour over the period 1929-57.

The symptoms of this increasing density appear in the worker in many ways, for example, in terms of high rates of work-related mental and physiological malaises. At an extreme in Japan, where intensities are relatively high, it has been estimated that '10,000 people a year die of *karoshi* or overwork' (MacShane 1992:27). A 'national defence council for victims of *karoshi* received about 2000 telephone consultations in two years from the middle of 1989' (Itoh 1992:205)- this in a culture driven by a narrow definition of work. Such figures substantially compromise enthusiastic technologicistic interpretations of Japan as a 'workers' nirvana'³.

These regional variations in intensity are indeed significant in the value creation formula on condition that there is a high level of inter-regional trade. Also of significance are recurring inter-sectoral and cyclical variations when there is a continuing tendency to enforce speedups and erode rest periods. Under such conditions, commensuration of labours can occur. It is equally apparent that there are physiological and psychological limits to the process of intensification. The ultimately intolerable nature of these cyclical variations for efficient management of production become manifest in cyclical rises in quality control problems, absenteeism and (especially in Britain over much of the 1980s), in a pronounced rise in industrial *accidents*.

Yet underlying these cyclical effects is a continuing dynamic of labour process change led by the ever-deeper application of mechanics. Such intermediation implies, for the labourer, further separation from the objects of labour, a weakening of technical control over work tempos and a transfer of aspects of skill to the phenomenon of the *collective labourer*.

C. Collectivisation and hierarchy:

Mechanical intermediation by definition has the effect of separating the worker from the object of labour. The sensual nature of many historical labour processes is ruptured, as the development of the means of production forces labour power farther and farther from direct physical action on the ultimate object. Fordism simultaneously intensifies the division of labour by increasing the detailing of tasks, especially in the areas of material transformation and assembly.

The principle of transindividual discipline underpins this process. By providing physical linkage between work-stations, the Line tangibly binds the activities of associated workers. As Palloix observed, ‘the collective worker becomes an ever greater obstacle to the freedom of manoeuvre of the individual worker’ (Palloix 1976:53). How might one best characterise this Fordist interdependence? Adler’s (1988) formulation is useful here. He types the Line as a variety of *sequential* linkage, with value being added to the object of labour in a series of iterations. This can be expanded on somewhat. Sequences are customarily linked in vectors of activity (around for example, specific sub-assemblies). The objects of labour cascade simultaneously through each vector to the assembly *gates* and then on to final assembly. Given this, it might be more accurate to type the interdependence of Fordism as *vectored sequencing*.

Vectored sequencing is, as one might expect, not the only available form of collectivisation under capitalism, and nor is it free of problems. Unevenness of throughput between vectors is, as noted in Chapter 2, a major source of slack and a continuing problem in production flow scheduling. There is moreover the noted vulnerability of the whole system to vector-based disruption. An interruption in the flow of operations at any point cascades downstream at a rapid pace: sequencing becomes sequential disruption.

There is another aspect to this. The objective homogenisation of labour (as reflected in the growth in numbers of *semi-skilled* workers) increases the scope for the formation of positional identity among workers. The community of interest in the ‘bargaining group’ (Scherrer) is objectively based in the skills and schedules of a work group. These affiliations are difficult to remove insofar as they are imbricated in job hierarchies and task specifications. It was, to recap, precisely to block the formation of just such communities that Taylor sought to individualise wage systems. Much of the writing around so-called *credentialism*, in which unions and/or employers maintain for example, anachronistic professional statuses or unnecessary trade certification or qualification rules, is also speaking to this theme of the artificial division of work and workers. When such collective identification combines with job classifications which minutely differentiate tasks and limit the range and scope of acts, then the potential for structural rigidity is indeed profound. As Scherrer notes of the U.S. steel industry in the 1960s:

‘...the detailed job classifications and the comprehensive seniority system removed from the hands of management important tools for rewarding and punishing workers. Greater work efforts could be elicited through neither individual bonuses or promotion (except to a position outside the bargaining unit, i.e. supervision)’ (Scherrer 1991:98).

Thus the formation of the collective worker does not in any sense preclude effective worker action. Indeed, in certain circumstances, the fact of transindividuality may be made to work for labour: Palloix does not register this contradiction.

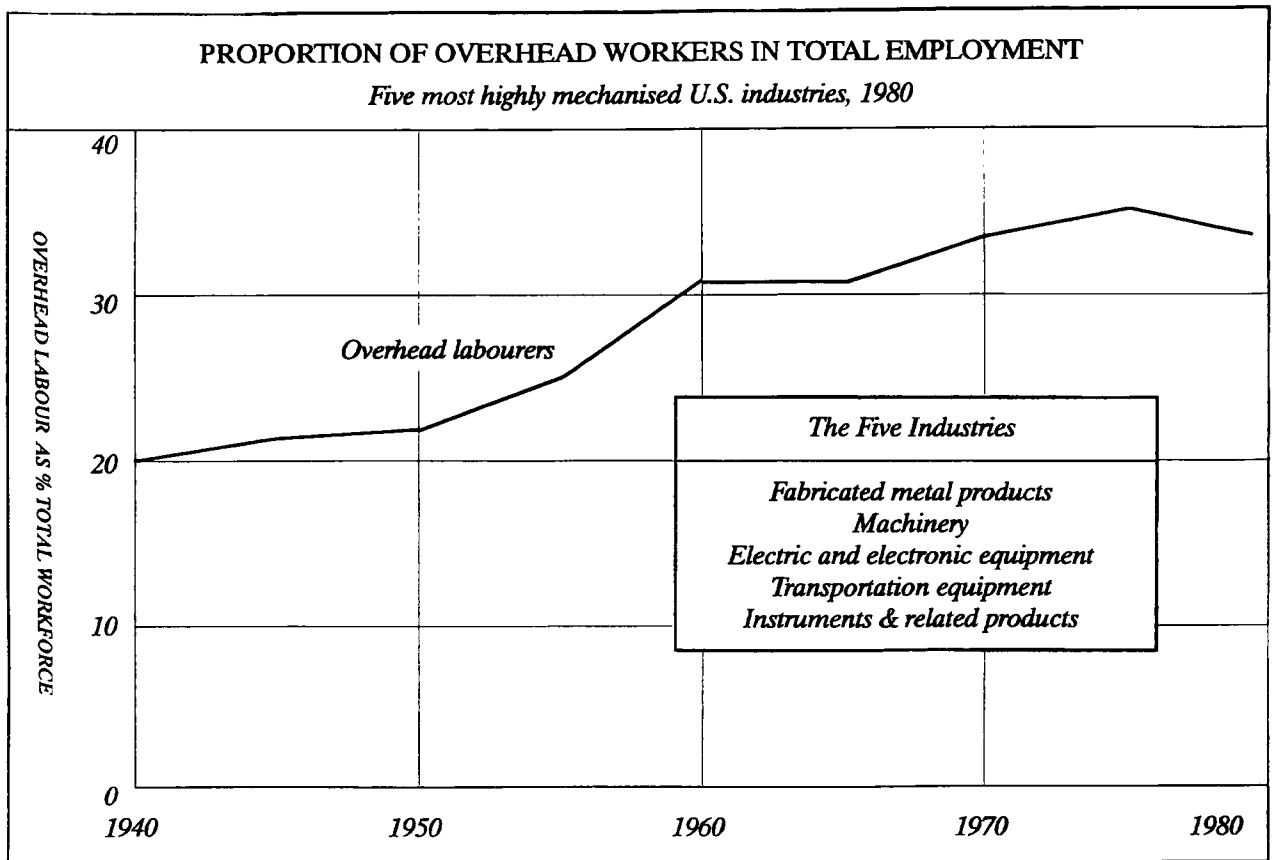
The range of motivational problems associated with the collectivities of vectored sequencing lie at the heart of the arguments put over recent years for Fordism's historical obsolescence. Idson's (1990) study provides indirect support to such hypotheses. He undertakes a detailed statistical analysis of the U.S. Quality of Employment survey data for 1977 and finds, *inter alia*, that plant size correlates positively with inflexibility in working methods and negatively with job satisfaction. Thus:

‘...larger establishments structure work in a more formal, regimented fashion, significantly reducing worker's freedom with regard to how work is done and the scheduling of hours and days’ (Idson 1990:1016).

He also found that higher average wages in large plants compensated only in part for the job dissatisfaction produced by more constricted and detailed work routines. This finding echoes quite strongly Gramsci's analysis of Ford's intensification in the expenditure of labour power, which ‘...the wages are not sufficient to recompense and make up for’ (Gramsci 1971:312). It is, of course, in the large plants that mechanised assembly line working methods have been concentrated⁴.

Such rigidities, and the associated crushing of worker creativity, underpin a contemporary search for novel and stable collectivities that could be more supportive of renewed accumulation.

Inseparable from the Fordist collectivisation of swathes of the manual labour force is the social and spatial removal of the conceptual function from the activity of execution. The withdrawal of the higher neural functions of the factory to the office and the subsequent specialisation and separation of those functions is a necessary corollary to the massification of material transformation and assembly. The trend in overhead labour in the United States typifies the general experience of the Fordist epoch⁵:



Source: Gunn 1982:88

The co-operative structure and formation of collectivities in these heterogeneous administrative and technical functions is an extremely complex matter. As a general observation, it seems fair to conclude for the Fordist epoch that individualised forms of working continued to typify managerial/technical work, while some routinisation of clerical and administrative labours was pursued.

In the latter category, many repetitive clerical transactions (especially those involving pre-programmable large volume transactions) were routinised in the post-1945 period. Indeed, the armies of (primarily female) clerical workers in large open-plan offices remains one of the enduring images of the period- analogous in its social power to the modernist portrayal of the Line at the onset of Fordism. The process is described by Guiliano using the metaphor of the industrial assembly line.

‘Work ...moves from desk to desk just as parts move from station to station along an assembly line. Each worker gets a sheaf of papers in an “in” box; his job is to perform one or two incremental steps in their processing and then to pass the paper through an “out” box to the next person’ (Giuliano 1982:131).

While the comparison with the Line is useful, there are crucial differences between the two that merit brief comment. First, the process of simplification and detailing that underpinned such routinisation (as Giuliano observes, based explicitly on the principles of scientific management) was not matched by systematic mechanisation of the work-station (the desk). The peripherals (typewriter; telephone; latterly, xerox, photocopier) were unevenly distributed and minimally integrated. Second, the possibility of mechanising the transfer of information was until recently simply unavailable. In consequence, the form of unification of labour power remained primitive: in many ways akin to the manufacturing division of labour. Residual credentialism (the illusory professional status of the [generally male minority of] clerks) and/or external soldiering prevailed. In short, the extraction of surplus value was based on a formal subsumption of labour.

Giuliano’s depiction of detailed administrative work has a strikingly anachronistic quality to it. The extent of change in this segment of the labour force has in recent years been among the most rapid and dramatic of any, a history that will be returned to below.

The development of co-operation in technical and managerial work was even more sluggish. Certainly, teamworking came to dominate all aspects of research, development, process engineering and management and general management. Yet there was little systematic innovation in work organisation. This is somewhat ironic, given that such groups came to monopolise the overall understanding of production under Fordism. These workers knew better than most the efficiency gains to be had from enforced co-operation but could not countenance such change in their own working lives. Indeed, there are instances, perhaps most pronounced in research and development activity, in which the organisation of labour power remained profoundly individualistic. The unsatisfactory nature of this evolution was only to become pressingly evident when other capitals instituted systematic programmes of compaction in overhead labour⁶.

In sum, the condition of routinisable clerical work was closely analogous to the pre-mechanical state of the manufacturing period: massification without corresponding mechanical control. All synthetic technical functions remained organised moreover, on a fundamentally artisanal basis. The overall impression of the Fordist epoch was of radically different forms of collectivity

coexisting according to hierarchy and trade. This uneven development again reflected a limited technical base in which manufacturing principles continued to dominate tracts of the economy. There is no doubt, conversely, that where detailing was an available option, as in much clerical work, the principles of scientific management were extensively utilised. The trajectory of collectivisation in mental labours seemed, with an important historic lag, to be emulating that of manual labour.

As the division of labour deepened, so the hierarchy of the firm continued (seemingly naturally) to lengthen, with anything up to fourteen discrete layers of command typifying U.S. corporations (Gunn 1982). In these structures, skill comes to assume a dual aspect. Some absolute criterion remains, which is of direct importance to the psychological development of individuals and which may be captured in Spenner's taxonomy of substantive complexity and autonomy-control. A second, uniquely modern conception also arises, one that is founded on place in hierarchy and comparative indices across work groups. This distributive notion is directly related to the rise of objectified collectivities: its pecuniary and status aspects are concretely registered in formalised seniority and progression systems, wherein claims to relative skill are ultimately decisive.

D. Skill in the Fordist epoch:

Skills are devalorising at an accelerating rate. While it is difficult to measure the extent of such change with any precision, two recent estimates of occupational mobility are at least indicative. Change ensuing from mechanisation alone has been estimated to affect significantly around 10% of the total U.S. labour force over a five-year time period (Spenner 1983). In Gallie's (1991) British study, 16% of surveyed workers had shifted 'class position' in the workplace between 1981-86 (a perhaps atypical period of rapid economic restructuring). The scale of these changes is, by any token, extraordinary. Yet gauging the implications of this rapid turnover for absolute skill levels remains, not surprisingly, difficult. Definitional problems, irreconcilable methodologies and incomplete coverage continue to bedevil the debate on skill (Spenner 1990). There has been some improvement in the empirical evidence. Both the frequency of skill studies and their occupational coverage have improved over the Century. These factors combine with the development of standard classification systems⁷ to lend somewhat greater confidence to conclusions on the direction of skill change under Fordism.

Kenneth Spenner's work remains seminal in this regard (Spenner 1979;1983). Observing the accumulating body of studies and the competing hypotheses as to the ultimate trajectory of

absolute skill change, he notes that 'no attempt has been made to judge this voluminous body of literature' (Spenner 1979:98). This was precisely the gap that Spenner intended to plug. In 1983, he systematically reviewed eleven key aggregate studies of the U.S. labour force primarily for the period from 1945-1977, including his own (Spenner 1979). These studies use a variety of methodologies ranging from aggregate population to sector sample techniques but specifically exclude case study work. They also seek to capture elements of both substantive complexity and autonomy-control (though the accent is on the former).

What was Spenner's conclusion from this careful analysis? In relation to the content of work (as opposed to compositional shift), he finds 'no evidence of monolithic content shifts in complexity in the post-World War II period' (Spenner 1983:831). In short, he concludes an 'approximate aggregate stability' in substantive complexity. This applies equally to those moving between firms and those whose work changes in a given company but who remain at their post. There are three deeper qualifications that Spenner registered which are worthy of reproduction here:

** there does seem to be stronger evidence of deskilling with respect to an autonomy-control dimension than to that of substantive complexity. Work may still require historically comparable levels of complexity, but the personal discretion over work pace, mode of task execution and other aspects of autonomous or self-directed working may have reduced. This 'raises the possibility of divergent aggregate trends in the two dimensions of skill' (Spenner 1983:836).*

** compositional changes seemed again broadly neutral in relation to both deployed measures of skill. There is a strong suggestion of shifts in industrial structure acting to cancel proletarianisation, and a prediction that such structural changes would have largely run their course by the 1980s. The inference is that compositional change will then push aggregate skills downward.*

It is worth noting here that, while there is no absolute correspondence, such compositional shifts provide the clearest evidence for demand-side skill change. (Such changes can also feed through via mechanisation strategies into intensities and work scheduling. These effects are statistically inseparable from supply-side effects such as detailing.)

** the aggregate stability cloaks significant variation between 'population groups' and within 'regions of the sample space'. This is a dynamic which case studies were particularly suited to capture (though coverage problems are a continuing handicap in this regard).*

These variations in the sample space are particularly intriguing. At the sector level, there is some evidence from the metalworking industries of a degree of *polarisation* in both aspects of skill. This polarisation seems especially sensitive to the *size of plant* dimension. The recent survey of over one thousand plants undertaken by M. Kelley and reported in Vallas (1990), found a tendency to deskill workers in large (especially multiplant) firms compared to workers in analogous occupations in smaller (often non-unionised) firms. The rigidities traditionally associated with such plants have already been noted in Idson's study: the skill rigidification is therefore not unexpected.

This size distribution effect provides an important position for advocates of post-industrialism or (more modestly), of post-Fordism. Yet the inference to be drawn from such work is double-edged, as Vallas notes.

'Although Kelley's findings provide at least partial support for notions of "flexible specialization", they also demonstrate the prevalence of rigid, centralized uses of new technologies in the commanding heights of the economy' (Vallas 1990:385).

The concept of *flexible specialisation* will be further analysed below. It should be noted, though, that such rigidities are themselves historically produced within a given organisation of the productive forces. Size itself may not be the causal factor.

The results of the numerous case studies undertaken in the post-1945 period are equivocal on the direction of skill change. Adler (1990) cites P. Flynn's 1988 review of 197 case studies undertaken between 1940 and 1985 and concludes that the incidents of deskilling are essentially localised.

Compositional (demand-related) shifts have undoubtedly been dramatic over the post-1945 period. The most dramatic signals of these are the near-universal elimination of the agricultural worker and of domestic hands (see below). The importance of the rise in overhead labour has already been noted. This process of occupational shift has been accelerated by the relatively high growth in the service industries. Thus the occupational shifts in Gallie's (1991) British study correlate closely with regional differences in economic growth and the resultant degree of

diversification of the local economic base. What are the skill implications of these structural changes in the economy?

In overall terms, the skill composition of service industry activity is, unsurprisingly, marked by a concentration of both 'service' personnel (defined as 'professionals, administrators, managers, higher technicians and non-manual supervisors') and lower non-manual workers compared with manufacturing. Correspondingly, there is a higher proportion of skilled manual workers in manufacturing. This functional *polarisation* in the service sector is much more marked in the private than in the publicly owned services. In terms of skill change, unskilled manual workers in the service sector experienced the least upgrading in both substantive complexity and responsibility of any segment of the labour force in the Study.

The differential experience of skill change among the different classes of labour power in the service industries is in Gaillie's view symptomatic of more general and accelerating inequalities over the 1980s. Thus the British evidence points overall to substantial upskilling, with the accent marginally on enhanced responsibility in work as against complexity. The degree of upskilling was *contingent on position in the skill hierarchy*, however. His category of 'non-skilled manual worker' had maintained a relatively static position in the labour force compared with all other occupational groups. For Gallie, these changes pointed to a 'polarization of skills', in which:

'...the contrast is between those in higher occupational classes that have experienced an enrichment of their skills and those in non-skilled manual work whose position has remained static' (Gallie 1991:331).

This is, one may hazard, an increasingly important contemporary variation within Spenner's *sample space*. Relativities of skill distribution as between different collectivities in the labour force come increasingly to overshadow absolute skill variation as the 'big question' (Adler) in skill development. (There is an obvious comparison to be drawn here with the marxian hypothesis of absolute versus relative pauperisation of the worker.) Vallas provides an example of the mechanism of relative skill change that helps to clarify the issues at stake.

'Even if the technical competence required in working class occupations were to increase, greater expansion of the knowledge controlled by engineers and other technologists might easily dwarf such increases in workers' skills, yielding a net reduction in the latter group's share of production knowledge and technique' (Vallas 1990:380).

It is notable that such relative effects are beyond the purview of the value creation debate, which, as with collectivisation, remains entrapped in an individualist methodological framework. Such effects clearly relate to concrete skills and not capacity, since they only become operative in the workplace (that is, after value creation has begun).

Adler (1990) is among the few commentators to have systematically sought to address such relative skill issues. His work is particularly sensitive to both the *horizontal* and *vertical* skill relativisation ensuing from forms of collective working. (The formation of collectivities requires that the concrete skill of one worker is affirmed in a horizontal relation to the skills of other members of the work-group and in many cases becomes inseparable from the competence of the unit. Vertical effects of the type that Vallas describes register relativities between different collectivities up and down a changing hierarchy.)

Adler identifies three general circumstances that may impose relative skill impoverishment:

- * *a constant/falling level of skill in one section of the labour force coinciding with a rising overall level of skill in another (the Gaillie/Vallas **polarisation** cases above).*
- * *impoverishment relative to the objective needs of capital-in-general. There are two options here. First, the branch of capital involved in training and the state education system cannot between them provide an adequate supply of appropriate capacities. Second, the private sponsorship of training (through apprenticeships, work placement and other on-the-job activities) does not produce the requisite supply or distribution of skills. Such failure is all too common in a **labour market** notorious for poaching and other forms of cheating.*
- * *rising capacities in the labour force that capital cannot productively utilise (giving rise to theories of relative **overqualification**).*

These effects will be denoted for brevity RS1, RS2 and RS3 in the following section. The distinction needs to be drawn again in the last case between the value-creating capacities of workers as a non-marketed (intrinsically personal) phenomenon and that segment of capacities that is traded (concrete skill) and that becomes abstract skill when realised in commodity exchange. One is, strictly speaking, not dealing with a relative *skill* effect in overqualification, but rather with a non-correspondence between the stock of abstract capacities and concrete skill requirements. Registering this caveat does not substantially alter Adler's overall argument, however.

None of these relative skill effects has been the subject of empirical inquiry to anything like the same degree as the more familiar absolute skill measures. Further, given the multiple problems associated with credentialism and job design/specification⁸, all such findings will remain strictly provisional. Gaillie (1991) compared formal job qualification requirements with realised qualifications of incumbents as part of his large scale British sampling and found indicative evidence of a sectoral division. In manufacturing, the technician and supervisory labours seemed to display signs of a relative shortfall in formal qualification (RS2). In the service industries, and particularly in private services, there was fairly clear evidence of a surfeit of qualification compared to stated job requirements (RS3).

When conceived as socially necessary training times, such relative over-/underqualification effects eventually produce changes in the value of labour power, manifest in re-/devalorisation of concrete skills: but the pace at which this proceeds depends very much on the institutional characteristics of specific labour markets. The key factors include the strategic centrality of type of labour to accumulation, length of labour contracts, specific S.N.T.T.s, the strength of any credentialism and unionism and the form of technical change. When coupled to demand-side considerations that capture the degree of market pressure acting on particular capitals to force realignment of relative skills, these measures combine to indicate the overhang or adjustment period.

Now consider again the interesting question of exactly who pays for these devalorisation effects. The socialisation of education clearly shifts the burden of an element of S.N.T.T.s from individual capitals to capital-in-general. Given the temptation of firms to exploit such externalities to the benefit of their own balance-sheets, it is hardly surprising to note the shift over the Century from (in the vernacular of skill study) special vocational preparation to general education demands, where the latter are (at least in Europe) extensively socialised.

In the United States on one estimate (Adler 1990), aggregate S.N.T.T.s are gauged, using a 1950 benchmark, to have risen from 10.3 school-years' equivalent in 1900 to 11.2 school-years in 1970. According to S. Dubnoff, studying the same period with a different benchmark, the balance within this rising aggregate has shifted, such that the general educational demands of work had increased, while the period of special vocational preparation had diminished (Form 1987:41).

The socialisation of an element of S.N.T.T. frees individual capitals to some extent from the burden of building their human capital and of planning its amortisation. There is little fundamentally that a specific firm can do about chronic realisation problems (and then about

ensuring the transformation of concrete into abstract skills). Yet there are measures that can be taken to ensure that concrete skills are developed in a systematic and functional manner. This is precisely what *human resource planning* was designed for. Ironically, the *mixed economy* of training and education may discourage such activity and encourage the poaching and relative underinvestment typical of RS2.

There is finally another, compounding aspect to RS2 in particular which merits brief mention. Where there is a relative paucity of concrete skills, then one is also likely to find a technically inefficient utilisation of other elements of capital compared to regimes elsewhere in which living labour is of socially adequate quality. This inadequacy causes for rising output costs and/or degradation of product, both of which will tend to undercut competitiveness. These accumulation problems will inevitably affect in turn the choice of technique. This is the classic reciprocal determination of the relations fettering the means of production. Techniques are then introduced that require relatively low quanta of concrete skills which could then induce a supply-side devalorisation. One can discern the cobweb pattern of multiple interaction, with demand- and supply-side devalorisation reinforcing each other through the vector of mechanisation. This is precisely the process that Green & Ashton (1992) describe.

‘Low skills in the present tend to breed low technology, which leads to stagnant skills in the future. Alternatively, low skills bring a lack of competitiveness and largely irreversible bankruptcies in skill-intensive industries’ (Green & Ashton 1992:295).

It is the combination of these two effects that yields cumulative decline in concrete skills. The exactly opposite circumstance may also prevail. Green & Ashton thus cite the modernisation strategy of post-1945 Germany, in which a high value-creating capacity in the labour force encourages development of highly mechanised techniques that require in turn autonomous and high-concrete skill work practices. This is though, to anticipate.

In sum, the available evidence seems to support a thesis on Fordist labour that emphasises:

** rapid reductions in worktimes, with the accent shifting from the working day to other time-periods.*

** increasing difficulties in the contemporary economy in maintaining offset even where the range of Alternative Work Schedules are imposed. These difficulties manifest at their most severe in utilisation problems and may generate an accelerated rise in capital-labour ratios.*

- * *a secular trend to intensification of working time, with important regional differences and specific forms of market failure that are deleterious to biography.*
- * *the evolution of new forms of work collectivities based on mechanical principles in a production process marked by deepening hierarchies. Uneven development also permits the co-existence of individualistic or co-operative work methods in particular in mental labours.*
- * *the sub-division of concrete skill into absolute and relative forms, with absolute skill levels approximately maintained, but with important variations within this. Relative skill effects come latterly to assume prominence.*

The Distributional Inequity:

The aggregate nature of these observations on biographical change to this point needs to be stressed. Such aggregation by its nature elides a continuing internal differentiation (and division) of the labour force that mitigates the trend to homogenisation associated with collectivisation.

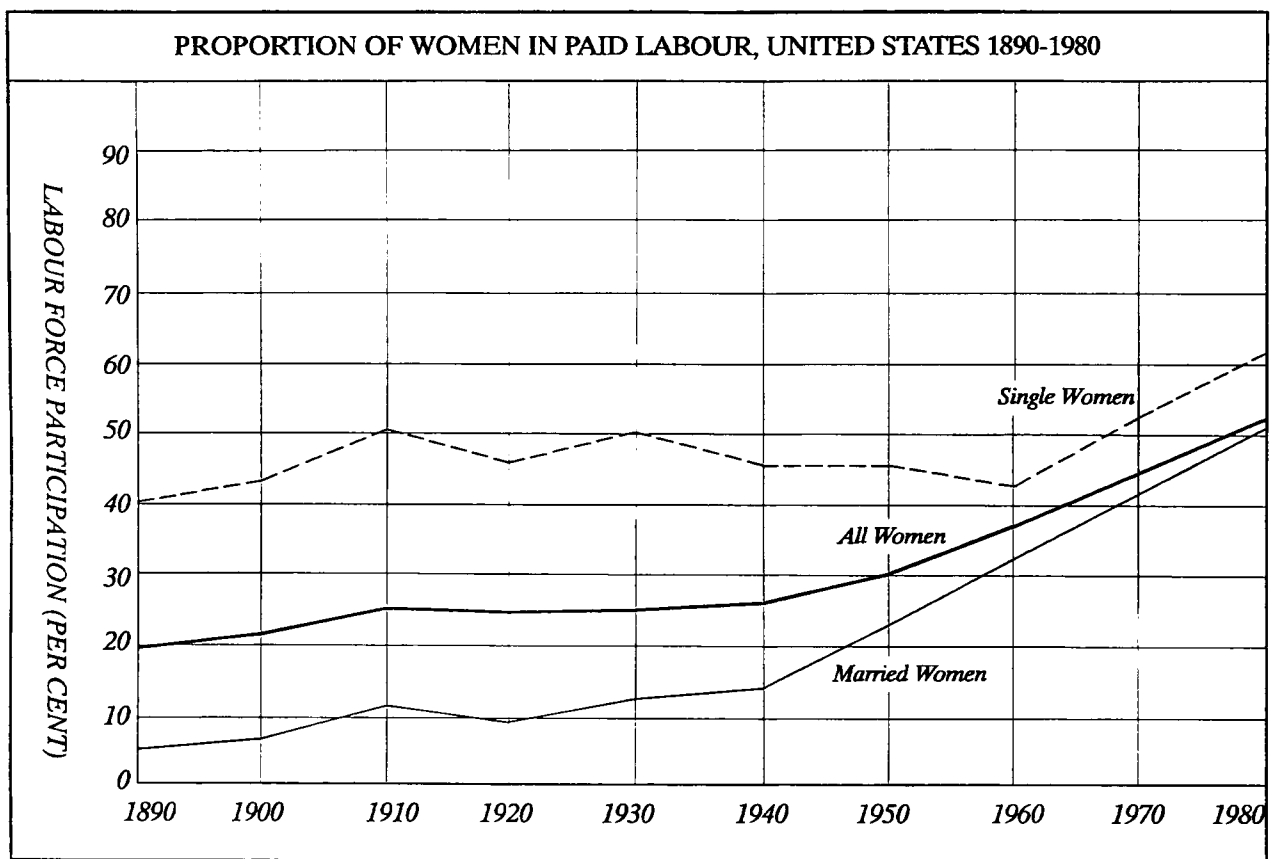
This differentiation impacts in exceedingly complex ways and, moreover, through distinct mechanisms for each of the populations of separated workers in the labour force. There are distinct processes at work discriminating disability, race, age, sexuality and gender. This process of differentiation runs, so obviously far beyond any relevant physiological or cultural base and is *actively* created, replicated and, at specific points, intensified, that a defence of the *status quo* is rare indeed. In the context of this Essay, the key dimensions of differentiation include:

- * *inequality in the distribution of working time and variability in the dynamic of worktime change.*
- * *radical differences in working conditions.*
- * *discrimination in intensities of work.*
- * *divergences in the development and valorisation of skills.*

These distributional inequalities mediate access to all of the key resources that form abstract capacities, which is of course the decisive category in the model of personality development proposed by Sève.

The complexity of differentiation systems and the limitations of space permit only the most perfunctory treatment here of the moral and social issues that distributional inequity raises. What follows is an attempt merely to register the *extent* of difference, as opposed to the much more difficult task of providing a theoretical explanation for labour force segmentation. Even this modest objective will be further restricted to but one species of segmentation-gender. This focus reflects the ubiquity of gender issues in the political economy of the advanced nations and the general importance of this division in structuring the economy of time of the domicile.

Participation rates for women have climbed over a century from 1890 in the most advanced economies. Commensurate with this rise has gone a rapid decline in the numbers of women employed in paid household labour (domestic servants *et cetera*)⁹. This incursion is, as Walby notes, secular, proving remarkably resistant to cyclical variations in employment levels. One is dealing, in short, with ‘...a long-term restructuring of the gender composition of the workforce’ (Walby 1989:140). This secular quality is displayed in terms of labour force participation rates for women in the Fordist epoch in the United States.



Source: Wallach Scott 1982:146

The rapid entry of women into socialised labour was founded on significant sectoral changes in the advanced economies. These shifts generated in turn profound occupational movement on the back of which women's entry was effected. Perhaps the decisive occupational shift, commencing in the 1890s, was the rise of the female office worker.

Yet the incursion of women into the labour force remains circumscribed within sharply defined occupational limits. Thus in the U.S. in 1980, women constituted near-100% of all workers in seven key occupations, including telephone operators, secretarial work, practical nursing and sewing and stitching. The converse is a virtual absence of women from most engineering occupations and very low participation in nearly all management functions (Wallach Scott [1982]). Similar patterns are evident in Britain.

Clerical work remains universally a central occupational activity for women. Thus Walby and P. Bagguley found in a 1988 study that an extraordinary 39% of all employed women in Britain were classed as being in the 'junior, non-manual category, which typically means clerical work' (Walby 1989:133). Conversely, manufacturing employs only around 20% of the female labour force. Occupational limitation on this scale is a decisive indicator of the existence of systematic and effective segregation mechanisms. It is in this material sense of deep polarisation that one may refer to *feminised* occupations.

The early feminisation of clerical work was accompanied by processes that have come to typify much of the recent history of women's participation in the labour force. Specifically, the woman in the office endured wages that were on average around one half of those paid to male equivalents. There was a corresponding reaction among male workers that the employment of women was dragging down both average wages and occupational status. Such attitudes and wage practices remain typical (Wallach Scott [1982]). The fears of the male clerks were not unfounded. The generally lower wages of women for like work (based on a different definition of subsistence) indeed enables employers to use the Babbage Principle to advantage to weaken (male) credentialism and skill monopolies (MacKenzie 1984:197ff).

Overall, women's wages continue to lag appreciably, at between two-thirds and three-quarters of their male equivalents'. There is no basis, moreover, in the content of work, for such wage differences. The relation between wages and skill has been recently subjected to detailed critical analysis. The conclusion is, at one level, unsurprising: that wage differentials correlate directly with the level of feminisation of a given occupation. Steinberg concludes of this work that:

‘...even when controlling for skill levels, the percentage of females in an occupation accounts for a significant portion of wage differentials by gender, partly because skills differentially found in historically female work are not compensated’ (Steinberg 1990:452).

The subject of skill will be returned to below. Yet if there are great wage differentials, there are equally significant variations in general working conditions by gender.

In manufacturing, the signal underrepresentation of women continues. The historical roots of the exclusion of women from (particularly) the Fordist centres are analysed in May (1982). The gendering of the Fordman was in part a reflection of a broader movement pushing for a specific definition of the *Family Wage*. Gendering also reflected more or less consciously articulated perspectives on the physical requirements of manufacturing labour and the limitations of female labour. The alliances around the Family Wage were particularly complex, taking in progressive elements in the labour movement which focused on issues of poverty and employment security. At the other extreme were those who, like Ford himself, were persuaded from a range of ideological and religious positions of the merit of the male breadwinner.

Women have subsequently achieved a higher degree of penetration of the manufacturing workforce, but remain qualitatively sharply differentiated from their male counterparts. In the first instance, women are peculiarly susceptible to all forms of heightened labour discipline. The Molinié & Volkoff survey found that women were much more likely than men to be employed in the direct process of production and therefore to experience extreme routinisation. Males were conversely, relatively concentrated in overhead processes (inspection and maintenance; materials and production control; and plant engineering) with significant status advantages. Women were also differentially subject to limitations on movement, behaviour and time and frequently worked in environments of lower quality than those experienced by men (Doray 1988:157-8).

Jenson similarly notes the dynamic of segregation working at the plant level. Thus, ‘...even in the same workplaces women and men work at different jobs and often in separate locations. In particular’, she continues, ‘women are *increasingly* concentrated in jobs classified as unskilled or semi-skilled, which are the classic ones of mass production’ (Jenson 1989:145, emphasis added).

The evidence from clerical work on conditions of labour is far more mixed, not least because of the heterogeneity of labours in this occupational class. This also makes generalisation difficult.

Walby (1989) suggests that many clerical workers enjoy conditions of labour that are superior to (largely male) production workers in terms of job security, worktimes, time regulation methods (a general absence of clocking in procedures), good sickness coverage and a quality working environment. There are increasingly firm indications, conversely, of specific psychophysical stress arising from the sedentary nature of much clerical work, as well as the new hazards presented by for example, prolonged exposure to ionising office equipment. (It is well known that such effects were only publicised when male workers in high-status journalist work were subjected to them.)

The degree of autonomy-control in clerical work is also a complex matter, but the overall impression is of a generally passive relation to the determination of work content and pace. This lack of control is especially apparent where women act to service the work of (typically male) professionals. Dense computerisation of clerical work is also widely held to portend increasing routinisation (Steinberg 1990).

In broad terms, the conditions of work for women bifurcate along a manufacturing/service divide. Given that 81% of the female labour force worked in services in 1986 in Britain, the balance is, at this level at least, favourably disposed to women workers. There is another dimension to this, however, which cannot be overlooked. Part-time workers constituted 42% of the female labour force, compared to only 7% of the male population, and their relative significance grew sharply over the 1980s (Walby 1989). Female homeworking also increased sharply over the same period. The employment rights of these workers, especially in Britain, are minimal. Differentiation applies with a vengeance to these workers.

The quantum of skill in occupations primarily undertaken by women workers has, as is well known, been historically underestimated in both theoretical and practical terms. For example, following severe criticism, the U.S. D.O.T. job classifications were comprehensively revised for the fourth edition, with the result that the substantive complexity of male- and female-dominated occupations significantly converged (Attewell 1990). Steinberg summarises recent comparative studies of female and male skill which, importantly, utilises the D.O.T. classifications to this end. The findings, based on a fivefold reclassification of the D.O.T. categories, indicate that:

** both cognitive and educational requirements are broadly comparable.*

** similar levels of visual complexity are demanded from women and men, but different qualities of visual skill characterise feminised occupations.*

** greater manual effort and dexterity is required in work undertaken by men.*

** women's work necessitated 'more social and verbal skills'.*

Women's work is, then, different in terms of skill requirements, but there is overall comparability in S.N.T.Ts and general educational attainment levels are now also evenly distributed by gender (Steinberg 1990:452-3).

Steinberg also notes the complex bias in job evaluation systems. Here, certain technical capacities in for example, computer-based clerical work are simply not registered (are rendered *invisible*) in job evaluation through extreme fragmentation. Highly visible 'emotional skills' are, conversely, poorly valued and compensated. These are of course, precisely those areas of capacities in which women have become specialised.

There are moreover a swathe of capacities that are learned in domestic labour and which are incorporated wholesale into abstract labour without due recognition or compensation. Case studies such as that of the skills of clothing workers undertaken by Ruth Cowan illustrate this process in vivid detail (MacKenzie 1984). There are at least two aspects to this sequestration that are relevant here:

** as already noted, the setting of the price of labour is, more than with most markets, overdetermined by political and ideological factors, such that price and value rarely empirically converge. The systematic (gendered) nature of these differentials can be manipulated to undercut or reinforce credentialism, as with the clerks. This is a form of devalorisation of labour power that goes under the rubric of simplification: the tactical replacement of simpler for more complex labour power and the utilisation of that process as a more general weapon in the war of position between capital and labour (see for example, Gould [1981]). Trading on domestic capacities is an important expression of simplification.*

** there is no formal training time to domestic labour: as such, the transferable capacities that are learned therein do not enter the equation of value itself (based, however imperfectly, on S.N.T.Ts). This underscores the importance of the distinction drawn by Burkitt (1991) between abstract activity and abstract labour. It also reflects a long-standing parasitism of capital on the domestic economy.*

This sequestration is hardly confined to the textile industry: welfare services, cleaning, waiting on others and public relations work have also been cited in this regard¹⁰. Yet such thefts are of reducing economic significance, as proletarianisation generalises across working women.

What is the dynamic of skill change? Gallie's (1991) findings for 1980s Britain are suggestive. The workers' declared statement of the skill content of their jobs varied radically by gender. Women were relatively overrepresented in non-skilled manual labour and in the lower echelons in non-manual activities. 57% of women respondents estimated their work as skilled compared to 79% of men. In addition, women were significantly less likely to have received vocational training in their current posts (63% receiving training as against 44% of men). Even among workers with the same jobs, gender asymmetries were pronounced. This is reflected in qualification level, allocation of spending on training and induction periods¹¹. His conclusion is unequivocal, that, '...even when similarly classified, women are in fact in very different types of work from men' (Gallie 1991:343).

When the skill changes of the 1980s are considered, moreover, a greater proportion of men had enjoyed upskilling than women (56% compared to 45%); and similar differentials were maintained in relation to increases in job responsibility (66% against 50%). These differences were more marked the greater the gender segregation of a given occupation. In broad terms, the direction of skill change builds on extant inequalities.

In sum, gender remains one of the key dimensions in a more general process of skill polarisation. The asymmetrical distribution of women by function and sector, combined with the continuing availability of zero-priced capacities and prevalence of low wages makes simplification and devalorisation a continuing and tempting tactical option for capital: conversely, a progressive element to compositional change renders women workers' participation both permanent and increasingly central to accumulation.

In relation to worktimes, the increasing differentiation of work schedules associated with the recent wider adoption of A.W.S. strategies has affected women workers in idiosyncratic ways, as the British employment practices survey undertaken by Horrell & Rubery (1991) indicates. The Survey covered 29 establishments in a broad spread of sectors which were selected for their intensive utilisation of alternative working schedules. As has already been noted, A.W.S. can take a number of forms, from overtime and various kinds of shiftworking to part time contracts and annualised working hours.

Horrell & Rubery found that the type of flexibility imbricated in working practices was extremely gender-sensitive. Men were thus much more likely than women to enjoy overtime or premium wage payments for shiftworking as their *price* for accepting extended operating ratios. The flexibility in feminised occupations was conversely, as it were, *built in* as a norm through part time or casual contracting practices. These distinctions relate to the sectoral segregation of women and men, the specific motivations of employers in seeking flexibility and the varying opportunity costs involved in a failure to attain that flexibility.

In manufacturing, the primary employer motivation was, not unexpectedly, to attain maximal levels of plant utilisation. As has been shown, the costs of relative underutilisation here are significant indeed. Given the high comparative capital:labour ratios in manufacturing (and concomitantly low proportion of wages in total costs), Horrell & Rubery find a relative willingness among employers to pay wage premia. Yet A.W.S. in manufacturing was focused very sharply on men and away from women. This they explain in terms of the occupational segregation by gender within many manufacturing industries. With male employment dominant in all key manufacturing occupations, it is hardly surprising, they conclude, that men experience A.W.S. in so distinct a manner.

Women are by contrast concentrated in public and (especially) in private services. Here, the momentum for A.W.S. came through primarily from changes in competitive conditions of trade: in retail and distribution, longer operating schedules were particularly important in stimulating worktime restructuring. In these cases, employers expected that little net additional revenue would be generated through, for example, longer trading hours. In consequence, the cost implications of extending working times were key. A.W.S. regimes that minimised incremental costs but that improved 'the matching of labour hours to labour demand' were then favoured. Employers therefore emphasised low cost re-rostering of both part- and full-time workers within the terms of their existing (flexible) contracts, and recruitment of similar classes of worker where necessary. These workers were overwhelmingly female (Horrell & Rubery 1991:379ff).

In the public service sector, worktime change was pressured by tightening finances and by a commitment to extending existing services to new social groups. (One may conjecture that the legal obligation to submit increasing volumes of contracted work for competitive tender must also have played a role.) Here again, the gender differential was pronounced. Feminised establishments and labour processes were historically relatively flexible. In these circumstances, employer responses similar to those typical of the private service sector prevailed. Where males dominated a workplace or a specific occupation, existing practices (including 'notions of standard

working weeks and ...expectations of high and regular levels of overtime' [Horrell & Rubery 1991:383]) had formally to be recontracted.

In short, the differential impact of distinct forms of A.W.S. builds on extant occupational and sectoral segregation and so reinforces the temporal and income inequalities by gender in the labour force. Further, Horrell & Rubery found no sign of A.W.S. being used to accommodate better the whole-biographical needs of workers. Thus:

'...there is little evidence that working time for women is arranged to fit with domestic constraints and women's preferences, except with respect to the total length of hours worked... As choice in the labour market is in practice very limited, employees will often have to take jobs where the working-time arrangements are not ideal' (Horrell & Rubery 1991:388).

Women may consequently face no alternative but to take work that devalues their capacities and experience. Furthermore, employers in the Survey displayed little willingness to vary worktimes to match biographical change in workers' lives. The problems of use-time *balance* that Seve adverted would appear, then, to be as ubiquitous under A.W.S. regimes as in the more rigid worktime systems classically associated with Fordist industry.

Yet it is a mistake to assume that the right to integration of use-time is one that is specific to women workers. The vast majority of both female *and male* workers value their domestic existence very highly. Many workers experience the brittle reality of dichotomisation and temporal rigidity as a formidable barrier to psychological integration. Indeed, the point has been made many times as an empirical criticism of for example, the New Home Economics School, that the marginal adjustments in time allocations between abstract labour, abstract acts and concrete acts required in order to maximise a notional household utility function are, as a matter of fact and put baldly, simply not available as options for most workers. On this level, there is in essence substantial commonality between workers regardless of gender, that a univalent focus on the themes of separation and difference tends to obscure. Wajcman argues this, when she suggests that:

'(t)ypically, a "gender model" has been adopted for the study of women's work. In this model, women's relation to employment is treated as derivative of their family experiences. Simultaneously... men's work attitudes and behaviour are seen solely as the consequence of their occupational experiences' (Wajcman 1982:144).

The focus on issues of temporality that has rightly characterised much feminist writing comes out of a recognition of double inequity: the logic of labour force differentiation on the one hand; and the glaring and continuing divergence in gender liability to domestic labour on the other. The regressive distribution of training, worktime and other resources ensures the further development of those with a high O.C.P. (principally the core white male workers and non-producers). The converse- the limitation of learning and psychological progress for the segregated workers- serves merely to compound the radical income and wealth inequalities of capitalism¹².

These multiple inequalities evoke often radically different programmatic responses.

One tendency posits a new politics founded on an attack on the *male* temporality of the political economy. Integration of use-time will here be founded on the procession to a new (female) temporality, a transcendental time with nurturing and ecological roots. While key dimensions of the conditions of labour are clearly constructed and distributed in a gendered manner, to characterise the *production* of those conditions *primarily* in terms of *masculinity* is completely erroneous.

This is the thrust of the criticism levelled by Wajcman. Whatever the form of the collective labourer, it is already substantially feminised- incompletely so undoubtedly, but (in historical terms) unprecedentedly so. Any supersession to a new temporality, while it must involve a movement beyond increasing distributional inequity and a deepening of the attack on male and other manifestations of privilege, must also, and centrally, involve the transformation of the time economy of both genders.

A close biographical examination of the overall requirements of use-time balancing and of the roots of temporal asymmetry for both genders, is a *sine qua non* for this. This theme of comprehensive biographical integration along progressive lines will be more closely examined in Chapter 6.

The terms on which this reintegration might be founded are meanwhile changing again with substantive changes in the political economy. These contemporary alterations are themselves partly a response to the fundamental restructuring of the collective labourer that the mass incorporation of the woman worker has produced. Perhaps more significantly, many of the technical transformations of the current phase are clearly directed at sectors and occupations that are now extensively feminised and in which productivity growth has lagged.

'Japanisation' and Fordism:

The quantum leap in mechanisation that was prefigured at the Ford Motor Company, has resulted in a dramatic, but unevenly spread, reduction in the proportion of labour costs to total costs. In Japanese Fordist industries, the wage bill now constitutes a tiny fraction of total costs. By the early-1980s, labour costs accounted for only 7% of total costs at Nissan and 6% at Toyota: in electronics, the figure was just 5%. In steel-making, a figure of 10% was not uncommon¹³. For British manufacturing, the New & Myers survey reported in Williams *et al*, found an average share of 18% of labour to total costs in mass production industries. As indicated, this historic reduction has been accompanied by a (weak) skills polarisation and an increasing segregation of the collective labourer.

The reduction in the relative size of the permanent wage bill underpins the recent experiments in many Japanese manufacturing companies wherein labour is regarded as a fixed or overhead charge, with plant and machinery now treated as the variable cost. This reversal reflected the high degree of penetration of mechanisation and of Fordism in the Japanese economy and the peripheralisation of labour power in the forces of production. The fact that Japanese companies now exemplify many aspects of this process is also of significance. The world dominance of Japanese capital in key markets is founded on an idiosyncratic *model* of accumulation that has come to assume broad political and theoretical appeal as a paradigm for the future. Among these idiosyncrasies in Japanese production are:

- * the extensive and systematic use of subcontracting often mediated through the controlled environment of the keiretsu trading blocs.*
- * a continuing push to reduce stockholding and improve work scheduling.*
- * collaborative industrial relations based on neutered enterprise unions.*
- * relatively stable or even guaranteed lifelong employment contracts (the **nenkō** system).*
- * highly mobile and broadly competent 'core' workers combining in distinct work team collectivities.*
- * the deployment of multipurpose capital equipment wherever possible.*

These factors contribute to reduced overhead costs, higher factor productivity, faster innovation and responsive product and process change in Japanese firms compared to their competitors in the other advanced nations. By 1989, the Japanese productivity lead in for example, automotives assembly had opened substantially. Japanese volume car assemblers operating in Japan assembled a car in 16.8 hours; Japanese producers operating in the United States consumed 21.2 labour hours per vehicle; U.S. assemblers took 25.1 hours while European companies required 36.2 hours per vehicle. What is more, levels of energy consumption and materials wastage per unit of output are much lower in many Japanese sectors including steel and shipbuilding compared to other advanced nations.

The greater coherence in plant working is evident in shorter batch sizes for a given cost threshold in Japan, which also enables a controlled expansion in the range of product lines. The Japanese deepening of Fordism is led by marketing considerations, echoing the rise of G.M. under Sloan fifty years before. Reciprocally, the degree of market penetration that results also enables higher levels of plant utilisation, which further pushes the cost profile and amortisation period down (Williams *et al* 1987). In short and to use the favoured term, Japanisation connotes higher relative *flexibility*.

Lest these observations encourage an uncritical approval, it is worth recalling here the many manifestations of stress that arise from the higher intensities and longer worktimes of the Japanese worker¹⁴.

Yet as slower growth rates continued in the U.S. and much of western Europe from the early 1970s, so the Japanese growth phenomenon attracted just such unscientific admiration. This preoccupation was fed by the direct impact of the growing number of Japanese transplants resulting from the increasing internationalisation of key branches of Japan's industrial base over the 1980s.

Much controversy and many spurious claims surround the Japanese form of competition: some of these claims will now be considered. These are sequenced to reflect the move from the relation between capitals (*via* the property connection) through the portals of the company (shipping and receiving and inventory control) and finally to the intricacies in the organisation of the forces of production within the plant (in the real appropriation connection).

To begin with intensive subcontracting: this indeed marks a clear departure from the classic conception of Fordism as a dynamic of vertical integration. Yet it is necessary to be cautious on

this score. The commercial confidence required in a successful relation of contractor to contractee is enormously strengthened for both parties by the long term contracting and prime customer status that characterises inter-trading within the same business group in Japan. The interweaving of ownership structures typical of the *keiretsu*¹⁵ provides an ultimate contracting guarantee. Where workers are assisted to found their own companies by their current employer, the strong ties of history and product/process specificity also suffice to keep the contracting networks in a supplicant mode.

There are other noteworthy aspects to the *keiretsu* structure. Where cyclical variations in demand occur, the outer subcontracting networks bear the burden of output change to a disproportionate extent in terms of accumulating inventories. As Sayer puts it, the ringed subcontractors act as the *shock absorbers* of demand variation. For core trading companies though, the buffer of the periphery permits for greater output continuity. There is also that invaluable fusion of finance and industrial capital ensured by the inclusion of a merchant bank at the heart of the combine.

The commercial advantages of the *keiretsu* have not been lost on would-be competitors. Emulation has been perhaps most successful in countries with a similar commercial culture. Amsden observes that similar combines characterise the economies of most late-industrialising countries. Prime among these are the nations of the Pacific Rim and specifically the so-called *Asian Tigers*. In Korea, these groups (the *chaebol*) exert a phenomenal commercial leverage and are critical to the growth of the local economy (Amsden 1990:16ff).

In the United States, Charles Ferguson has suggested that very similar structures of cross-ownership are emerging in information technology and computers¹⁶. There are, however, formidable legal and cultural obstacles in the other advanced nations that brake such developments. An obvious calculus of risk has meanwhile forced more conventional strategies of what has come to be known, following J. Atkinson, as *distancing*, to be pursued.

Distancing has a number of distinct causes and mechanisms, which Schutt & Whittington (1986) pithily summarise under the rubric of 'decentralisation; detachment; and disintegration':

* *decentralisation occurs when large plants are broken up, with the new, smaller factories that result either retained in parent ownership, or incorporated into the assets of formally distinct but clearly dependent subsidiary companies.*

- * *detachment occurs when direct ownership bonds are broken but where a strong control element is maintained through, for example, product licensing or franchising.*
- * *disintegration characterises the decision to sever all formal control ties, but to exert the decisive influence through judicious use of buying power or the potential threat of take-over.*

The dependency conditions that ensue under each strategy are evident in the decentralisation and detachment policies of Fiat and Olivetti in the so-called *Third Italy* (Turin-Emilia-Romagna region) (Michelsons 1989). In Fiat's case, primary contractors are engaged collaboratively in product and sub-assembly design and development; then Fiat disengages. The primary contractor assumes responsibility for managing the supply *tail* and ensuring that Fiat's requirements are met. Olivetti directly manages relations with around fifty firms in relation to its computer control software needs alone, as well as a wide band of electronic components and sub-assembly producers. An *observatory* provides Olivetti with the market intelligence on suppliers' cost structures and performance that it requires in order to exert the requisite control.

These inter-firm relations have also characterised automotive production throughout the advanced capitalist bloc, with components suppliers playing an increasingly prominent role in the overall process of production. One can again see the dependency relations in this network coming through in the results of a survey undertaken in 1990 of 56 British suppliers (Oliver *et al*). From the early-1980s, consistent pressure was exerted by the assemblers on suppliers to lower defect rates (raise 'quality'). The tensions that this relentless pressure has caused are also registered in the Survey, with many sub-contractors taking desperate steps to diversify their customer base.

The *keiretsu* and their emerging foreign equivalents undoubtedly represent a formidable social innovation. In many cases, their extended productive assets span all key linkages in the Development Blocks in which they operate. Yet how radical a departure do these forms represent from the vertical integration classically associated with Fordism? In many ways, the *keiretsu* offer but an illusion of disintegration. This is of course, exactly what they were produced for- as a means of circumventing the restrictions on capital centralisation imposed by the United States in the period of occupation. The underlying logic is as integrative of economic activity as the more formal ownership structures of Fordism. Indeed, the operation of the property connection in the mode of production has assumed greater significance in contemporary capitalism than ever before, as the operation of *Just-in-Time* ('JIT') systems strikingly illustrates.

Walker (1989) rightly notes the 'lack of attention' given by management to the receipt and shipment of commodities in Fordist manufacture. There has as a result been a tendency for buffer stocks to build up, with accompanying cost implications. According to one survey cited by Walker, '30 per cent of production costs in industry go to warehousing, inventory, carrying and monitoring stocks' (Walker 1989:65). This 'system' of mass stockpiling has come to be known, ironically, as *Just-in-case*. JIT seeks a systematic reduction in inventories, of which a closer scheduling of the *goods in* and *goods out* functions forms an integral part. The system is predicated on a coherent and continually updated understanding of the dynamics of production within the plant (which then guides the rate of depreciation of inventories) and also on zero-defect inputs. These factors lead Sayer to characterise the inventory control systems of JIT as a *pull* rather than a *push* (Just-in-case) system.

Once again, this form of economising on costs of capital circulation often works to the commercial detriment of suppliers. The onus of producing all output to the pre-given standards of the assembler is placed on them (though some assemblers, and particularly Japanese firms, do undertake medium term collaboration and burden-sharing to this end). It is the suppliers moreover that have usually to bear the additional costs of organising transshipment of smaller, mixed batches at the times specified by the customer. Systematic output smoothing at every level is then necessary in order to control the potentially disruptive implications of JIT. At most Japanese car assembly plants, the short run volume flexibility is contained to within a 10% variation from planned output. JIT may also induce spatial clustering: Sayer cites the 'localised complex multilayered production system' of Toyota City in this regard (Sayer 1986:54).

This reality was reflected in the results of the British survey undertaken by Oliver *et al* in 1991. Suppliers indicated their companies' unwillingness to negotiate Just-in-Time working. Where they had accepted the principle, JIT acted as a source of continuing friction in their relations with the assemblers.

In overall terms, JIT is clearly about shifting the burden of stockholding and production scheduling to other capitals in the value chain.

To move now into the Japanese manufacturing establishment: one is struck by the scope of seemingly unconnected discrete innovations introduced over recent decades. These range from JIT and failure mode evaluation and analysis to statistical process control, the *kanban* system and quality circles. Technology, management control systems, a telescoped hierarchy, the form of worker collectivity and broader cultural identifications weave together to yield the distinct mode

of real appropriation in the Japanese plants. Indeed, the relation between these phenomena is a source of much confusion among would-be emulators in Europe and the United States, as Greenell (1991) *inter alia* indicates. It is, then, an innately hazardous task to attempt to separate out such closely associated factors, but one that is nonetheless indicative of what Japanese firms have done to the Fordist techniques that they borrowed. According to one well known estimate, the higher productivity of Japanese plants compared to western plants decomposes along the following lines:

** intensive use of plant and machinery, relentless improvement in quality standards, and elimination of balance delays and production buffers accounts for around 50 % of the productivity difference.*

** effective control of labour times (including work pacing and absenteeism) and specification of job content contribute 34% of the difference.*

** finally, superior deployment of technology in process management and change and more careful product design accounts for around 17% of the gap (Abernathy et al cited in Jürgens 1989).*

The underlying imperative of this cluster of control innovations is a familiar one of raising plant-wide operating ratios.

To take the intensification and balancing theme first: an extension of the twin distinction proposed by Greenell (1991) in relation to Quality Control (Q.C.) methods may be useful. Line balancing is attained primarily through a set of *on-line* quality control measures, defined as 'assessments made during and after production'. Increasing mechanisation implies that such verification comes to focus on the tracking and maintenance of *process* parameters (hence the widespread use of the variants of statistical process control) and less on the physical characteristics of the ultimate object of labour. This reflects in turn the continuing peripheralisation of living labour.

The reduction in buffers is chiefly associated with studious production planning and continuous line management. Simplification of product engineering (notably through the *Taguchi* process) and component standardisation are central to this. Underpinning this simplification is a decisive weakening in the traditional (profession-based) apartheid of the technical departments such that research and development, design and production engineering activities are undertaken in a

unitary manner, with the emphasis firmly on the last two functions (*simultaneous engineering*). This has the effect of homogenising a technical collectivity that is already characterised by what Amsden (1990) calls a 'strategic shop-floor focus'. This orientation is evident in the system of so-called *collective apprenticeship*, in which the engineers systematically inculcate a full understanding of new processes to production workers in a continuous stream of knowledge transfer (Jürgens 1989). These *off-line* activities represent, in short, a determined attack on overhead charges.

The overhead offensive is symptomatised in the intensive usage of plant and machinery, as reflected in the prevalence of double-shift working. Intensity is also manifest in spatial terms, with the Japanese car worker customarily utilising only around one half of the working space of a U.S. counterpart. Formidably high land prices obviously contribute to this situation, but Japanese management has typically turned this cramped necessity to competitive advantage. The spatial geometry practically forbade the development of repair bays which in western plants symbolically sanction defective work. Layout is then used to tighten on-line practices. U.S. assemblers are now considering how such streamlining can be adopted in their plants (Jürgens 1989). JIT also contributes significantly in this regard, by both cutting the space given over to storage facilities and reducing the volume of the parts bins at the work-stations.

One index of the commercial success of these measures is provided by the rapidly industrialising South Korea (Amsden 1990). Korea has adopted many of the Japanese methods in its industrialisation drive, often under the direct tutelage of Japanese engineers, and the countries are in many ways comparable in their commercial cultures. The comparison that she draws is the familiar one of the the ratio of overhead to direct workers. In the Korean case, then:

'...the ratio of white-collar to blue-collar or production workers *declined* from 0.13 in 1960 to 0.10 in 1980. This is a rather surprising fact in the light of the steady increase in this ratio in the U.S.A. and Europe, beginning with... the onset of Fordism at the turn of the century' (Amsden 1990:28-9).

Alternatively, Jurgens estimated in 1988 that three hours of 'indirect labour' were required to produce one Japanese car, compared to nine in the United States (Jürgens 1989). Finally, another estimate puts overhead costs at 35% of total manufacturing outlays in the United States, and at 26% in Japan (Sayer 1986). These kinds of results are quite remarkable and largely reflect the impact of the changes in the structure of the collective labourer pioneered in Japanese plants.

In terms of surplus value extraction, this reduction in overheads through the collapse of one part of the division of labour, and the further, systematic reduction in idle times arising from balancing problems both result in a rise in ASV_2 . This strategy also clearly informs the high intensities of the Japanese worker, while ASV_1 underpins the relatively long amplitude of worktime.

On-line Q.C. responsibility has been firmly pushed down the Japanese plant hierarchy to the line worker. In fact, Japanese direct production workers are charged with a wide range of overhead tasks, from basic maintenance of the work-station to more sophisticated process control responsibilities (often under the aegis of *Job Enrichment* strategies). In many cases, they are expected to report the errors and failures of other workers upstream in the Line as part of a process of collective self-surveillance (At their British plant at Sunderland, Nissan ambiguously titled this procedure *Neighbourhood Checks* [Tomaney 1990].) All of this is in addition to the multiple machine-minding on a continuous moving line that Japanese auto-workers regard as the norm.

This expansion in worker responsibilities is related to the second theme of Japanese plant management: the effective control of labour power. Work is highly specified by management and densely supervised (Jürgens 1989), but targets are constantly revised in an upward direction in an extraordinary collaboration with the worker. This revision is effected with the aid of technically simple but psychologically ingenious systems of imbalance monitoring. Warning lights above equipment, or line stop (*andon*) chords both alert managers to line imbalance or quality problems. It is not, however, to the worker's advantage to be seen to pull the chord, when the personal targets so important to seniority progression would surely be jeopardised as a result (Parker & Slaughter 1990).

It is the way that these systems are used by management that is so subtle. Japanese managers often regards the absence of flashing lights as a sign of slack and reduces staffing on such quiescent sections. At Toyota, breakdowns are seen positively as a stimulus to error detection and correction and then to tightening standards. The analysis and rectification of minor or local breakdowns is also the responsibility of the directworkers. In a final twist, where remedial action has been taken, the buffer stocks are invariably reduced to provoke a further tightening of work-station norms (Jürgens 1989).

These systems have been acutely typed *management-by-stress*. As Parker & Slaughter suggest:

‘(t)he goal is to stretch the system like a rubber band on the point of breaking. Breakdowns in the system are thus made inevitable but are in fact welcomed, because they show where the weak points are, weak points that can then be immediately corrected’ (Parker & Slaughter 1990:33).

The worker is doubly ensnared in this upward ratchet by the specific form of collectivity developed in Japanese plants: the work team. The small working group (with typically around 15-20 members) is central in the organisation of the worker’s abstract labour time. As Jürgens observes, it represents “family” and social contacts’. He continues:

‘(i)n Japan the group is an integral part of the system of production management without which the zero-buffer and zero-defect principles could not function’ (Jürgens 1989:215).

Japanese team-working operates through a mix of consent (founded on a corporate loyalty associated with the *nenko* and on personal bonds of identification) and coercion (management-by-stress and evaluation of relative group performance). The range of operational responsibilities with which the work team is charged is wide indeed.

Team leaders are usually involved with a team planner, supervisors and technicians in the detailed engineering required to introduce new models, or in the embedding of new fixed capital and ensuing job redesign (especially during the *trial-build* period). This involvement also secures active identification with subsequent operations.

The team also has primary responsibility for the induction of new employees and on-the-job training for all team members. Significantly in the context of management-by-stress, the team is charged with the planning and execution of job rotation and enlargement of individual responsibilities that also typify Japanese working. Multi-skilling workers are expected to move between jobs in their team as required in order to balance the line or to meet the exigencies of absenteeism. Given that wage structures are often tied in part to the operating skills of the worker (*pay-for-knowledge*), then issues of training, task rotation and work experience are indeed of importance.

It is a reflection of the dynamism of the team system that these important labour functions may well have been developed in their present form under the pressure of the teams themselves (Jürgens 1989).

The issue of absenteeism, that chronic illness of conventional mass production, has already been broached. This too is addressed through delegation. Team leaders are charged with themselves covering the absence, or with securing task redeployment throughout the team. The team must also report any sustained absence problems to management. This policy, which is reinforced by not hiring absentee replacements, is related to the broad practice of understaffing against notional establishment figures. The team is also required to cover for other absence periods (toilet/medical breaks; to undertake repair area work; and to provide assistance to other teams throughout the plant). All of this increases peer group resentment of absentees and depresses the absence rate.

The team is ultimately a driving force behind rationalisation and process change. Formalised as Quality Circles, the team acts as a focal point for the analysis of all aspects of performance against targets. The teams have made a substantial contribution to plant efficiencies by a plethora of incremental improvements in equipment, work practices (then intensified by management) and in product design and simplification.

Team working has been widely incorporated in various forms in U.S. and European competitors, not least because the costs of its introduction are relatively low (Jürgens 1989; Parker & Slaughter 1990). One particularly nefarious aspect to their north American application is highlighted in Parker & Slaughter; the practice of *whipsawing*. Quality standards are continually ratcheted upwards through structured comparisons of teams against others in 'competitor' plants in the same company. This practice, which is directly divisive of the collective worker and disruptive of industrial unionism, proves particularly efficacious for management when the Group is international.

Team-working is a powerful tool. In many ways, it represents a 'mobilization of problem-solving knowledge' (Jürgens) that the workers have always possessed, albeit to differing degrees. To now, it has invariably formed a part of the time/energy reserves of labour. This protective screen when stripped away leaves the worker vulnerable to precisely the terminal condition of *karoshi*.

What team-working attempts is a systematic utilisation of the disciplining capacities that are inherent in a transindividual labour process to the end of accelerated valorisation. In building on a latent potency, team-working extends the organic collectivism of Fordism but does not reach qualitatively beyond it.

To turn finally to the third theme of Japanese manufacturing: the strategic use of technology. The current phase of mechanisation is founded on a group of machines that use a variety of embodied microprocessor systems to regulate many aspects of their operation. Some of these machines are very obviously linear developments of antique devices for materials transformation. The computer numerically-controlled machine tool (N.C.M.T.) is a good example. Other devices are in many ways quite new, deploying sophisticated artificial sensing capabilities for the first time. In all such *tertiary* mechanical devices (Coombs), electronic self-regulation plays a pivotal operational role.

The robot, the so-called *steel-collar worker*, was projected through much of the 1970s as the icon, the core machine of a new age of labour displacement that tertiary mechanisation was to usher in. The etymology of the word itself (Czech *robota* meaning simply 'work') reflects this supposed ubiquity. It has to be said that the deployment of the robot to any tangible commercial gain has been exceedingly difficult, and that Japanese capital has again in many ways proven more perceptive than its rivals.

As Tidd & Bachtler (1990) observe, robots have something of an historical lineage behind them now. The direction of development has been revealing, following a progression from the general ('universal') automaton to the detailed specification of final use and thus a more effectual conception of the robot itself. Marx's comments on design anthropomorphism may well be relevant again here¹⁷. Most high volume, repetitive welding is now undertaken by tailored robots. Paint-spraying and significant elements of assembly work have also been given over to robots.

The use of robots across the A.C.Cs has developed in an uneven manner. In 1989, there were some 42,000 installed (industrial) robots in the United States, 67,000 in Europe (with 22,400 in the Federal Republic of Germany) and 180,000 robots in use in Japan. There are classificatory differences that bring many advanced machine tools into the Japanese total that are definitionally excluded in the other two blocs. These accounting differences are not irrelevant insofar as they reflect important cultural differences in actual use of robots. The gap is so large, however, that one can claim with confidence that Japanese industry is far and away the most robotised in the world.

The definitional ambiguity highlights differences in the pattern of deployment. These symptomise in turn broader lines of difference in the industrial culture. In the U.S. and Britain, deployed robots are often deeply specialised, are of high levels of technical complexity and

moreover, spatially and functionally separated in automatic islands. Such is the level of technical complexity that problems continue to bedevil vision and touch systems (Sayer 1986). The adoption of such robots, which are in many ways clearly *sui generis*, reflects a management culture steeped in the principles of overdetailed labour as well as (often) a Ure-type motivation to mechanisation. Japanese capital, with a more systematic grasp on its productive assets, combines a greater number of simpler (general purpose) robots with labour power to greater commercial effect.

This lack of control merely compounds when series of tertiary tools are articulated *via* a central computer to form automated Flexible Manufacturing Systems (F.M.S.). Williams *et al* discuss the many difficulties encountered by U.S. and European manufacturers. On the British experience to date, they conclude that the financial results have been ‘disastrous’, with many systems even generating losses. These systems are, as it were, overstressed relative to commercial imperatives. They are based on ‘expensive over-sophisticated equipment which is not necessary for their business strategies’ or for their markets (Williams *et al* 1987:433).

The issue of strategic inappropriateness is a difficult one. As Tidd & Bachtler rightly observe, the deployment of such machinery is often a *substitute* for a strategy that would address the integration of all relevant forces of production: technology serves in this context quite literally as a *deus ex machina* for deeper planning lacunae. Positive effects on accumulation can be derived from tertiary mechanisation only where the productive forces are properly *integrated*. This is the central conclusion that Tidd & Bachtler (1990) reach on the Japanese experience:

‘(i)n Japan users have the advantage of a highly trained, multi-skilled workforce, good communication between different functions, and close relationships with suppliers. Design for manufacture and high quality components are the norm. Consequently, the manufacturing technology need not be as sophisticated, and financial justification is easier’ (Tidd & Bachtler 1990:15-16).

This integration extends reflexively to the planned articulation of the different forms of machinery that characterise a robust fabrication system. Japanese plants effectively integrate elements of tertiary (A.M.T.) and secondary mechanisation, as Williams *et al* observe.

‘Best practice Japanese factories typically use a mix of dedicated “hard” automation and flexible “soft” automation’ (Williams *et al* 1987:435).

The results of this greater integration are visible in the superior output and product diversity from installed F.M.S. in Japan compared to the U.S. (Williams *et al* 1987).

What conclusions can sensibly be drawn from the Japanese innovations? In many important respects (as in the principle of team-working, in so-called job enrichment or in the offensive on overheads), Japanisation does not qualitatively reconstruct Fordism. Indeed, the spirit of these changes is firmly in sympathy with the principles of scientific management and Fordism. This is hardly surprising, given the origins of many of these practices in the United States (Sayer 1986). In broad terms, what one is encountering is akin to an optimisation strategy. It is centrally concerned to deepen control over the forces of production (not just over the labour process). As Scherrer observes:

‘(e)mphasis is placed on efficient use of labour power. Without abandoning the concept of a taylorist division of conception and implementation, workers’ involvement is sought’ (Scherrer 1991:106).

These aspects to Japanisation, being readily comprehensible to competitors, are relatively easily replicated. There are now clear signs of successful emulation in key E.C. industries (Dawkins [1992]). The Peugeot Group (including Citroën) for example, has splintered the production line into smaller vectors and pushed overhead and quality maintenance down the hierarchy, enabling the closure of the refinishing departments. Given that these functions ‘used to occupy 10 to 20 per cent of total production time’, their elimination is not insubstantial.

Such changes have also enabled the Group to recast its mechanisation strategy. After general and intensive automation in the mid-1980s, Peugeot has ‘reintroduced more labour and simpler machines to the shopfloor’ (Dawkins 1992). The complex robots previously deployed were apparently prone to breakdown!

At the other end of the hierarchy of skills, the compaction of technical functions associated with simultaneous engineering gathers momentum. Project teams have been established encompassing the traditionally territorially distinct activities of design and production engineering and management, with significant resulting economies in time and money.

Finally, Peugeot has comprehensively resituated itself relative to its supply chain. JIT has reduced stockholding, and the proportion of bought-in components has risen steeply, albeit that outsourcing still lags the 80% averages of Japanese assemblers. The unreconstructed nature of

the property connection continues to pose specific difficulties, though. The vulnerability attendant on managing with low stockholding in the European political economy was sharply illustrated at Renault, which operates similar stocking policies. The absence of buffers enabled striking workers in 1991 to bring all production to a stop in just ten days.

Further down the value chain but in the same industry, in the study by Oliver *et al* already cited, the continuing quality pressure from assemblers has directly translated into significant changes in job specifications and work practices in the vast supply network. Operator responsibility for quality, frequently including statistical process control, had been introduced, in full or in part, in over 90% of surveyed suppliers. This involves familiarly, the restructuring of work tasks, pushing responsibilities down the hierarchy onto the production worker. This is, as the Authors note, a trend that does not stop at fault detection.

‘For example, there is also a trend for operators to have more responsibility for elementary maintenance and scheduling activities’ (Oliver *et al* 1991).

At many points then, the competitive challenge posed by Japanese manufacturing capital has provoked a rapid (if uneven¹⁸) response overseas. Peugeot and other assemblers are clearly beginning to close the productivity differential with their Japanese competitors. Again, the speed with which these changes have been carried through might suggest that Japanisation lies ideologically within the orbit of Fordism. One is then entitled to question whether, with these changes alone, the underpinning philosophy of ‘continuous improvement’ (the *kaizen*) can truly be sustained (Jürgens 1989; Tomaney 1990).

There is one, perhaps insufficiently registered aspect to Japanese practices that could prove of epochal significance. In every respect, the concern of Japanese management has been to ensure the coherent integration of the system of value creation. This preoccupation is hardly new. One recalls that systematic integration and regulation represented the functional terminus of scientific management. Japanese management has been exceptional, however, in taking this objective with due seriousness.

Integration necessarily involves the rationalisation of the production process at a higher level of abstraction than any preceding form of mechanisation. It may be useful to recap on the diverse forms that rationalisation (and then mechanisation) has taken and thus to place integration into a broader historical perspective.

It will be recalled that Coombs relates the historical forms of mechanisation to a typology of the key processes involved in the production process¹⁹. These are elaborated further by Walker (1989), who characterises the process of production according to a fivefold taxonomy:

- * *the transformation of materials or services.*
- * *the transfer of work-in-progress between work-stations.*
- * *the assembly of components and sub-assemblies.*
- * *the integration of vectors of activity.*
- * *the regulation of processes and product (Walker 1989:61).*

The locus of nineteenth century mechanisation was the site of material transformation (primary mechanisation). With Fordism, the purposes of mechanisation changed. The new waves of transfer machinery disciplined much of the work of assembly by objectifying the relations between different work-stations (secondary mechanisation). Tertiary mechanisation is already practically addressing many of the problems of mechanical regulation of the process of production by permitting the incorporation of devices of micrometering and correction. Such regulation is a characteristic of both Hard Automation and Flexible systems, though to different degrees of adaptability.

Tertiary mechanisation can also be used to support a wider imperative of integration of the distinct processes of production. As Walker observes, American systems production, scientific management and finally Fordism all attempted at different levels to integrate the discrete processes of transformation. It was out of such efforts that the separation and partial rationalisation of clerical and technical work largely proceeded. Yet such separation presented its own problems in terms of the uncontrolled expansion of the overhead functions. Just-in-case working also generated proliferating regulatory problems, as symbolised by the emergence of the *expediter* and a host of other firefighters.

The Japanese overhead offensive has pushed much of the structured work of regulation back down the hierarchy to engineers and directly to the worker, in a new application of the Babbage Principle. This it has been able to do only because it has built a clear and robust model of the overall process of production, constructed the information flows required to enable that process

to work and improve, and ensured that these systems will tell management in good time if and where it is *not* working (exception reporting). Such systems are, it will be recalled, the necessary underpinning to a sustainable JIT strategy.

In all of this, it is the identification of appropriate measures and formulation of attainable targets for the management information system that is crucial (for example, the close and regular monitoring of scrap/rework rates as the mechanism for moving towards 100% first-time production targets).

In most cases, these systems have not yet been mechanised, let alone computerised. The order boards that underpin Toyota's famous *kanban* JIT system are a good example. Yet cybernetically, these seemingly simple systems perform their task of integrating the movement of components and workpieces very effectively. There is a perennial temptation, though, to use computer-based systems as a premature technical fix without first addressing the complexities and assumptions underpinning the organisation of production. This may well prove to be the fate of General Motors' *Manufacturing Automation Protocol* (M.A.P.) system. The Company viewed M.A.P. in the middle-1980s as a central informational framework within which to make the transition to plant-wide computer integrated manufacturing²⁰ and even beyond into the vehicle ordering and distribution network. That M.A.P. was closely linked, at least initially, with the greenfield G.M. Saturn plant, and given the problems that have bedevilled that project (Luria 1990), the fate of the M.A.P. system must itself have become rather clouded. With the plethora of plant management practices that G.M. has built up over the recent period, any attempt to impose a common (and probably inappropriate) informational framework would seem, superficially a deeply hazardous task.

Ford, now arguably the strongest of the U.S. assemblers, embarked in the late-1980s on a very large scale computer assisted integration of its spatially dispersed technical labour force. This endeavour, which was, as Michie (1990) notes, in renewed preparation for production of a 'global car', coded CDW27, required a substantial and very flexible infrastructure:

'...Ford has created a global communications network of computers to link up its 20,000 engineers and designers in Europe, the Americas, Australia and the Far East' (Michie 1990:3)²¹.

Similar large scale computing responses have been attempted in a host of environments, with varying levels of success.

Where mechanisation of aspects of integration has been properly pursued, the results are startling. Hyundai Motors of South Korea operates a high level computerised routing system which has great capacity for disintegrating the set of operations in car assemblies. This enables faulty work to be rapidly attributed to individual labourers or suppliers (Amsden 1990). In the case of Hyundai, these systems can of course be used to discipline workers directly. Given the intensive screening typical of Asian manufacturers and the relatively good conditions of labour, most workers are favourably disposed to company objectives. Attribution of mistakes usually serves another purpose: to stimulate further rounds of collective learning, with faulty products serving as 'workers' teachers'.

Computer-based routing through Materials Requirement Planning at Nissan evidences comparable standards of performance (Sayer 1986).

Generalising Systems Integration:

The overhead efficiency of such systems has broad applicability in other commercial sectors. Integration systems have been rapidly taken up in modified form in distribution and retail activity, as Walker notes. Electronic Point of Sale (E.P.O.S.) devices provide one index of stock movement and changing sales patterns, as well as contributing to the mechanisation of much basic financial accounting. Laser barcode stock reading and development of standardised packaging enables considerable improvement in the relative efficiency of the distribution system.

As a result of this (by industry standards) intensive mechanisation, centralised retailing and much of the distribution network now widely operates according to a *pull* system that is in many ways comparable to JIT (Walker 1989). The emerging integration infrastructure of the U.S. clothing and textile industry (the *Quick Response* programme) provides a good example, with remote integration of capitals along the whole of the value chain. The eventual implication of this system is that:

'when a sweater is sold in New York City, a scanner reading the bar-coded label may automatically trigger ordering, shipping and production activities all the way back to the wool warehouse in South Carolina' (Malone & Rockart 1991).

Savings of up to 50% on the total inventory costs of the U.S. industry are projected. These equalled approximately \$25 billions in the late-1980s.

The marked correspondence with JIT is perhaps hardly surprising. As Sewell & Wilkinson note, much of the inspiration for JIT came from close observation of U.S. retailing in the early-1960s by Toyota's Taiichi Ohno. The deepening of the concept, and the implementation of integration systems by Toyota in particular, has more than returned the favour (Sewell & Wilkinson 1992:280)!

Such systems nearly always serve a dual purpose. Retailers like J. Sainsbury have also attempted to use the detailed work pace records that E.P.O.S. provides to introduce rationalisation and individualised appraisal, leading inexorably towards differential remuneration packages for workers. Union resistance to such forms of remote regulation in Britain has been strong and (to date) effective.

The impact of improved integration and regulation falls, as already suggested, very heavily on the collective mental labourer, being associated with the flattening of overhead hierarchies. This is a novel and important phenomenon, given the accelerating drag on productivity and growing claim on the wage bill that such workers have presented (see Duncan [1981] for evidence on the 1970s). Clerical labours were, as already noted, partly rationalised to Taylorist principles in the post-War period, while professional/managerial labours retained largely individualised forms of working. This dichotomy deepened with the widespread application of machines at clerical transformation sites.

Mechanisation of clerical work has taken an uneven course, veering from the early introduction of workstations in rigid data processing systems, more recently, to the intensive application of standalone microcomputers utilising word processing, spreadsheet and database applications; and finally, to the reintegration of microcomputers with corporate databases under the aegis of distributed networks. Machine operation of the work-station permits in the first instance a significant reduction in reworking, filing and retrieval time for documents and improvements in analytical support functions. Reintegration of work-stations through networks allows the full introduction of remote regulation systems. By 1981, these changes were already yielding efficiency savings on clerical labours relative to the overhead labour force as a whole. Thus:

'(w)hile the cost of the workforce of clerks, who perform structured work, has risen 100% since 1975, the cost of the rest of the office workforce has risen nearly three-fold... In the U.S., the wages of clerical grade workers amount to only 27% of the total cost of running the office. The remain(der) ...represents the costs of managers, professionals and other "knowledge" workers' (Duncan 1981:193).

Until recently, no strategy could be conceived for integrating and mechanising the *unstructured* and very expensive labours of the technical collectivity. The development of mechanised integration systems in manufacturing environments can now at least potentially assist the rationalisation of historically individualised overhead labours.

The first stage in this process is heralded with the construction of electronic (E-)mail networks. The significant social effects of these systems are traced in Sproull & Kiesler (1991). E-mail networks (especially those that are open access) are *popular* with the professional and middle managers that use them and foster the formation of organic horizontal links both across a company and with workers in other organisations on the network. Project-based work by E-mail encourages the formation of what has been rightly designated *intellectual teamworking*. This term suggests that information-sharing systems like E-mail permit the part-socialisation of a classically individualistic labour process. This process is directly analogous to the horizontal enlargement of workers' tasks in many manufacturing companies.

These networks permit the formation of project or task teams across distance and time zones at minimal additional cost relative to personalised equivalents. Multiple projects can be worked on simultaneously, with problem areas or issues left pending on the team files. Information search routines are rendered more systematic, effective and rapid by structured linkage to databases. These factors alone permit considerable cost savings.

Remote management regulation of such part-socialised labour is technically feasible (though commercially still experimental) through structured interrogation programmes. This form of control can be achieved at any time and without any consent or even knowledge on the part of the worker. This hierarchical reassertion counterbalances any centrifugal tendencies of horizontal team-working. As Malone & Rockart observe:

‘because lower-level decision makers know they are subject to spot-checking, senior managers can retain or even increase their central control over decisions’ (Malone & Rockart 1991:97).

Adler's (1988) study of French banking found such regulation to be already technically possible but blocked by workers' organisation. Thus:

'(a)ccess to the data system is obtained by keying-in a personal identification code, which also indicates to the computer the nature of the operations the operator is authorized to conduct. It is the use of such codes that makes individual job monitoring technically possible... in France the threat of labor strife encouraged bank managements to abandon any such monitoring' (Adler 1988:n7).

Remote regulation is particularly important where workers are spatially dispersed or when multi-shift working requires continuous monitoring. There is then no substance in an oft-repeated claim to inherently progressive (*democratic*) features for these systems. Access to information in for example, E-mail networks can be gradated and blocked off very easily. Sproull & Kiesler (1991) cite the limitations placed by management on journalists' network access at a U.S. news publication. Modifications to a formerly open-access system resulted in the imposition of an information hierarchy: editors were entitled to send and receive, but journalists could only receive.

The ramifications of these systems, which essentially promote rationalisation in the nature of technical work transformations and the density and speed of transfer operations, is already visible in the well-recorded recent simplification and reduction in numbers of intermediate functionaries. More important, while delegation of operational matters may increase as a result of transformation and transfer mechanisation, the key directive functions of strategic management can also be clarified and strengthened. Mechanical intermediation, in the shape of so-called *Executive Information Systems*, may then penetrate the crafted citadel of the capitalist boardroom.

The Technically Integrated Worker- provisional conclusions:

The full impact of these contemporary changes in the economic base on the structure of abstract capacities and the infrastructure of personality is as yet difficult to discern. The following comments should obviously therefore be treated as highly provisional.

Clearly, the Japanese model has served as the exemplar for contemporary restructuring. Yet all available indices communicate the exceptional qualities of the Japanese political economy compared to all other A.C.Cs. In terms of workers' biographies, these include: formidable working intensities; long labour times; geographical and plant mobility; the absence of industrial unionism; and deep segregation of labour. Indeed, as Devine (1989) observed, intensity is only economically relevant when it differs in this way between capitals and capitalist countries.

These exceptional characteristics provide support to Amsden's hypothesis that Japan can be viewed in all crucial ways as a late-industrialising country. In other senses, including the ubiquity of the capital relation and generalised high levels of mechanisation (in the industrial sectors, at least), Japan ranks alongside the most advanced capitalist regimes. The coexistence of deep technical intermediation and extensive forms of surplus value extraction reflects this extraordinary combination of the traditional and the modern. There are justified questions surrounding the long run sustainability of the *kaizen* in the absence of mechanically assisted integration. There can be little doubt as to the unsustainability of the current ergonomic conditions that underpin Japanese accumulation. This is painfully reflected in the many symptoms of (often lethal) stress in the workforce.

Whereas worktime reductions have partly compensated for the accelerating densification of labour in the other A.C.Cs (Nyland 1989), such a coincidence has not yet been evident for Japan. Indeed, the emulation of that model overseas has begun to unravel aspects of this historic but unsung settlement. What happens in Japan in this regard will undoubtedly set the tone for the coming period. (It will incidentally provide an empirical test for the argument that Nyland puts: perhaps that process of ergonomic balancing was historically grounded in classical Fordism?) Empirically, the instigation of JIT working patterns, for example, stimulates experimentation with Alternative Work Schedules, as Horrell & Rubery detected in their British study.

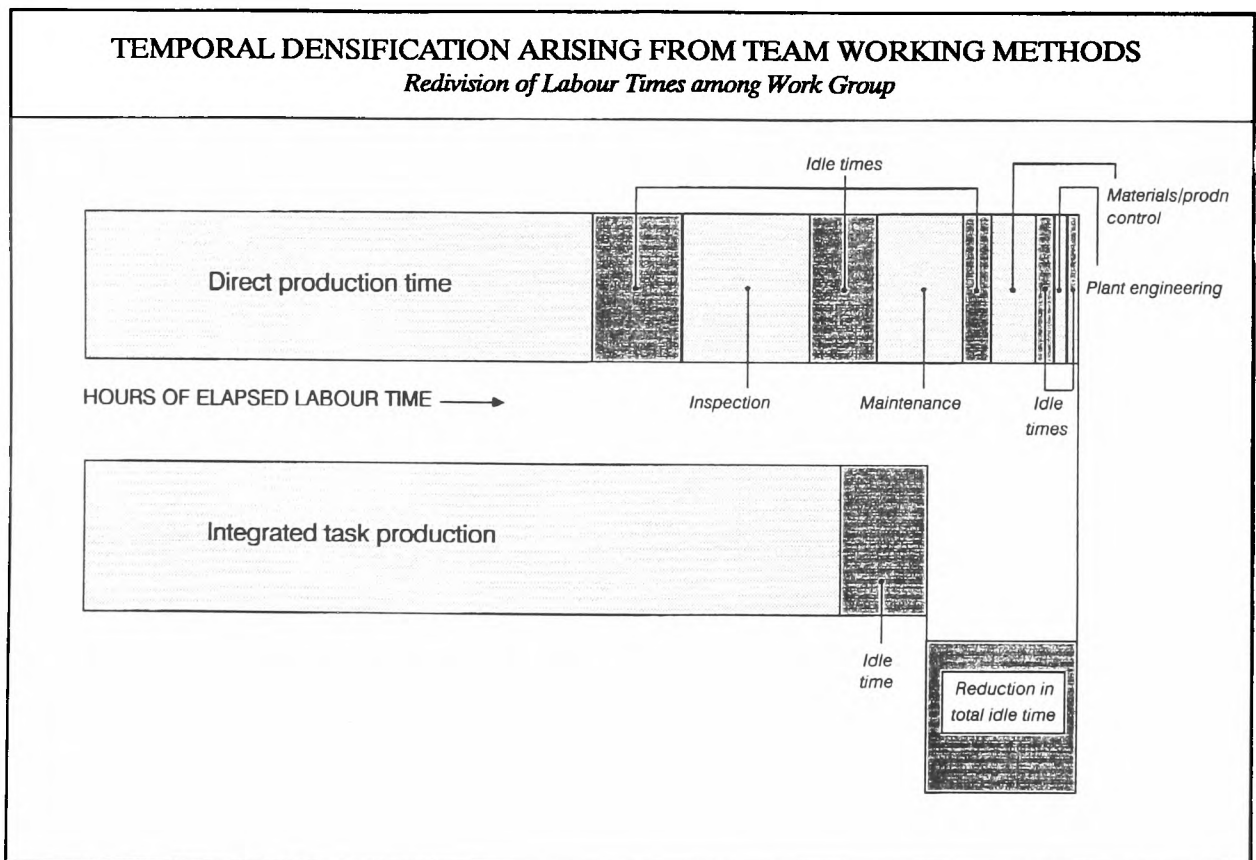
'In manufacturing, the move towards more flexible production systems, including just-in-time systems, required a generally higher level of flexibility in working time; overtime was worked at the weekends not just because of higher demand but because of bunching of delivery dates' (Horrell & Rubery 1991:389).

These (flexible) time requirements are hardly conducive to any progressive social objective of use-time balancing. It has been suggested that such balancing would begin to unravel the multiple differentiation characteristic of contemporary capitalist production. It is surely then not coincidental that the Japanese political economy is marked by an exceptional degree of gender segregation. This segregation is particularly striking in the multiple hierarchies of the subcontracting networks. As Sayer notes, the density of women workers grows and relative wages fall as one moves down the hierarchy. *Nenkō*-type conditions of work are also largely absent in the subcontracting buffers (Sayer 1986:56).

The application of the zero-buffer principle also practically reduces the porosity of the working day (raising ASV_2) by processes of horizontal collective intensification. Cover for absentees,

for meal or other breaks *et cetera* manifest this. Most important, work is intensified through delegation of on-line quality control functions. The worker's social *event horizon* is foreshortened by the localisation of team working and neighbourhood surveillance. The attack on overhead generates further important changes in the collectivity. The weakening of artificial division between technical workers permits team-working through *simultaneous engineering*. This begins the historic process of homogenising the technical worker, a process which is being accelerated under the influence of computer networks and other remote communication systems. A shopfloor orientation and the practice of *collective apprenticeship* ensures that the engineer's mastery of the process of production must be constantly renegotiated. These processes secure a vertical compaction of the labour collectivity and broadened individual task responsibility.

These changes illustrate the continuing importance of collective working to accumulation and to the distribution of concrete skill. Japanese capital has adeptly exploited the disciplining elements in transindividual labour processes to raise productivity across the entire labour force. The importance of ASV₂ in underpinning team-working, is indicated by General Motors' time-planning for work restructuring at its Opel subsidiary in Aspern, Austria.



Source: V. Hass cited Jurgens *et al* 1986

In perhaps an epochal development, the conscious formulation of targets for, and measures of, continuous improvement has required the development of enhanced dynamic models of the process of production as a whole. These simulacra have informed a wave of rationalisation associated with the improved integration of constant and variable capital. Such models are also the necessary condition for the effective deployment of new vintages of machinery. These systems (Advanced Manufacturing Technologies) typically embody (again, remote) mechanisms for real-time regulation which can be used to discipline labour power in novel ways.

Advanced Manufacturing Technologies may also weaken the linearity associated with Fordist working. Japanisation of the labour process typically involves the partial *batching* of traditional Lines and the shortening of the sequences in the vector cells. While tasks may be more fully shared horizontally between the team members that occupy the vector, the overall length of the vector, the scope of the team's operations, may actually contract.

The quality of overhead labours is also likely to change under the weight of mechanised working. The rationalisation of clerical work is already well advanced. This process can now be extended to the mass of professional and technical workers, in the first instance through greater use of electronic information networks. Networking may also, Adler (1988) suggests, inaugurate a new form of collective working, which he types as *systematic interdependence*. This higher level of interdependence is based on the capacity of computer networks to accept and reconcile simultaneous as opposed to sequenced operations. This system of working bears certain similarities to continuous flow production in the 'literally instantaneous' nature of the production process. Upon data entry, the object of labour (the information) is cascaded through the network and thus rendered immediately available to all those workers with appropriate system access rights. This builds organic relations between workers, as well as rendering the need for data accuracy vital to the effective functioning of multiple workteams.

The individualism of working methods typical of these *unstructured* labours is already beginning to alter. Intellectual team-working, with a simultaneous labour process mediated through the peer disciplines of the network and the possibility of remote (hierarchical) regulation, represents a major efficiency gain for capital.

If electronically mediated work has reduced the costs of dispersed labour processes, then spatial reconstruction has also featured more widely in the attack on overheads pursued by Japanese capital. The lessons in the Japanese revitalisation of the property connection, controlled through the tangled threads of ownership of the *keiretsu*, have been generalised in wider strategies of

distancing across all of the A.C.Cs. This emphasis on space is contradictory. In many Japanese industries, clustering of capitals has resulted from JIT-type working. This development is echoed in many Japanese transplants overseas. Nissan at Sunderland has attracted other Japanese suppliers to its environs and inevitably, many European components producers too. In other cases, the enhanced synchronisation of capitals ensuing from integration has permitted the erosion of distance as a factor in control. This is the thrust of the argument presented for mechanised integration systems in Malone & Rockart (1991).

The selective use of space and distancing strategies tends overall to increase the segregation elements in the collective labourer. In the Turin-Emilia-Romagna region (the so-called *Third Italy*) beloved of exponents of *Flexible Specialisation*, distancing and the rise of a significant artisan subcontracting sector has led to a deep restructuring of the labour force. Yet as Murray observes:

‘(r)acial, gender and skill divisions are essential to the operation of this economic model. The quality craft work... is for middle-aged, Emilian men. Semi-skilled assembly work, plastic moulding, and wiring work is carried out by women, while heavy foundry and forging work is done by southern Italian and North African workers’ (Murray 1987:88).

This is not atypical. Distancing and outsourcing merely contractualise the relations embodied in the segregated worker. Uneven development is as characteristic of the current restructuring of the production period as ever, Levidow (1990) uses the term *Neo-Taylorism* to denote ‘revived labour-intensive methods’, set in close proximity with and linked temporally to highly capitalised process lines.

Such associated but internally highly stratified labour processes can, Levidow observes, even operate in the same plant. For example, the sweated assembly of integrated circuits and sub-assemblies in electronics plants in Asia and the United States alongside high-level applied research typifies the ‘...social divide between computer professionals and female Asian operatives’ (Levidow 1990:73).

The effect of integration and selective automation on concrete skills is not yet clear. In Form’s (1987) review, he summarised the competing claims in four hypotheses:

* *that automation reskills where mechanisation deskills.*

* *that automation first upgrades skills then accelerates deskilling.*

* *that automation polarises the skill distribution between skilled and unskilled.*

* *that the effects of automation are contingent on type of industry, structure of demand and occupational class.*

In office automation, the evidence would seem to support deskilling of already routinised tasks but contradictory effects across the overhead labour force as a whole. In engineering, the application of A.M.T. has had similarly mixed effects, thus providing support to contingency theory. Type of industry and form of production appeared to be critical, with deskilling most evident in 'large-scale batch production industries'. In high-technology sectors, the impact on skills again varied widely. In publishing for example, automation certainly effected a massive deskilling. A multi-industry study of 22 companies (Hodson 1985) found, on the other hand, continuing skill *disruption*, with attendant crises of relative position among different groups of workers.

There is an interesting body of case study material that suggests, however, important and unilinear change in the form of labour ensuing from integration of the production process. Adler (1988), in his case study of French banking, finds that the process of labour has fundamentally altered under the impact of computer integration systems. The peripheralisation of labour from the production process is apparent where '(t)he worker is now entirely dependent on the computer system' and labour is 'mediated by a new language of computer codes' (Adler 1988:8).

The nexus of integrated work shifts towards control, service interface and problem diagnostics functions and away from what Adler calls the 'manual/rote execution of pre-specified routines' (Adler 1988:30). Amsden (1990) presents a similar picture from advanced steel-making in South Korea. The role of the worker in process management remains complex- as does the corresponding structure of skill. As she notes:

'...the largest number of workers can be found at well-defined set points in the process. Workers check sensors for temperatures in different process zones, note the chemical composition of gases, and register flow rates. For this they must have a fairly good understanding of the physical and chemical processes involved in iron-making and steel-making, in order to ensure a high quality product, since *steel production is not all in closed-loop control*' (Amsden 1990:30, emphasis added).

Again, Cavestro's (1989) study of both continuous flow (refining) and mechanical engineering sectors points the same way:

'the formal procedures alone do not ensure the successful operation of automatic control systems. Various unpredictable problems do crop up, the handling of which becomes part of the workers' exercise of skills' (Cavestro 1989:234).

Once more, under the impact of such peripheralisation, the content of work shifts.

'The work is increasingly characterized by data gathering, and the construction of hypotheses and strategies leading to the resolution of malfunctions' (*ibidem*).

Arguments similar to this have been robustly put by Larry Hirschhorn. He argues that the mechanisation of control fundamentally alters the nature of human intervention. In what he terms *cybernetic systems*, the relation of constant to variable capital assumes a complementary but asymmetric form. There is, he suggests, a hierarchy of regulation, such that:

'...machines control expected or "first-order" errors, while workers control unanticipated or "second-order" errors' (Hirschhorn 1984:72).

These new types of surveillance require a commensurate shift in the structure of concrete skills. This move has been described as the formation of 'intellective' (synthetic conceptual) functions by Zuboff.

The conclusions that Hirschhorn in particular draws from these changes are altogether less tenable. He asserts that extensive job redesign is a minimal condition for optimising systems integration, and that this redesignation must involve the delegation of strategic as well as operational responsibilities. This leads him to suggest nothing less than the end of the capitalistic form of the labour process. Vallas notes the technical determinism in this.

'Neither Hirschhorn nor Zuboff identified social mechanisms or agents that seem capable of insuring the transition to a post-hierarchical workplace' (Vallas 1990:389).

This overestimation is a common feature of much of the theorising on *post-industrial work systems* (Hirschhorn).

Adler is careful to avoid precisely this trap. He suggests merely a set of ensuing contradictions in the wage relation and does not speculate as to their mode of (quasi-)resolution. Adler also valuably speculates on the collective nature of networked labours.

'Let us hypothesize that automation and productivity pressures tend to drive work organization ...into a stage of systemic, reciprocal interdependence characteristic of many computer-integrated operations... Beyond the increase in the importance of interpersonal skills, this greater interdependence seems to call for a new definition of individuality' (Adler 1988:31).

Conclusions:

Much ground has been covered in the relatively short period of time since modern industry assumed hegemony. The rapidity of change again attests to the remarkable elasticity of modern industry and to the extraordinary impact of mechanisation on the process of production. The main lines of that development have been covered, albeit schematically, in this Chapter. To recap:

- * mechanisation has progressively moved from the point of production to assembly and movement of work-in-progress (Fordism). In recent decades, mechanisation has come increasingly to support synthetic activities relating to plant control and intra- and inter-firm transactions. There can be little doubt that this extension represents an historic revolution in planning competence.*
- * the imperative to vertical integration has been signally weakened by the spatial flexibility of such systems, to the point that remote control has permitted the renewed development of outsourcing on new terms. Centralisation has been modified in important ways.*
- * mechanisation has supported the formation of distinct work-based collectivities. Vectored sequencing for production workers was pioneered in and largely limited to the commanding heights of the manufacturing sector. Japanisation shortens the vectors and utilises new horizontal and vertical collective controls to intensify the rate of value creation.*
- * the increasing compaction of abstract labour times requires compensating reductions in all dimensions of working times for psychophysical balance to be maintained. The violation of this principle, as in contemporary Japan, produces personally unbearable hyper-exploitation for workers.*

- * *for overhead workers, contemporary mechanisation has multiple consequences. It intensifies ongoing rationalisation of clerical work. Vital for capital, the development of integration systems also at last enables the partial rationalisation of technical and professional labours. The systematic interdependence characteristic of mechanically integrated working may prefigure long term changes in the form of collectivity.*
- * *in overall terms, the concrete skill and abstract capacities of workers would appear to have been maintained through the period of modern industry. Compositional change has played a major role in pulling women into the labour force to an unprecedented extent and in a secular manner. Proletarianisation continues on a global scale, while the problems to accumulation associated with task orientation recur.*
- * *enhanced integration of capitals has given a renewed impetus to application of the Babbage Principle. This has generated in turn a more structured approach to segregation of the collective labourer with important spatial and temporal implications. These changes accentuate existing inequities in resources for development of abstract capacities.*
- * *inequalities in use-times between workers need to be set in the context of rising unemployment and the radical social divisions that expulsion from the labour force betokens.*

Theoretically, as Julkunen (1977) suggests, Sève's analysis of use-time needs to be modified to reflect the important effects of space and of transindividual working in modern industry. Commenting on time budget studies, he suggests that:

'...temporal aspects can be complemented with spatial and social aspects by continuing... (a) question list: where and in what company' (Julkunen 1977:18).

APPENDIX 2: Flexible Specialisation- a 'Yeoman Democracy'²²?

It is in many ways difficult to discuss contemporary change in the capitalist economy without also touching on the key themes of the influential body of theory surrounding the concept of flexible specialisation (F.S.). This provocative set of hypotheses is of course closely associated with the work of Charles Sabel and Michael Piore²³. The disparate and unsystematised nature of many of these hypotheses has been widely noted (Wood 1989), as have the differences between Sabel and

Piore over time (Smith 1989). One is never quite sure at what level the much-trumpeted characteristic of flexibility is supposed to reside: around multiskilled worker; perhaps within the (small) firm; or then maybe at the level of confederations of firms in the value chain of particular sectors or industries? There is a tendency for exponents of F.S. to slide between levels in search of the chimera of flexible working.

These ambiguities reflect two deeper theoretical lacunae:

** a distinct aversion to statistical evidence in sustaining the propositions of flexibility in production, in division of mass markets and especially, in supporting the hypothesis that F.S. constitutes a new epoch of capitalism. This is an observation made repeatedly by critics of the F.S. thesis. Williams et al's characterisation of Piore & Sabel's approach as being founded on 'homiletic examples' is among the most incisive (Williams et al 1987:437)²⁴.*

** a more basic confusion of synchronic (static 'structural-functionalist') models of industrial activity (Pelaez & Holloway 1990:23) with the dynamics of industrial change. In the **Second Industrial Divide**, there are but two models presented for analysis: mass production and flexible specialisation. These are eternalised as the only conceivable forms of capitalist production, with enduring internal characteristics that hold over two centuries of unparalleled transformation in the productive forces. This is a very strained and stylised history (Williams et al 1987).*

*This confusion escalates into policy recommendations for revived economic growth (the **Possibilities for Prosperity**²⁵ for a flexibilising United States' capitalism), which is based on a supposed unity of interest of worker and capitalist. At the end of this policy intervention is the utopian suggestion that new productive structures possess a liberating social potential.*

Similar observations are made in Tomaney (1990), who notes the technological determinism inherent in much F.S. theorising. In this regard, Smith's contextualisation of F.S. theory against a longer (post-1945) tradition of speculation surrounding automation and a supposed end to mass production, is useful.

Given the vast amount of work associated with F.S. and the strengthening body of criticism, the following brief comments will be confined to three relevant critical hypotheses of flexible specialisation. These are:

- * *the attempt to isolate theoretically a new, firm-specific labour aristocracy which, it is contended, is (or will become) central in competitive struggle.*
- * *the contention that minimum efficient scales of production are falling, cutting away the imperative to vertical integration, as it were, from the supply side.*
- * *the proposition that mass markets are decomposing into multiple niches with special characteristics that favour batch over volume production and thus encourage smaller capitals with an orientation towards flexibility in production capacity.*

A new Labour Aristocracy?

Sabel & Piore's analysis of contemporary change in the productive forces registers many of the processes of decomposition and fragmentation of the collective labourer outlined in Chapter 5 above. The inferences that they draw for the organisation of labour are, however, quite different. Whereas the process of peripheralisation of labour is held here to be a continuing feature of contemporary change, they see conversely a recentring of labour at the heart of production. This is the lesson that they draw from team-working, for example. More apparently surprising is their contention that one can dimly perceive the recrudescence of a species of labour power that seemed destined to slide into oblivion under modern industry. They claim that F.S. could yield a new generation of (post-industrial) yeomen²⁴, reborn artisans of a vanguard of creative small firms leading a new, flexible era.

These yeomen then collaborate with designers around general purpose machinery to build products and services for increasingly discerning consumers in a climate of qualitatively and quantitatively variable demand. This reintegration results in a broadly based and accelerating process of labour force reskilling. This conspectus is counterposed against the drab uniformity of Fordism. Colourfully put, then:

'(i)instead of Fordism's use of interchangeable, unskilled worker drones applying their brawn in repetitive Taylorist motions to complement dedicated machines processing parts in a fixed order, flexible niching depends on inventive, skilled employees constantly making informed judgements about how to get the most out of their general purpose equipment in response to dynamic market signals' (Luria 1990:134).

The deep division of labour associated with Taylorism weakens as a result, with workers required to move between machines and to operate a range of different processes. New technology, and particularly the computer, is playing a catalytic role in pushing this transformation. As Williams et al observe:

'Piore and Sabel's discussion of new technology concludes with a paean of praise for the computer as the contemporary equivalent of the nineteenth century artisan's tool' (Williams et al 1987:413).

*The exemplar for this new division of labour (which might indeed constitute the end of the formal division of labour) is the so-called **Third Italy**.*

*Small firm production in the **Third Italy** is indeed characterised by comparatively high levels of lateral movement among workers: but there is a darker side to the Italian artisan's idyll which Sabel & Piore do not dwell on. As Murray (1987) has observed, Emilia-Romagna is also characterised by low ('scarce to non-existent') densities of unionisation. The ensuing lack of protection is reflected in the general absence of employment contracts, the narrow focus on wages where contracts do exist, and the virtual non-existence of labour time regulation. Wages and wage growth, while rapid in a regional context, continue to lag the Fordist metropolises.*

*One may also question the novelty of the relations of production in the **Third Italy**. A weak division of labour is, as many studies have shown, a general and longstanding characteristic of small firm methods. Sabel & Piore are undoubtedly right to connect this labour flexibility with variability of tasks in the context of bespoke or batch production. Yet the issue would be of strategic interest only if new technology were impacting to create radically new skills and if other changes were acting to boost the importance of the small firm sector in the macroeconomy. In this sense, the portrayal of a new yeomanry stands or falls as an argument on the broader conditions of machines and markets.*

The detailed criticisms levelled by the likes of Murray caused some retrenchment and a shift in focus on Sabel's part. As Smith observes, he:

'...has left behind the romanticism of craft in Emilia-Romagna, and embraced the restructuring of Boeing, General Electric, G.M. and Fords as indicative of a new era of corporate community and solidarity' (Smith 1989:211).

*This new emphasis is based on a 'glorification of Japanese and German corporatism' (ibidem). Little more needs to be said on the contention that Japanisation represents a categorical break with the labour control principles of scientific management. The multi-skilling demanded of Japanese production workers is clearly pressured by vertical and horizontal lines of collective force. The degree of autonomy-control (including discretion over production methods) is as strictly limited as under any classically Fordist regime. The process of **autonomisation** pioneered at Toyota, wherein the expenditure of labour power is regulated and patrolled by simple but powerful machine control systems, actively peripheralises labour in the expenditure of the productive forces.*

In short, neither for the artisans of the 'cottage industry' networks of Emilia or for Japanese line workers is the experience of changing production conditions pointing towards a more 'humane' world of work.

The projection of reskilled artisans ultimately serves to distract attention from more fundamental issues. Chief among these is that of labour force segregation, a phenomenon that contemporary restructuring seems in many ways designed to deepen. Luria (1990) suggests that the 'union avoidance payoff' is central to the disintegration and distancing strategies of many supposedly flexibilising firms in the United States. Indeed, he contends that the lower labour costs from operation of smaller plants with low union densities is so large that companies can tolerate reduced technical efficiencies associated with spatial disintegration. The whipsawing of different groups of workers, a regular feature of labour discipline there, is founded on the notional segregation of plants in the same group. These practices have obvious international and transnational equivalents, in for example the repeated and undignified scramble among European unions to dilute national labour agreements to attract footloose investors.

Such segregation practices may, as Luria indicates, explain more about strategies of labour control than any appeal to an imperative to flexible specialisation.

*Even where the argument is narrowly put in terms of skill change, the relativisation of the study of skill change cautions against an exclusive focus on a particular group of workers, however seminal one may believe that they are. That which they have attained could well be secured at a direct cost to others. Empirically, gender segregation is general and intense in the very homeland of flexible specialisation, the **Third Italy**. Murray recites evidence from the engineering sector of the regional capital, Bologna, that exemplifies the narrow gender focus of the F.S. model.*

'While 66 per cent of male engineering workers are in the three highest of the six engineering grades, 96 per cent of women workers are in the three lowest grades' (Murray 1987:88).

The gendering of the yeomanry is no accident, as Jenson (1989) cogently argues²⁶.

The skill distribution in supposedly flexibilising mass production sectors is hardly neutral either. Smith's case study of British food production provides another example of ubiquitous segregation, again in relation to gender. He observes that:

'(t)he gender construction of skills in these mass production sectors is essential to understanding employer strategies and control, but Sabel appears blind to this' (Smith 1989:214).

Sabel & Piore's portrayal of a renascent yeomanry is curiously uncomplicated. They ignore many of the features of segregation and partiality that have accompanied the rise of so-called flexible productive systems. Yet they also fail to register that those characteristics, differently expressed of course in the conditions of the transitional economies preceding modern industry, also manifestly supported the original population of artisans. What is then so desirable about the reinstatement of a group that built much of its economic privilege on rigid forms of exclusion and stratification?

The methodology that supports this approach is less tenable still: a projection into a desired future of all-rounded workers founded on a backward reach into a carefully reconstituted arcady. This idealism clearly connects with the uneasy balance of static (ahistorical) and dynamic concepts of political economy in their work.

The policy recommendation for the present of Sabel & Piore's image of the worker is that the A.C.Cs can rebuild comparative advantage by using their mature educational infrastructure to form a high skill base of flexible workers. This directly supports batch production for high margin niche markets that form these countries' best hope for future accumulation. The sanguinity in this has been widely noted. The competitive vigour of Pacific Rim economies is, as Amsden (1990) observed, founded on a core labour force steeped in technical know-how. Luria also contests this link between F.S., high skill bases and A.C.C. supremacy in respect to complex sub-assembly work in automotives won by Mexican capital.

Flexible Production?

The posited rise of the flexible worker is supported by a new infrastructure of production that is itself founded on specific technologies that seem to support batch or customised commodities over mass production. According to one estimate (Luria 1990), the systematic appropriation of computer-aided design and manufacture (CAD/CAM) may reduce the cost differential between batch and mass producers from between 3-5:1 to between 1.67-3.33:1. If cost saving on batch production of this magnitude were routinely attainable from sensitively deployed A.M.T., then the direct competitive benefits would be significant. There could also be advantage to mass producers' competitiveness through cost reductions on their considerable outsourcing budgets feeding through from higher efficiencies achieved by their batch suppliers. These hypothesised effects underpin much of the public policy work surrounding F.S.

What is the substantive evidence on technical change leading relative efficiency improvement in batch production?

Luria finds that the effective use of 'at least one programmable technology' does indeed permit an easing of the costs of product switching, and this manifests in shorter production run lengths for a given level of labour productivity. Again, the deployment of A.M.T. permits smaller plants to attain labour productivity levels comparable with larger establishments (Luria 1990:150-1). These tools are, then, permitting '...efficient production in smaller batches'. He emphasises however, that the correlation is a weak one.

Williams et al also study the operational implications of A.M.T., focusing on robots and F.M.S. This similarly illustrates the weakness of the connection between A.M.T. and radical flexibility in production. In both cases, throughput requirements remain high. For robots, a Japanese study cited in Luria suggested that manufacturers there were '...using robots in operations with average cycle times of 20 seconds, which corresponds to annual output of 360 000 units' (Luria 1990:n39). Radical switching of operations (between models, for example) is moreover, anything but simple or inexpensive. Commissioning costs, including for the production of dedicated software, constitute a significant proportion of total outlays: these are generally model-specific and architecturally rigid. Images of the robot as the universal worker or of A.M.T. as the modern artisan's toolkit are largely fanciful.

*Batch, and especially customised, production is associated with smaller firms. The assertion that relative efficiencies are changing is *ipso facto*, a claim for the dynamic vitality of small capital in the*

launch of a new epoch of accumulation. The supporting statistics have of course, to be read with care. Luria observes for the U.S. that smaller firms increased employment share and sales per employee at the same time as average plant size actually increased! If new technologies only weakly support small firms in batch production activities, as the foregoing suggests, then perhaps the change in degree of product diversity attributed to the flexible microfirm by F.S. theorists has been overstated.

Luria's (1990) contribution on the issue of diversification is outstanding. His provisional conclusion is that, far from increasing output diversity on the basis of a more flexible utilisation of the productive forces, most firms are actually reducing the number of products per plant. This is based on a comprehensive study of the U.S. economy between 1963 and 1982, undertaken by F. Gollop and James L. Monahan. There are distinctions of degree between firms producing for end-use markets and intermediate producers, but the overall trend is clear: 'the manufacture of intermediate goods is increasingly the province of single-product plants, or "focused factories"' (Luria 1990:148).

When one recalls that Department I production comprises the overwhelming majority of U.S. manufacturing activity, then these results cast a long shadow over the contention of flexibilising small firms.

There is more. The inter-plant 'efficiency gap' is growing most rapidly between diversified and focused factories, while the degree of output diversity is falling most rapidly in the smaller plants. Luria undertakes further testing for very recent output change, finer definitions of product mix and for serial diversity (the capacity to switch tooling 'with little or no additional capital investment' so as to produce different single products over the production period). These more refined tests do not, however, alter the basic finding, that:

'there is no basis for the claim that the supply-side of US manufacturing is being fundamentally transformed by the nichification of market demand, if indeed it is taking place' (Luria 1990:148-9).

Crucially, output-capital ratios for firms engaging in batch production continue to lag those in mass production by a significant margin, due to the continuing haemorrhage in operating ratios arising from switching downtime. A.M.T. has not radically impacted on capital utilisation in the manner that Sabel & Piore expected. At the same time, labour productivity growth in the larger plants continues to outstrip that of smaller establishments by a wide margin.

In light of such evidence, it is hardly surprising that Sabel should latterly have come to emphasise the role of flexibilising mass producers. One manifestation of flexibility in volume production is, of course, the degree of process/product switching. The evidence on falling production runs, which is the best (if distant) surrogate for such flexible switching, is complex. In the car industry, Luria (1990) suggests that minimum efficient scales for engine and transmission production, body stamping and final assembly may have been halved in the U.S. since 1970- a significant achievement. This would at first glance support Sabel's position. Again though, the limits on flexibility need to be emphasised.

Elsewhere, Williams et al note the very long production runs of Japanese manufacturers, which are unfailingly presented by Sabel & Piore as paragons of F.S. These high volumes are founded on a protected home market and global export penetration- a favourable competitive position indeed. Yet the limits to the elasticity of the Toyota paradigm are, as already noted, tightly drawn even under the most honed of integration systems. Luria's analysis of the production economics of the ill-fated G.M. Saturn project similarly indicates the continuing sensitivity of capital costs to underutilisation.

There is no doubt that mass producers are actively seeking ways to build greater flexibility into their productive systems, but the results have been mixed. Some have resstructured lines but many have not. Thus Smith (1989) finds no evidence for fracturing assembly lines in food production, for example. Many manufacturers have deployed latest production line techniques, with variable outcomes. Japanisation has proceeded unevenly in the U.S. and Europe, while the adoption of systematic integration systems remains at best a programmatic commitment for most large firms. These are cautionary experiences rather than the paragons of the highly stylised transition that F.S. presents.

Market Fragmentation:

*It is the hypothesis of market fragmentation that is in many ways theoretically decisive to the F.S. project. Elam (1990) characterises this (neo-Smithian) emphasis on demand as **market determinism**. The dissolution of mass markets provides a microeconomic linkage between consumption and production. This relation pivots on the depth of the division of labour. Where uncertainty is high and instability is growing, then the degree of risk involved in large scale production of standardised commodities also rises. This offsets any cost advantage from further detailing of labour power and thus provides a supply side barrier to the growth in plant size. Indeed, the increasing burden of demand uncertainty pushes the maximum efficient scale down, making small plant working increasingly attractive (Elam 1990). Herein lies the importance to F.S. theory of the claim for productive efficiency at low output levels of smaller firms, as Williams et al observe.*

'Under flexible specialisation adjustment to the market is not a major problem and macro regulation is not so crucial. This is because flexibly specialised producers employ general purpose equipment... which enables the enterprise to shift within and between families of products' (Williams et al 1987:409).

Williams et al make some important general points about contemporary market dynamics that are worth recapping here. In the first instance, they differentiate between the saturation of markets and market fragmentation and breakup.

On market saturation, they highlight the significant (and relatively inelastic) levels of replacement demand for consumer durables. Sabel & Piore's contention that volume increases are required for cost reduction under mass production is rejected on the basis of 'L'-shaped cost curves. They conclude that:

'(t)here is no good reason why enterprises and industries should not make steady and less risky profits by meeting a large and stable replacement demand which does not tempt producers to invest in over-capacity' (Williams et al 1987:425).

Even where sales penetration levels are high, there is always the possibility of redefining the product. This rejuvenation of supposedly mature commodity markets is a standard tenet of management studies, which has for some time now qualified the classic product life-cycle model. In this regard, Williams et al note the waves of new and recycled high-margin products of recent years, including the recasting of even the ubiquitous television in a number of enticing variants. For multi-product mass producers, a balanced portfolio of products will at any given moment straddle a cross-section of markets with different growth trajectories ranging from relatively static to highly complex environments.

Sabel & Piore's more radical claim is that key markets are fragmenting with increasing discrimination of consumer tastes. This is contended to be the crucial stimulus to market fragmentation and it is important to their case that it comes through from the structure of demand. As Williams et al observe, this supposed trend would only assume strategic significance (in terms of the potential dissolution of mass production) '...if markets were breaking up in a way which creates patterns of demand which mass production cannot cope with' (Williams et al 1987:426).

Williams et al flatly reject this proposition, on the basis of two simple but pertinent observations. First, extreme product differentiation has long typified volume producers' marketing strategies. Far

from being threatened by such tendencies, indeed, the archaic Sloan strategy at G.M. illustrates that it is in the tactical interest of assemblers to embrace such market segmentation. Segmentation obviously raises sales margins but also encourages compression of the repurchasing interval. This is an approach that has been perfected by Japanese manufacturers and has nothing whatsoever to do with market-driven flexibilisation.

Luria sought the views of a panel of industry experts on market breakup. Across eight key sectors of the U.S. economy, only two were moving towards fragmentation according to this subjective appraisal: cars and clothing. The largely cosmetic product differentiation to which Williams et al refer typified the other six sectors of chemicals, oil, steel, gas and electrical appliances and food production.

Smith's (1989) case study of British food production provides support to these views. A rise in numbers of product lines here is not attributable to any significant 'broadening' of tastes, but rather to pressure from increasing own-labelling by powerful retail groups. This is obviously a supply-side imperative.

Even for cars sold in the United States, the evidence of fragmentation links directly with the capturing of U.S. dealership networks by non-U.S. assemblers and increased sales of their models. This expanded the total portfolio of models available to U.S. consumers and then reduced average sales volumes for domestic assemblers. The response of U.S. firms has been to attempt to reduce their product range while increasing technically trivial product differentiation (the plethora of 'add-on trims') (Luria 1990).

Second, the case of Japanese manufacturing illustrates that mass production is well capable of meeting the operational difficulties posed by segmenting markets. They deploy advanced production planning to permit assembly of multiple batches of differentiated products on lines that are as long as any associated with Fordism. Again, Williams et al draw the appropriate conclusion in their discussion of the economics of flexible manufacturing systems.

'In this respect the crucial consideration is not batch size but the cumulative volume of all the batches produced through the year' (Williams et al 1987:432).

It is quite possible to maintain volume throughputs (and therefore, operating ratios) on the basis of complex families of commodities, though of course, the technical and social mastery of such integrated production systems continues to elude much of U.S. and European manufacturing.

Where markets do become more volatile, moreover, large firms have typically used the smaller firm networks that surround them as demand buffer zones.

Finally, Luria observes that Department II production accounted for only approximately 15% by value of total U.S. manufacturing production in 1985, with the remainder consisting of intermediate goods. The direct effects of consumer market fragmentation would obviously be far more limited than F.S. advocates have suggested!

Given the humanist and social democratic orientation of many of the promoters of F.S., perhaps the most surprising lacunae in their market determinism are the extraordinarily evacuation of issues of distributional equity; and a unilateral reading of the effects of (supposed) market change on productive efficiency. In terms of changing incomes, it is as though Friedman's helicopter has passed overhead again, showering out a chance allocation of purchasing power. The ramifications of this income-fortuity on the productive base are then read as unmitigatedly benign: supply-side economics writ small. These issues have been posed by Luria (1990) in a less partial manner. He proposes four 'testable hypotheses'.

(i) 'Is luxury consumption a rising proportion of total consumption in more than a superficial sense?'

(ii) 'Is there evidence that market segmentation is being driven by growing income-share inequality?'

(iii) 'Is the consumption bundle of the upper and upper-middle income strata produced under qualitatively different run-length and wage-earning conditions than the consumption bundle of the rest of US society?'

(iv) 'Is the industry mix associated with the production of the output to satisfy the consumption of the upper and upper-middle strata different than the mix associated with the rest of society, and if so is it a lower-productivity mix?' (Luria 1990:154-5).

These questions necessarily prompt a more balanced exploration of the connection between the spheres of distribution and production than the partial and overexcited market determinism of the proponents of flexible specialisation. What are Luria's answers?

To question (i), the answer is affirmative. There was a 'doubling in the number of high-income families' in the United States over the decade from 1976, a trend closely associated with intensifying regressive taxation. This was fed by rising poverty and a reduction in numbers of households on middle incomes.

Similarly with the second hypothesis: the growth in the population of high-income families has driven the development of 'top end' market segments. This has also sucked in imported commodities in key sectors like cars, where the product mix shifted dramatically towards luxury (largely European) class purchases (up from 32% in 1978 to 63% in 1987).

Luria's test for proposition (iii) is simple and elegant. He attributes sales bases of a sample of thirty U.S. industries according to the income levels of consumers. This yields a bundle of ten 'high-income tilted' (H.I.T.) sectors wherein sales to high-income consumers exceeded 42% of the total. The other twenty 'medium-income dominated' (M.I.D.) industries were characterised by sales to middle-income consumers of in excess of 50%. Luria then calculates the ratio of value added to materials cost (a surrogate for degree of batch production) for the high-income tilted and medium-income dominated subgroups. He concludes that the H.I.T. sectors were indeed oriented towards batch production, while mass production typified M.I.D. sectors. Obviously then, distinct systems of production are being used to meet the different consumption bundles of high-income and middle-income strata. It also follows that a regression in income distribution will tend to encourage batch over mass production.

In terms of industry mix (hypothesis [iv]), Luria's findings are even more intriguing. Labour productivity in the ten H.I.T. industries lagged that of the M.I.D. group, as did wages by a considerable margin. He then calculates 'what average labour productivity and average pay would have been, ceteris paribus, in 1986 had the 1970 consumption distribution remained in force' (Luria 1990:157). He concludes that the regression in income distribution has lost the U.S. economy both earnings and productivity growth. These are conservatively estimated at 'about 1.2% of manufacturing output and 2.4% of manufacturing labour earnings' per annum.

Luria's work clearly demonstrates the contradictory dynamic of production and consumption. While F.S. proponents are correct to stress the importance of market conditions in the growth of productivity, the conclusions that they derive as to the progressive impact of fragmentation are demonstrably wayward.

Also visible in Luria's account are the shadows of different accumulation paths. A politics based on the nostrums of flexible specialisation risks encouraging low productivity small firms typified by poor conditions of work at the expense of the more dynamic mass producers. Regressive redistribution of income compounds this trend to low productivity by undercutting the mass market incentives to reducing the value of workers' subsistence bundle. Luria rightly emphasises the importance of 'cheapening the elements of majority consumption' in the development of contemporary U.S. capitalism: what he is highlighting is the centrality of relative surplus value extraction to accumulation.

NOTES TO CHAPTER 5

1. As Pronovost (1989:50) observes, paid holidays were legislated as early as 1936 in France during the *Front Populaire* period (twelve days' entitlement).

2. The full references are: O.G. Edholm (1970) 'The changing pattern of human activity' *Ergonomics* 13:6; and Frank J. Poper (1970) *A Critical Evaluation of the Empirical Evidence Underlying the Relationship Between Hours of Work and Labor* Ph.D thesis, New York University.

3. The phrase is from Tomaney (1990:33): the context, an excellent critical dissection of Piore & Sabel's exemplification of the Japanese production model.

4. This relation between large plants and assembly line working is reflected in the results of the Molinié & Volkoff study of the French economy, reported by Doray. Here:

fewer than 2% of all workers in companies employing under 50 people work on an assembly line; for companies employing between 1,000 and 4,900, the figure is 10.2% (Doray 1988:156).

5. Seymour Melman's 1951 discussion of the causes behind this growing proportion of overhead to direct labour over the Fordist epoch remains among the most careful available (Melman Seymour [1951] 'The rise of administrative overhead in the manufacturing industries of the United States 1899-1947' *Oxford Economic Papers* 3). To substantiate the general experience of rising overhead, he provides the following multi-country comparison for manufacturing and mining industries:

NUMBERS OF NON-MANUAL WORKERS PER 100 WAGE-EARNERS

COUNTRY	1905-11	1919-25	1929-34
<i>Australia</i>	7.1	9.4	12.1
<i>Belgium</i>	4.9	-	9.1
<i>Canada</i>	8.6	15.8	16.9
<i>Germany</i>	-	11.9	14.0
<i>Great Britain</i>	7.6	9.5	11.3
<i>Sweden</i>	9.0	10.2	13.1
<i>United States</i>	11.9	15.9	15.4

Source: Melman 1951:63; abridged.

6. *The primitive individualism of much industrial research work enabled teams, and even key individuals, frequently to wander away from corporate objectives. This was tolerable for so long as key competitors suffered the same fate. Indeed, virtue was often made of necessity, with U.S. corporations laying claim to a role in the blue skies of pure research. When competition stiffened, new attitudes came to the fore. The exasperation at typically individualised modes of work practice is clear in the observation below.*

'From the windows of the corporate finance office, the research center has looked more like a resort for misplaced academics than a business division. Scientists often seem motivated by obscure, intensely personal goals rather than company goals' (Elizabeth Corcoran 'Redesigning research' Scientific American vol. 266:6 June 1992).

The shutdown strategy that ensued from these changed imperatives has been dramatic.

7. *The most influential among these remains the U.S. Dictionary of Occupational Titles (D.O.T.), with an encyclopaedic 12,000 job categories in its fourth edition. The limitations of such systems are widely registered (see Vallas 1990:384-5). Chief among these are that:*

** the D.O.T. unilaterally focuses on measures of substantive complexity, thus minimising issues of autonomy-control.*

** skill classification of jobs across successive editions has frequently not been independent, so that '(e)arlier scores prejudiced later ratings'.*

** evaluators have been systematically influenced in their skill assessments by subjective aspects of status and prestige.*

** there has been a tendency to overlook new occupations in the revision of the Dictionary.*

These factors combined will cause some understatement in the degree of skill change in aggregate studies based on the D.O.T.

8. *For a detailed explication of the limitations on concrete skill evaluation posed by inadequate job design and specification systems, especially in relation to gender and comparable worth, see Steinberg (1990).*

9. Thus in the United States, more than 50% of employed working women in 1870 were occupied in various forms of household labour. This proportion fell rapidly to around 16% in 1920, rapidly if unsteadily again from 1940, so that the share stood at approximately 2% by 1980 (Wallach Scott 1982:146).

10. MacKenzie also summarises some interesting work on the relation between gender and technology. As one might expect, these relations tend to assume importance in situations where issues of craft and control are paramount (in Ure-type mechanisation). The most famous example of work in this field remains Cockburn's case study of male composers' separation efforts (Cynthia Cockburn [1981] 'The material of male power' *Feminist Review* 9; [1983] *Brothers: Male Dominance and Technological Change*). Jenson gives such work an unqualified approval.

'When the composers faced technology which threatened the dominance of the craftsmen in the shop, they fought it as a challenge to their own power, which included their power to be men... their identity as skilled craftsmen encompassed not only the boundaries between themselves and the owners and themselves and non-skilled men, but also a gender boundary' (Jenson 1989:147).

Very often then, craft, technology and gender intertwine in employer simplification strategies.

At another level, one is again struck by the crafted basis and craft assumptions of much of this analysis. Evidence repeatedly suggests that Ure-type mechanisation is of subordinate import in contemporary deployment of machinery.

11. The induction period is here defined in a subjective manner as the required worktime for workers to feel confident in their ability to do the job well and repeatedly.

12. Where workers are subjected to double discrimination (black women, for example), the inequalities of separation are viciously accentuated. Steinberg, in reporting on research undertaken in the United States into wages comparability, notes that 'the highest estimates of undervaluation are generally found for minority females, pointing to the combined impact of gender and race' (Steinberg 1990:n.2).

13. K. Ohmae, cited Holland S. *The Global Economy: From Micro to Meso-economics* 1987:167.

14. *Aside from labouring long and hard, Japanese workers and their families also pay personally for the employers' requirement for geographical mobility. As Dave Osler observes:*

'(w)orkers are routinely moved from plant to plant, leaving family behind. The word Tanshin-Funin ("transfer-separation") has entered the language' (D. Osler 'Partners in crime' Socialist June 1992.

15. *The cross-holdings of the typical keiretsu are formidably difficult to unravel, as Thomson for example, notes of the Mitsubishi Corporation, then seeking a listing on the London stock exchange.*

'The cross-holdings are complex. Mitsubishi Corporation is 5.5 per cent owned by Mitsubishi Trust, 4.9 per cent by Mitsubishi Bank and 3.1 per cent by Mitsubishi Heavy Industries (MHI). MHI is itself 6 per cent owned by Mitsubishi Trust and 3.6 per cent by Mitsubishi Bank, the world's fourth-largest bank. It is 3 per cent owned by MHI, 1.9 per cent by Mitsubishi Trust, 1.7 per cent by Mitsubishi Corp and 5.7 per cent by Meiji Mutual Life Insurance, an unlisted member of the group. And so the pattern continues' (R. Thomson 'Mitsubishi courts London friends' Financial Times 4th October 1989).

16. *For a brief resumé of Ferguson's arguments, see P. Wallich 'David or Goliath?' The Analytical Economist Scientific American 263:4 1990*

17. *See n. 19 of chapter 4. The early development of robotics would undoubtedly have been influenced by the many popularisations and fictional depictions of social change under the impact of robot working. Isaac Asimov's series of robot stories certainly impacted on a large segment of the intelligentsia.*

18. *There is a growing and extremely interesting literature surrounding the mechanisms and peculiarities of Japanisation in the U.S. and Europe. Jürgens (1989) is centrally concerned with this. As he notes, there is a distinct vector of development in Germany that has also been of influence in shaping contemporary competitive strategies. Parker & Slaughter (1990) deal in some detail with the ramifications of Japanisation on the industrial relations and working conditions of the U.S. automotive industry, while Scherrer (1991) adopts a similar focus for cars and steel. In both cases, what comes through are the distinct plant-level variations in operations, and the varying resulting impact on accumulation. For a further analysis of General Motors' troubled Saturn production plant, see Meyer (1986) and for an interesting analysis of the origins, operation and transfer of JIT., see Sayer (1986).*

19. This very important taxonomy was generated from empirical work undertaken in the British engineering industries in the early-1970s: see Martin Bell *Changing Technology and Manpower Requirements in the Engineering Industries* Sussex University Press 1972.

20. Computer Integrated Manufacturing (CIM), rather than so-called 'workerless factories', represents a probable historical zenith to automation. These systems are characterised by comprehensive remote direction and activation of machinery, mechanised integration and real-time process feedback. In CIM., workers' uniquely flexible (and cheap) bundle of sensory and learning capabilities are typically reserved for the detection and correction of specific kinds of problems, forms of disturbance that Hirschhorn calls 'second-order' errors. These are irregularities that lie beyond the design regulation and correction capabilities of the automated systems or those that were not anticipated in design or subsequent operation.

These practices, and indeed the integration imperative as a whole, is designed to smooth yet further the 'lumpiness' associated with assembly operations. As Palloix (1976) noted, discontinuous production continues to approach the low-balance integration of the continuous flow model of production.

In one interesting interpretation, based on the work of Michel Foucault (Sewell & Wilkinson 1992), the visibility inherent in the real-time remote regulation of CIM-type systems can be interpreted as a partial fulfilment of the control imperatives inherent in Jeremy Bentham's proposal for a highly visible prison system (the *Panopticon*). They opine that:

'(t)here is now the possibility of the creation of... an *Electronic Panopticon*, where a disembodied eye can overcome the constraints of architecture and space to bring its disciplinary gaze to bear at the very heart of the labour process' (Sewell & Wilkinson 1992).

21. The specific context of Michie's remarks is an attack on 'Post-Fordist' theory. Michie is using integration of the technical collectivity to illustrate the continuing thrust to standardisation, massification and centralisation in the car industry. He observes, then, that while similar plans were largely shelved in the 1980s, and '...despite being written off as history by the theorists of Post-Fordism, they are now firmly back on the agenda' (Michie 1990:3).

Of course, Japanese capital has not had to face the inherent problems of spatial dispersion to any comparable degree, until very recently at least. Under pressure to establish major satellite plants in Europe and the U.S. (on pain of severe market limitation), the Japanese manufacturers are not

finding the transition simple. Scherrer (1991) notes the high turnover of managers and the technical limitations of an obsolescent supply infrastructure in the U.S. The efficacy of the integration systems of the property connection (the well-recorded migration of Japanese suppliers with their tail of assemblers) and of the real appropriation connection will be thoroughly tested in the context of multi-continental operations.

22. *This affirming characterisation is taken from those leading advocates of flexible specialisation, Piore & Sabel.*

23. *Key references include: M. Piore & C. Sabel (1984) **The Second Industrial Divide**; Sabel & Zeitlin (1985); and C. Sabel (1982) **Work and Politics**. The hypotheses of H. Kern & M. Schumann, working, as Tomaney (1990) observes, ‘...at a different theoretical level’, have also been influential in the arguments over **flexibility**. See Tomaney (1990) for full references.*

24. *Lauria’s excellent article, peppered with ingenious statistical testing of the most intractable aspects to the hypothesis of F.S., also makes the same point with characteristic understatement.*

‘With relatively few exceptions, the case for flexible niching has been made at either a highly abstract, macroanalytic level, or at a very micro, case-study level in which stories and anecdotes substitute for trend lines and significance tests. In part, this reflects ...a certain lack of rigour’ (Luria 1990:139).

25. *This is the subtitle of Piore & Sabel’s work, **The Second Industrial Divide**.*

26. *After a convincingly damning exegesis of the gender assumptions in their work, Jenson (1989:142ff) concludes that women ‘somehow disappear with modernity’ into a post-modern future. The disappearance, while unwelcome in itself, is also theoretically a mirage, as a threefold set of ‘if-statements’ make clear.*

‘If, for example, employers make use of the female and male labour force in different ways, if the development of a more “flexible” labour force also means rising rates of feminization, if only men are likely to be “flexible specialists”, then a world of post-Fordist flexible specialization is very different- and less benign- than that which Piore & Sabel assume (Jenson 1989:144-5).

Jenson finds ample evidence to support her three ‘if-statements’.

CHAPTER SIX

THE CHILIASM- 'LA REVOLUTION DU TEMPS CHOISI'?

'By the mere fact that certain sections, groups and strata claim for themselves, as their major occupation, a life-long universal and creative activity in politics, science and art, thus monopolising that work which inherently leads to the development of the individual's essential powers- by this fact they condemn other groups and strata to occupational limitation, if not to the stultification of their brains. And naturally enough, they project this condition materially into the future, through their decisive influence on the planning of investments, educational institutions and mass communications' (Bahro 1978:181).

The primary objective of the preceding two chapters has been to assess the critical relationships between historical epochs and Sève's putative personality infrastructure. This story centres on the structure and flux of use-time. With empirical work continuing to support the seminality of socialised labour in the development of the conditions for mental and physical health and learning, the emphasis that Sève placed on abstract activity (more precisely, labour) in the overall complex of individual acts appeared at least defensible as an analytical starting point.

One then looks for the threads that tie personality development to the conditions of labour in contemporary production. Devine's highly stimulating attempt to capture the complexities in Marx's notion of complex labour power pointed the way here. The four key factors that he identified structured the historical analysis of the transition to and the periods of modern industry. To recap, these factors were: the length of working time; the intensity of labour (the converse of porosity); the average value-creating capacity of a defined working population; and the multiple of average value-creating capacity induced by mastery of concrete skills.

Chapter 5 indicated the necessity of modifying this approach in light of two further empirical developments. First, a degree of socialisation of the costs of capacity-building, combined with rapid compositional change and a degree of occupational polarisation, increases the importance of relative skill effects in determining the value of labour. In terms of biographical

development, this relativisation further attenuates the relation between learning for labour (sector I_A acts) and the income and occupational resultants. The motivational effects of this increasing socialisation and contingency are as yet unclear.

Perhaps more significant, the increasing penetration of mechanised forms of production, culminating in the reflexive mechanisation of the integration function itself, objectively peripheralises labour. Peripheralisation necessarily engenders its opposite, the centripetal force of collectivisation. As Palloix *inter alia* noted, the collective labourer enforces its own discipline and regulation on individual labours. In this narrow vein, the effects of collectivisation can perhaps be adequately captured in the skill coefficients proposed by Devine, and no major emendation is then required. This is the weak challenge to individualist methodologies presented for example by the hypotheses of the situated learning school.

Contemporary collectivisation throws this interpretation into doubt. The adoption of integrated production systems extends the reach of transindividuality to new groups of workers (in particular, to the mental labourer). More important, it deepens the collectivity, in a move that Adler types as systemic interdependence. This transforms the received dimensions of space and time in the production process and totally subjugates (in principle) the abstract labour of one individual to the simultaneous labour processes of the collectivity. In these work contexts, the transindividual form delimits all four of Devine's factors and is causally dominant.

The thrust of the argument presented here is then both historical and at many points, objectively transindividual. While many other valid criticisms have been levelled at analytical marxism, the fact of this empirical transindividuality resident at the very heart of working life is in many ways the most damaging.

The historical schematic of use-time has also permitted important qualifications to be lodged against some of the more wayward projections to be found in Sève's work. The relativity of personality dichotomisation- a product of the rise of capitalism and the supersession of task orientation- provides a noteworthy example.

More generally, Sève's reading of the fate of skills and other aspects to abstract labour under capitalist relations appears on closer inspection to be far too univalent. Where intensification is not matched by reduced working schedules and job redesign, where in short, machine-mediated ASV/RSV extraction combines with extensive work practices, then surely the worker is absolutely enervated. The victims of *karoshi* symbolise this lethal combination. This is a common

condition in many of the late-industrialising countries and represents a peculiarly contemporary twist to the practice of primitive accumulation.

Yet the history of the development of abstract labour across the A.C.Cs considered as a whole is nowhere near as negative. The fixing of times and the codification of methods has a progressive element to it that can be and indeed has been captured and used to effect by labour movements in Europe to attain historically remarkable improvements in general working conditions.

The central theoretical conclusion that may be drawn from this overview is though, that there is no intrinsic or transhistorical relation between the path of accumulation and the development of personality. The outstanding productivity record of modern industry has permitted active temporal reform in a manner that no previous mode of production could have sustained. Yet current retrenchment indicates the fragility of any ergonomic *settlement* (which is anyway continually undermined by further intensification). In this regard, capitalism is neither beneficent or inimical to personal development. In truth, the threads that tie the fate of individuality so closely to the changing political economy cannot be enlisted to support the general philosophical positions of either humanism or anti-humanism. The concepts of indifference and superordinacy then assume a central theoretical role.

There are nonetheless regularities in accumulation that imply much for the direction of human development. Temporal compaction and saving is a central feature of capitalism. In his later writings especially, Marx was to impute a progressive potential to these tendencies⁷ (Julkunen 1977; Pretcielle & Terrail 1985). At one level, the increasing productive capacity of modern industry would effect aggregate timesaving, expand the *time fund* and open new possibilities for discretionary social activity. (Marx contended, of course, that the fulfilment of this promise eludes the class-based partialities of capitalism.) This characteristic rationalisation of working time also enhances the individual capacity to produce an ever greater volume of what Julkunen has loosely termed *material and spiritual values*.

‘The more compact time is, the more values are produced and the higher the level of production and consequently also the average level of development of individuals’ (Julkunen 1977:8).

This deceptively easy progression from the imperatives of material production through the economy of time to an hypothesis of human development is in fact highly controversial. There is, in the first instance, a rather large measurement problem, as Filipcová & Filipec observe:

‘...in this specific case, “measuring” development and progress remains an entirely unresolved and extremely urgent scientific problem’ (Filipcová & Filipec 1986:27).

The tests of Sève’s theory undertaken in previous Chapters were, as noted, based on extensive use of what were clearly deeply unsatisfactory surrogate variables for all key aspects of use-time. The measurement problem is then real and complex.

Sève’s Hypotheses illustrate moreover, that the possible ramifications of changed conditions of abstract labour on the infrastructure of personality are manifold and contradictory. It is then unrealistic to project any simple and direct progression from the tendency to compaction of working times to the level of development of individuality. These contradictions in development are registered in Marx and in the broader tradition that Julkunen describes, and in a very familiar manner. Where only one segment of use-time is subjected to systematic rationalisation (abstract labour), then problems of psychological *proportionality* arise.

The Ubiquity of Inequality:

One encounters here the numerous manifestations of temporal and psychological imbalance of contemporary personality: and, lurking behind these, the enduring inequality in access to the resources of biographical development that separation practices universally generate.

Sensitively used, time budget surveys may provide a different window on the extent of these dimensions of biographical difference. The caveat is important: a large number of time budget exercises have been undertaken since their extensive deployment in the post-revolutionary Soviet Union (Julkunen 1977; Pronovost 1989). The methodology remains, however, troubling, trapped in an innately individualist framework and, as Julkunen rightly observes, invariably cross-sectional in approach. Even where comparisons are drawn over time, the method is essentially that of comparative statics.

At its best though, the cross-sectional method can stimulate the drawing of broad comparisons of use-time between different segments of the population. This is exactly what Belloni attempts, in a time budget analysis undertaken in 1979 of a large sample of the (working) population of Turin in northern Italy (Belloni 1986). Belloni divides the sample frame into four economic classes: the Upper Class, encompassing owners and senior managers; the Subordinate Middle Class (administrators, technicians, teachers); the Autonomous Middle Class, basically traders, often within family businesses; and the Lower Class (‘manual and subordinate

occupations'). The patterns of time use of each are then analysed according to five broad categories reflecting the degree of autonomy/latitude associated with particular acts.

In broad terms, Belloni finds a remarkable similarity in the overall allocation of time to different activities as between the classes. One explanation for this might be the high degree of temporal 'rigidity' and synchronousness characteristic of *urban-industrial* living. Another explanation could be that the mode of production, more precisely, the imperatives of accumulation, press down with force on all of those party to production. The extent of this uniformity might suggest at first sight an unanticipated degree of equality. The qualifications come through on the more nuanced reading that follows:

- * *the upper class 'is privileged in having a huge quota of free time'. This is founded on the shortest working day of any social class, but is accentuated by the extensive use of paid domestic assistance to discount the compulsory time associated with housework.*
- * *the autonomous middle class works the longest hours and enjoys the lowest proportion of free time. In the case of Turin, this class is composed virtually entirely of independent traders and retailers: the petty bourgeoisie.*
- * *the 'quality of work' is highest for these two classes, as reflected in 'greater commitment and less absenteeism' when compared with the subordinate middle class of administrators, technicians and other operational employees. Direct workers do not enjoy the latitude or job security to indulge in systematic work detachment.*
- * *there is far greater integration of free time with working time among the upper class than in any other social class, both over the course of a day and in terms of a more diffuse division of workweek and weekend. As Belloni observes, 'it is sometimes difficult to distinguish free time from work time... so closely do individual cultural interests coincide with work content' (Belloni 1986:73).*

This last observation is arresting: the degree of interplay of acts of the employed Turin upper class is reminiscent of relatively unstructured (task oriented) pre-capitalist biographical forms: does this indicate a more systematic class delimitation of use-time dichotomy²? When the sample data is interrogated along gender and class lines simultaneously, then the inequalities among the working population become yet more pronounced. It is perhaps appropriate to reproduce here Belloni's results in full:

DAILY TIME ALLOCATIONS TO KEY ACTIVITIES BY SOCIAL CLASS & GENDER

SOCIAL CLASS \ ACTIVITY	UPPER CLASS	SUBORDINATE MIDDLE CLASS	AUTONOMOUS MIDDLE CLASS	LOWER CLASS
<i>MEN</i>				
Housework	57'	59'	1h 09'	1h 23'
Paid work	7h 18'	8h 05'	8h 54'	8h 02'
Childcare	1h 27'	1h 13'	1h 12'	1h 10'
Purchases & services	53'	1h 04'	46'	50'
<i>WOMEN</i>				
Housework	2h 33'	3h 12'	3h 44'	3h 49'
Paid work	5h 23'	7h 01'	7h 07'	6h 47'
Childcare	1h 43'	1h 31'	1h 24'	1h 00'
Purchases & services	49'	1h 02'	43'	55'

Source: Belloni 1986:73; abridged.

The stark inequalities in allocations to domestic labour (principally housework) across all social classes are perhaps unsurprising. In this context, it needs to be emphasised again that these figures are based on responses from women who were all engaged in social labour of one kind or another. The temporality of those women who were not in paid labour (including 'housewives') was thus excluded. These temporal allocations are moreover, averaged across that proportion of the sample which actually reported undertaking such activity. The ratio of those undertaking such acts to the total sample is labelled the *participation rate*. Only 30.9% of autonomous middle class men reported undertaking any housework, while the figure for men from the lower class was just 36%. Participation rates for women were 93.9% and 88.1% respectively! Conversely, participation rates in paid labour were only slightly weighted towards males.

Viewed dynamically, these figures confirm an oft-repeated observation, that as female labour force participation rates grow, there is no commensurate reduction in domestic labour time or equitable redistribution of domestic work between male and female in heterosexual partnered

households. Thus, '(w)omen in the labour market spend twice as much time as men do on housework, and housewives spend three times as much' (Pronovost 1989:82).

Bearing primary responsibility for domestic labour while also undertaking paid labour on a substantial scale enforces unique temporal pressures on women. Such tension:

'...obliges them to find ways of coping with their dual "role". They resort to a variety of expedients: reduction in leisure and rest time, reduction in housekeeping and family tasks, choice of reduced or part-time occupations, or absenteeism' (Belloni 1986:72).

As Pronovost observes, there is a convergence in the findings of the various time budget studies undertaken across the A.C.Cs: there is no reason, then, to regard Belloni's findings as exceptional, save insofar as the social composition of the Turin economy is unusually skewed towards independent traders and retailers.

Belloni's useful study omits consideration of three important segments of the urban population: women working solely in domestic labour; retirees from the labour force; and the unemployed.

Given the significance of socialised labour, the motivational crisis posed to those who are prematurely expelled from the labour force is universally regarded as severe. Unemployment has been characterised as '...the most tragic form of economic and socio-cultural strife' (Filipcová & Filipec 1986:27). Given its seemingly inexorable, secularly rising trend², it is curious to note, following Pronovost (1989), that 'the use of time among the unemployed has not been adequately examined'. The motivational crisis is clearly there, manifest in the well-remarked phenomenon of the *discouraged worker*. There is also a tendency to temporal disintegration: time is plentiful and becomes devalorised, while sequencing of acts weakens and the biography destructures. As Sayers observes:

'(w)ork not only demands activity; in the form of a job, at least, it imposes a time-structure on the waking day. The absence of such a time-structure is also usually experienced as a problem by those who are unemployed' (Sayers 1987:19).

In broad terms, expulsion from the labour force also connotes evacuation from the general economy of time. The resulting passivity can be equated directly with a reality of social timelessness (Pronovost 1989; Wheelock 1990). Time structuring can then, play a positive role in biographical development. This is an important argument that shall be developed further below.

The social localisation of unemployed people clearly does wreak severe damage to motivation and to the capacity for intensive development: what is the extent of the psychological havoc? According to Filipcová & Filipec (1986), the impairment is total, with the unemployed worker being ‘...deprived of all prospects of professional and human betterment’. The evidence suggests that this conclusion is too sweeping. Jane Wheelock’s study of a small sample of families on Wearside in the English north-east indicates a continuing biographical adaptability and capacity for at least limited personal development. Her study area is, as she observes, ‘often perceived as holding strongly to traditional gender role stereotypes’. Yet through detailed interviews, she establishes a considerable (if variable) restructuring of the gender balance of use-time in families with unemployed male partners. As she concludes:

‘(i)f the wife is employed, male unemployment does indeed tend to lead to a positive change in gender distribution (of domestic labour) and only in a minority of cases will there be no change or a regressive change... the amount of change will tend to be related to the number of hours that wives work’ (Wheelock 1990:118).

Beyond such qualified functional exchange in domestic labour practices, there are also other important manifestations of use-time change among her sample group. There was a very limited substitution of domestic production for previously commodified activities (*self-provisioning*), with a dearth of equipment and materials providing the principal brake. Voluntary labour undertaken by unemployed males rose significantly, particularly in the undertaking of work for relatives. This increase can be interpreted as a compensatory move of psychological dynamism into the realm of the concrete in a manner very similar to that suggested by Sève.

These results are, as Wheelock concedes, controversial. Other studies have suggested greater temporal rigidity between genders. In broad, it would appear that the lines of dichotomy, which reinforce the gendering of domestic labour in the context of ideologies of the family wage and male breadwinner, do weaken with prolonged unemployment. Wheelock also notes the conflict frequently evident between ideology and the concrete structure of use-time, with pragmatic considerations usually prevailing. Overall, these changes signal significant alteration in the organisation of use-time and this reflects in turn the fundamental plasticity of adult personality in even the most unpropitious of circumstances.

Given the wide ranging evidence on inequality of access to the social time fund, it appears rather surprising when one encounters a strident claim to the contrary. Nicole Samuel’s (1986) evaluation of French temporal change makes just such an assertion. As she proclaims:

‘(l)ittle by little the marked inequalities between socio-vocational categories and, within a particular category, between operatives and office workers, are diminishing’ (Samuel 1986:56).

This process is accelerated by the adoption of the goal of increased ‘free time’ in individual and collective bargaining strategies. There is, moreover, an apparent convergence of worker and employer interest in A.W.S. systems which further supports progressive (egalitarian) change:

‘the varied attempts being made at company level to achieve more flexibility in working hours are generally in line with workers’ wishes, even where the main reasons for such experiments are the economic situation and employers’ objectives’ (Samuel 1986:60).

Much of this argument seems untenable, in light of the detailed analysis of Horell & Rubery (1991). Even where the progressive elements in A.W.S. are adverted, as for example in Sirianni (1988), who similarly reflects on the remarkable scope and intensity of recent experimentation in job delineation and worktime innovation, there is substantial equivocation. Job-sharing, sabbaticals, the compressed workweek and flexitime working, including the practice of banking and borrowing of work hours, all permit *in principle* an improved cohesion as between abstract labour and other sectors of activity. Such temporal balancing would, it is clear, represent a major enhancement in the social conditions fostering psychological progress. A.W.S. may also drive accelerated learning.

A.W.S. can temporally fragment workteams. A team may at any point in time over the planned work period find itself with workers on flexitime, secondment, work shadowing or jobshare and required to produce on reduced numbers and with a lower skills base. The direct relation between supervisors and staff may attenuate, moreover, as core hours and shift patterns vary. It is not easy therefore simply to pass operational responsibility up the hierarchy. In this circumstance, each team member would require a broader base of skill than would be the case with rigidly scheduled teams. Workers are then motivated to learn from each other, and a ‘new organizational flexibility over the definition of jobs and the distribution of skills’ can result.

Yet the actual experience of temporal restructuring when set against these possibilities is much less positive. The impact on the labour force has been deeply contradictory and divisive, as Sirianni notes.

‘In some settings, the liberatory potential of new temporal arrangements is clearly evident, if not always dominant. In most, however, the new flexibility has become implicated in old and new forms of inequality, marginality and managerial control’ (Sirianni 1988:6).

What conclusions might one legitimately draw from the foregoing? The discretionary social resources that support personality development- now available on an historically unprecedented scale- are very unevenly distributed across the population. Much of the divergence displayed in contemporary personality is then, psychosocially induced. Those whose work routines are relatively plastic and autonomously defined display a higher temporal density and broader diversification of concrete activity. Those personalities whose paid work is closely metered and externally structured tend towards passivity and stagnation in all sectors of acts, as the underlying motivational balance of psychological product to need uncouples. Such biographies ‘...are also described as “fatalistic”... these people must accept that their time is dominated by their work’ (Pronovost 1989:65).

One important manifestation of this passivity is a foreshortening of the individual’s capacity to plan. This is again evidenced in the conclusion of much conventional time-budget study:

‘a divergent structure of representations of the future is tinged with social inequalities: economic instability leads to a limited vision of the future while openness and disposition to change are usually associated with better living conditions’ (Pronovost 1989:64).

That this malaise, originating in the dominant realm of abstract labour, does indeed penetrate into and downgrade other biographical sectors, is evidenced in Belloni’s findings on the class differentiation of leisure activity. The upper class typically engages in reading and sophisticated game-playing, activities reinforced by the seamlessness of abstract labour with free time. The subordinate middle class pursues ‘more outgoing and gregarious activities’. The autonomous middle and lower classes gravitate towards ‘largely receptive activities involving little socialisation’, including predominantly, watching television. (Belloni 1986:73-4). The psychosocial levy clearly impacts, then, on all aspects of life⁴.

With the key economic factors supporting *in the aggregate* the social development of individuality but with such pronounced distributional asymmetries between distinct segments of the population, it is scarcely surprising that extremes of uneven personal development should prevail. What is encouraging is that the long term trend in temporal compaction, rationalisation and

capacity-building is certainly stable and might incline slightly. Within the socially decisive category of abstract capacities, the emerging (simultaneous) forms of collectivity may nurture a broader, synthetic comprehension in the labour force as to the interdependences of the productive system.

Starting the 'Journey of Hope':

As the time fund grows, so the degree of discretion objectively available to a given social formation as to how to utilise and allocate the labour force grows commensurately. Capitalist accumulation has increased that fund with incomparable rapidity. It is on that basis of increasing unit output that the average lifelong commitment of time to paid labour has been negotiated progressively downwards. Thus as Sirianni observes, in the mid-19th century, a male waged labourer typically devoted around 30% of lifetime hours to paid labour. This had fallen to 20% by the end of that century. Male workers born in the 1950s will, he judges, expend on average only 10% of their total life in paid labour. These changes have been based on rising productivity levels and intensification of worktimes. Reciprocally, on average, some 40% of all lifetime hours (excluding sleep periods) are available as *free or undirected* time.

This is a contradictory development. In conditions of rising labour productivity, each unit of worktime (which is the only decisively socialised time) assumes a higher social value as output levels grow. By '...mandating higher yields on other forms of time use' (Sirianni 1988:20), this revaluation renders all non-rationalised time relatively expensive too. The paradox is then, that:

'the more the society has been able to create disposable time, i.e., to save time, the scarcer time has become' (Julkunen 1977:9).

This condition only holds for those in paid labour. Such personalities (Steffan Linder's famous *Harried Leisure Class*) suffer uneven biographical development (with rationalisation being confined to abstract labour) and severe temporal congestion. These factors lead inexorably and ironically to a state of *time famine*. Dichotomisation accentuates these problems: indeed, Belloni suggests that segmentation of use-time lies at the heart of all balancing pressures.

'It is in fact the lack of integration and harmonization of time divisions serving different social purposes that results in the time shortage syndrome, because it obliges the persons concerned to be constantly moving from one compartment of their daily lives to another, engaging in activities that are often entirely unrelated and have not been assimilated' (Belloni 1986:74).

The reduction in aggregate worktimes coupled with the intensification of use-time imbalance are widely regarded as the central issues in the development of contemporary biography and shape research into so-called *Time Management*.

The exploratory and normative aspects to Time Management study are evident in Pronovost's (1989) summary definition, which revealingly conflates the theoretical and real (social) objects. Time management, he writes, investigates '...the redistribution of all or part of social and individual time so as to enable individuals and communities to use time in ways suited to their needs and aspirations'⁵. On dichotomy, Time Management theorists have researched available possibilities for *desynchronising* what are currently rigidly demarcated species of activity: to address the more traumatic manifestations of temporal rigidity, as Pronovost explains.

'Activities that need not be synchronized should be desynchronized and some sort of transition period between dimensions of time should be instituted' (Pronovost 1989:87).

In this regard, Pronovost highlights the major biographical dislocations that occur in the transition from school to work; and from work to retirement. He then poses some rhetorical questions. 'Must education, work and leisure really come in that order over the course of a lifetime? ...Why must people work roughly the same number of hours each week, when life cycles demand greater flexibility?' These are good questions, to which Pronovost can formulate no convincing answer.

Sirianni's approach to the project of synchronisation goes further and is more theoretically interesting. The process of temporal densification that destabilises the traditional structures of use-time also holds the key to new forms of reintegration. The instruments of the capitalist temporal revolution have been depicted, most famously by Edward Thompson, as purely disciplining, even (anthropomorphically) tyrannical. Sirianni does recognise that rationalisation has served 'purposes of domination': but there is another, more positive aspect to this development.

'The clock and the schedule are... not simply *disciplinary* instruments, but *diversifying* ones that permit us to synchronize and coordinate a broad range of activities and relationships in dense and pluralistic social networks, and that can expand the possibilities for individual and organizational flexibility within them' (Sirianni 1988:17).

It is, he argues, critical that one distinguish those factors of scheduling that assist in managing innate organisational complexity and relative time scarcity from those that are 'the result of particular worktime arrangements, career line structures, and power distributions which we can imagine quite differently' (Sirianni 1988:19). The former group are, he suggests, vital prerequisites for the formation of new progressive temporal regimes. They represent, as it were, the proper domain of a rationalised temporality. More precisely, a given quantum of synchronisation is important to the 'informal socializing and common meeting times on which effective worker participation depends'. Through effective workplace planning, such interaction can be actively fostered.

For Sirianni, dichotomisation clearly falls into the category of the unnecessary controls. The *brittle* quality of jobs, promotion lines and worktimes implies a highly disproportionate relationship between a reduction in worktime and wages/status: to cross that line of dichotomy can be expensive. Weakening that line, and weakening it for all is, he argues, an urgent social task. This requires, he suggests, a progressive reappropriation of the gamut of measures introduced by capital as A.W.S. The twin objectives of this exercise will be to enhance worktime options; and to introduce a broader flexibility between paid and non-paid work.

There then follows an exploration of the possibilities presented by exemplars of A.W.S. Flexible and reduced worktime options (chiefly job-sharing and flexitime) can assist in the restoration of balance in use-time. This permits a series of other positive biographical changes, including the improved integration of domestic labour (and greater gender equality) and an improvement in the quality of recreational and leisure activities. Flexible scheduling can also ease the problems of lifetime transitions that Pronovost highlighted, by easing (re-)entry into or exit from the labour force.

A.W.S. could also, Sirianni continues, 'facilitate, trigger or reinforce' broader changes in workplace management. Relative latitude as to working times may erode 'managerial time discipline' and encourage the delegation of authority. Cross-training between workers and multiskilling are also promoted where direct workplace contact is attenuated.

The impact of these changes is maximised, Sirianni observes, where flexible scheduling is deliberately combined with structured inducements to training and education and with extensive (*sociotechnical*) plant redesign. This was the case at Shell Canada's Sarnia plant, for example. Here, open computer networks (integration technology) and vocational and avocational training and education in workteams acted as social gluons, binding together

increasingly decentralised work practices and workers. Sirianni clearly regards the disciplines that these remote systems impose as legitimate forms of temporal rationalisation and synchronisation.

In this instance, the management's objective of maximising technical efficiency from what was an extensive plant redesign, was being met. That restructuring was in part a response to the 'suboptimal' performance of the previously Taylorite forms of temporality. There was an active union at the plant, which was also able to secure substantial qualitative benefit for its members from the industrial restructuring. Though Sirianni is not explicit, these observations are intended to illustrate that progressive A.W.S. can be a positive sum game. This is, at the level of the workplace, the enticement to reform.

In a second case (a car mirror-producing plant in Tennessee), a 'joint union-management program' sought to encourage greater social cohesion among workers at the plant. Workers were permitted to:

'receive "earned idle time" if they achieved their quota, and this could be taken by going home early, by resting idly or socializing, or by participating in one of the many in-plant educational and cultural programs developed by the workers themselves' (Sirianni 1988:37).

These educational programmes were wide-ranging, both vocational and avocational, and the high levels of participation 'spawned a virtual "cultural renaissance" at the plant' (*ibidem*).

Sirianni's brief exploration of the possibilities in contemporary temporal experiments in the capitalist workplace is intriguing. In beginning to open up the realm of abstract labour and so to erode dichotomy, these changes promote that famous *révolution du temps choisi*⁶. Where they lead towards is what has come to be known as the *modular timetable*. As Gorz explains:

'(t)he principle is that the work is divided up into modules that are independent of one another and to arrange things so that several workers can follow one another at a single work station. Each worker plans their own timetable out of the modules that are available by choosing both the number of modules, that is, the length of their working hours, and how they are distributed, that is, the make-up of their timetable' (Gorz 1989:213).

The careful distinction that Sirianni draws between those synchronisation systems that support conviviality and social intercourse and those that are more obviously the manifestations of social conditioning, exclusion or of class power, is particularly useful. The former constitute a part of the progressive resource base bequeathed to the future by capitalism. Julkunen has expressed this distinction well:

‘(t)he negative consequences of time saving in people’s lives must not be seen as inevitable but as something that can be removed by rational action and which thus do not nullify the progressive nature of economy of time’ (Julkunen 1977:n.2).

Proposals for resynchronisation fall under the rubric of *life planning* in Time Management research. What protagonists anticipate from the pursuit of such measures is an increasingly differentiated stock of work patterns and use-time in general. Radical commentators like Sirianni are seeking the means with which to build a distinct new temporality that will encourage the recovery of ‘spaces of time affluence’ without also negating the higher (rationalised) levels of social communication that capitalism has inculcated. This is clearly no return to an arcadian past.

To date, differentiation has necessarily implied inequality: nowhere more so than in the distribution of the time fund. Sirianni is projecting reforms in a context in which ‘monetized time’ retains significance (market allocation systems continue where they ‘prove indispensable as regulators of economic activity’). This is a most reasonable assumption: the complete abolition of waged labour and commodity exchange looks a distant and problematical ideal! Yet, given the controversy that surrounds the dual role of markets as simultaneously allocative and distributive mechanisms, and the innate injustice in even the most perfected of market systems, then one can state that such systems lend themselves at the very least to unequal outcomes⁷. Sirianni also observes the ‘*permanent tendency* of the demand on our time in complex societies to outrun the supply’ (Sirianni 1988:28). Relative time scarcity is, at one level of abstraction, a transhistorical condition. In recognition of this, he proposes a third objective for the synchronisation programme:

* *democratic control over the direction of temporal change.*

The increased personal motivation and scope for participation that he foresees from improved synchronisation would itself contribute to fuller workplace democracy. Unions that adopt such programmes can also contribute to that process, but that contribution is severely limited in the hostile environment of the contemporary United States.

Many U.S. unions remain, moreover, in latent or active opposition to all A.W.S.-type experimentation. This is justifiably based on the experience of job dilution, loss of collective cohesion in a workforce increasingly dissipated in space and time and a resulting undermining of collective bargaining. Given the record of A.W.S., these are quite legitimate fears. Yet, the structural weakening in 'common worktime standards' will, Sirianni projects, continue and probably accelerate: there is, in short, little alternative to a constructive engagement with temporal change.

Beyond the workplace, it is to the State and state policies that Sirianni turns his attention. He argues for a State Time Management policy⁸ to be founded on three core principles:

* *'legislating and legitimating "rights" to work at freely chosen time'*.

* *part-financing of reduced-time options.*

* *encouraging and underwriting 'the further development of an infrastructure for activity outside the formal labor market' (Sirianni 1988:39).*

Legislation and Legitimation: the State could introduce progressive A.W.S. options for its own employees. It may also set contract compliance requirements for contractors which include A.W.S. clauses. A.W.S. standards might, finally, be required by law of all employing organisations above a given size.

Financing Change: this builds on the most advanced examples of existing State support aimed at: encouraging parental leave; phased retirement (Sweden); and special education to span the divide between school and paid labour (France). New proposals might include extending Swedish-style *equity subsidies* to encourage employers to address gender and other inequalities in the allocation of resources to training and redress biases in employee recruitment. Competitive grant aid could be provided to fund a broad programme of *social service leave*. Here, workers generate and then implement ideas utilising their competences for the benefit of priority social groups⁹. In the U.S. context, these measures would be akin to a programme of *positive action*.

State infrastructural investment: Sirianni highlights the major problem with these varied and promising initiatives, that they are piecemeal and fragmented. Harking back to earlier propositions for welfare reform, he proposes a unified and universal (legislated) system of entitlement which would extend the principles of national insurance to provide a 'general income

insurance'. This would represent the decisive egalitarian step. Personal drawing rights from the social time fund would permit individuals to finance 'all periods of voluntary or age-determined withdrawal from paid work'. Special state incentives could be provided to encourage partial withdrawal from the labour force at specific times, or in specific industries, or to meet relative skill shortfalls. Such a comprehensive approach would, he contends, better meet macrosocial objectives while also significantly enhancing life planning for individuals.

The objective here is to create and sustain a wider and richer range of choices for undirected time. This encompasses 'individual and community self-help and service, ecologically sound cooperative and craft production, as well as aesthetic and leisure pursuits' (Sirianni 1988:41). The outcome of such investment would be to differentiate abstract labour from abstract activity in general and to revalue the latter, while also raising the status of concrete compared with abstract activity. Reciprocally, these measures serve to encourage exploration of A.W.S. and simultaneously to reduce worker competition over access to waged labour.

This emphasis on the State is broadly consistent with the recent history of temporal change, which has been led by contractual obligations originating in the U.S. in legislation and in a welfarist state/collective bargaining nexus in Europe.

These proposals may appear at one level to be radical, utopian (in a negative sense) and hopelessly unattainable, but it is worth pausing to reflect on the extraordinary changes in the time fund that modern industry has already produced. Viewed in this context, a project for progressive future reform is patently both necessary and politically important. The problems with Sirianni's approach need, though to be immediately registered. There are two, in particular, that demand further discussion, since they raise problems that are fundamental to the project of socialism:

** does the increase in producer control and in equality in the allocation of the time fund that these measures would yield act in a manner likely to encourage further, cumulative, progressive change? Is Sirianni seeking, in Miliband's formulation, **social reform** or a reformist **dynamic**? Is there a necessary relationship, then, between producer democracy and equality?*

** how comprehensive is the reform package that Sirianni has proposed? What other measures might be required in order to accelerate the development of individuality, and do these threaten the basis of accumulation?*

A. Producer Democracy & Equality:

Sirianni is clearly persuaded that increased democracy in decisions about the time fund will generate a momentum to still greater democracy¹⁰ and also to egalitarianism. Space does not permit anything more than a cursory comment on this highly complex issue, but as a general observation, it would be safe to conclude that these connections may not be all that secure.

First, there is a legacy of inequality induced by market activity that impacts on the moral calculus of the population at large. This legacy, part of the so-called *common sense* of the age, cannot be lightly discounted. Cohen (1991) characterises these affiliations as ‘moral shabbiness’. As he observes:

‘the market... motivates contribution not on the basis of commitment to one’s fellow human beings and a desire to serve them while being served by them, but on the basis of impersonal cash reward. The immediate motive to productive activity in a market society is usually some mixture of greed and fear, in proportions that vary with the details of a person’s market position’ (Cohen 1991:18, emphasis removed).

This argument would once have appeared truistic to a radical community. Given though the popularity of Analytical Marxism and the variants of market socialism, the point has now to be remade with new vigour and with deeper arguments¹¹. The relations between psychological product and need (a motivational proclivity) and, more specifically, between sector I_c acts and need, have come to be dominated by the narrow ethos of the capital relation.

Cohen does not contend that such tendencies are immutable- far from it. Influenced by the work of Joseph Carens, he proposes measures that would use the logic of market allocation and price determination to inculcate new, more egalitarian motivations. These kinds of initiatives are merely extensions (important for that) of experiments and debates in conventional accounting concerning the evaluation of human resources or of environmental impact in company operations.

Whether his proposals would in fact work as intended is perhaps beside the point. What is important is the recognition that the political economy is ultimately determinant of the conditions of abstract labour and of the development of the fund of use-time: and that these relations are essentially those of *many capitals*. They present in this form profound barriers to egalitarian norms. Sirianni’s focus on the individual establishment and his sundering of proposals for restructuring of use-time from the conditions of accumulation is inadequate.

There are more basic grounds for believing that inequality is mutable. The current moral shabbiness, while dominant, is by no means universal in either individual or collective activity: neither, as the historical specificity of the present economy of time makes clear, is it ahistorical or timeless. Assertions to the contrary customarily seek refuge in notions of an eternal and invariant *human nature*. Yet the critical reappraisal of this difficult concept undertaken by Norman Geras casts serious doubt on such hypotheses (Geras 1983).

There is no sense in which arguments such as these cement the link between producer democracy, the collective reform of use-time and equality. All that one can claim (a weak claim) is that the evidence suggests that the current motivational structure is not immutable and that ways can be identified, at least in principle, of encouraging new forms of motivation. The fact that reforms can in principle be framed that do not immediately contradict the *modi operandi* of the market system may increase the space for progressive politics: this is anyway the intention of both Sirianni and Cohen.

Second, the substantial body of work on the issue of equality indicates the complexities in what is always a relativistic concept ('equality in relation to what/whom?'). Most obviously for example, the principle of reward for contribution to production (an egalitarian principle at one level) would reinforce the inequity in initial personal endowments that largely determine differential contributions in the first place. As Cohen puts it, '(r)eward for contribution implies recognition of what I have... called the principle of self-ownership' (Cohen 1991:16). Such a reward system also patently disregards differences of need. Different needs also call up another egalitarian principle: that distribution of social assets should be directed at achieving what Norman (1991) terms an 'equal level of wellbeing overall'. The issue is complex, more challenging than Sirianni allows, illustrating:

'...the dialectical character of the concept of equality: equality at one level means inequality at another. If that is so, then we have to decide at what level the principle of equality is to be applied' (Norman 1991:134).

As both Norman and Phillips (1991) make clear, Marx was aware of these complexities, hinting at them in his comments on future distribution norms in the *Critique of the Gotha Programme*¹².

Summarily put, these complexities translate into a tension between common need and personal difference, then (politically) between universal entitlement and selective targeting¹³. The issues are complex and, as Marx rightly perceived, historically bounded: most tense perhaps, in the

earliest stages of any reform of the time fund, which is the period that Sirianni is also discussing. At the limit, Sirianni is clearly persuaded that the contemporary requirements of accumulation for fragmentation of temporalities (as reflected in the push to A.W.S.) are irresistible, and that the legacy of common standards painfully negotiated by unions will erode. Thus:

‘...the crisis of temporal organization... has made it increasingly difficult to represent workers’ interest effectively by clinging to the common worktime standards of the past... unions now have the task of responding to it in innovative ways’ (Sirianni 1988:46).

The unions, it should be emphasised, face the task and not the option. The response shifts the accent in workplace temporality dramatically away from universal norms. Yet in the wider arena of what he terms *welfare state politics*, the system of universal entitlements are to be expanded into the realm of time management. There is considerable systemic ambivalence here.

More generally, Sirianni understates the extent and depth of possible (better, probable) tensions between different groups of producers and between producers and non-producers, and then between the social activities of production, consumption and reproduction. These each have precise corollaries in the economy of time.

To the extent that the likely degree of contestation and conflict over use-time is evacuated from Sirianni’s work, then the bases and the dynamic of popular support cannot possibly be projected. It is therefore extremely difficult to judge the reformist azimuth of his proposals.

B. Universality and Class:

This connects fairly immediately with a second problem area in Sirianni. Universalist claims have constituted a distinct theme and strength in marxist conceptions of the future. The politics of difference is an overt challenge to this posture, and Sirianni is, as already observed, persuaded of the imminent eclipse of commonality in use-time. It is astonishing, though, that the differences attributable to class seem to have retreated in such analyses in inverse proportion to all other dimensions of difference. Sirianni’s work is no different in this regard.

There is one passing reference to the ‘power of capital’, which is mystifyingly disaggregated into its ‘social or private’ forms: there are vague indications of the problems in ‘heteronomous control’ of time; but these are as nothing compared to the extensive treatment of trends and possibilities in for example, a ‘voluntary’ self-provisioning sector. One is also struck by the narrow focus of the

examples of progressive temporal restructuring that Sirianni holds up. In all cases, they relate to redistribution of acts and temporalities *between workers*, and remarkably similar (skilled-technical-professional) groups of workers at that.

Given Sirianni's silence on this matter, is one to presume that the distinct privileges in time use that Belloni's 'upper class' currently enjoy, are to be left untouched in the process of reform? There may well be political arguments in favour of this, but they need to be explicitly and openly framed in the context of any serious process of building a 'democratic and egalitarian politics of time'. As it is, his proposals bear all of the hallmarks of a redistribution within one class!

If Sirianni's temporal reform package is limited in its constituency and tentative and unsure in its reach, it does nonetheless represent an important radicalisation of the theories of so-called time management. It must be emphasised though, that his Politics of Time is not coextensive with the wider objectives of any future Journey of Hope, and nor would he intend it to be. Progressive temporal restructuring can certainly weaken dichotomy and lessen the problems that this condition presents to use-time balance; it can also, as indicated, promote learning in abstract labour by encouraging certain positive features in teamworking and by integrating the abstract and concrete realms of activity in creative ways.

This emphasis on learning opportunities is, in the light of Sève's work, important. Indeed, if the terminus of such a Journey were to be a social formation in which the development of individuality was a desideratum, then the rate and demographic distribution of learning activity would become a central measure of its efficacy. In this context, aggregate time saving and redistribution of the time fund would surely be viewed merely as instruments to this end, a means of clearing biographical space for learning, as it were.

The Journey Lengthens...

Rudolf Bahro's (1978) *concrete utopia, The Alternative in Eastern Europe*, put these objectives with great force, notwithstanding his later views. His 'cultural revolution' explores the means for the 'liberation of individuals from all socially determined limitations on their development'. Learning and personal growth are pivotal in this. A socialised, liberated process of learning would enable the 'potentially comprehensive *appropriation* of the essential human powers objectified in other individuals, in objects, modes of behaviour and relationships' for the task of forming a rich individuality. This then constitutes the social *emancipatory* potential of such activity.

He couches the learning capacity in familiar temporal terms, as: 'the deliberate allotment of time for all-round development and satisfaction on a social as well as individual scale'. The biographical concomitant of this is clear:

** 'priority for the shortening of psychologically unproductive labour-time within necessary labour-time' (Bahro 1978:415-6)*

This condensed statement summarises what must be seen in the current context as a central objective of a socialist society, but one that has been woefully disregarded to date in the development of socialist thought and political practice. It will be apparent that this formulation takes the emancipatory issue rather beyond the conditions simply of the time fund, though. As he observes, the continued reduction in the length of the working day is only a necessary condition for the development of free time: it is the *qualitative transformation* of the relationship between the realms of necessity (now more closely defined as 'alienated' or 'psychologically unproductive' labour) and freedom that is the central challenge of the communist Alternative. This goes to the heart of the allocation of all social resources.

With the development of the conditions for learning as the basis for all social activity, the organisation of and growth in what Bahro terms the *means of development*, those resources available for progressive enrichment of individuality, correspondingly assumes centrality in the management of social reproduction.

'The question accordingly arises as to... how work, education and life, the organization of society, the system and the mode of function of its institutions should accordingly be constructed' (Bahro 1978:273).

Bahro then identifies the major social sites of learning and the key issues attending their development. These are:

- * the division of labour.*
- * universal access to all of the instruments of learning.*
- * the specific improvement in education required to meet the unique development needs of youth.*
- * the deepening in community life as the key to personal communication.*
- * the mechanisms for exploring social alternatives.*

The commentary on each of these, his *Perspectives for General Emancipation*, is far-sighted. More pertinent here though is the practical effect that he attempts to give to each of these in the context of the concrete organisation of a new society. This exploration represents, as Williams observes, a 'relatively detailed outline of a practical and possible communist society' (Williams 1980:4) and remains truly exceptional for that. The concrete measures that he proposes in many cases include temporal reconstruction along lines that are very similar to those advocated by Sirianni. For brevity, these are omitted from the *précis* of Bahro's case presented below. In summary form, Bahro proposes:

- * *planned surpluses in the forces of production to permit a 'redivision of labour' that equalises the burdens of psychologically unproductive labour while also opening access to every producer to 'all the given functional levels of the collective work process' (Bahro 1978:275-81;416-25).*
- * *the combination of that redivision of labour with the quantitative expansion and qualitative restructuring of education and enhanced opportunities for 'personal communication' to generate a new definition of need.*
- * *harmonising the production process: the redivision of labour coupled with a new structure of need, and the changed imperatives of economic development that flow from these communist commitments, require a different conception of the use of labour-power, machines and raw materials and energy.*
- * *establishing an information infrastructure that enables the collectivities to make decisions supportive of the redivision of labour; the satisfaction of needs; and the enhanced communication and social intercourse of the 'cultural revolution'.*
- * *finally, a new organisational infrastructure that will permit the 'general communication about social alternatives' concerning the balanced deployment of social labour and other resources, the opportunities in development of social life, and need satisfaction in general (Bahro 1978:416ff).*

1) The planned organisation of reserves of labour-power, machinery and raw materials and energy production in relation to anticipated output. The redivision of labour is utterly contingent on this, 'a surplus of labour-power, a genuine reserve of this, rather than one of goods and services'. As he continues:

‘If (communism)... is to give individuals and collectives “disposable time”, time for development and self-realization, time for increased feedback into the economy, then the first condition is that there is sufficient labour- time available in general’ (Bahro 1978:299).

‘Only this surplus’, he proclaims:

‘can guarantee the individual, *every* individual and *within* the universal labour obligation, the space needed to build up a personal economy of time related to his individual life schedule’ (Bahro 1978:418).

One major claim on the surplus would arise from the long term extension and qualitative restructuring of education and training, with higher education being drawn ‘closer to the workplace’ and with the lines of learning activity running through the middle of the productive unit itself. Where are the sources of surplus labour? In the economy, intensification forms one continuing source, albeit that the pace of intensification would itself be affected by limitations imposed by the need for reproductive balance (see [3] below). These result in a slower and more deliberate pace of expanded reproduction.

More significant, Bahro asserts that there is a formidable degree of potential for offset and thus labour saving, in the redivision of labour itself. The main thrust here is in the saving in overhead labour that the expansion in the commitment and control of the direct production workers might provide (Bahro 1978:379ff). In the context of actually-existing socialism, this would have taken the form of a massive reduction in bureaucracy: the functional elimination of large swathes of management; the removal of the workrate-fixing supervisors; and the ‘massive confrontation’ of ‘functionaries at all levels, and intellectuals of every degree’ with ‘everyday work in production and distribution, in the service sector and in administration’.

These proposals did seem to offer a plausible means of generating a substantial degree of offset, given the extraordinary levels of waste generated by stalinist command systems. Viewed from another angle, they also constitute a most radical step in equalising the distribution of the time fund, though they do not possess any ‘direct emancipatory function for the immediate producers’.

2) A ‘new definition of need’: in the ‘socialist-communist formation’, need will be differentiated only on the basis of ‘natural differences of age, sex and ability, perhaps also the quasi-natural

distinctions of character'. Bahro is loathe to comment much beyond this, since the changes in the definition and prioritisation of social need are the decisive prerogative of the developing individualities of a new society to shape and cannot be subjected to 'pre-conceived ideological values'. This is uncharacteristic of the thrust of the work as a whole and seems to echo the more proscriptive comments on those 'recipes for the cookshops of the future' made by Marx and Engels¹⁴.

Bahro is able to make but one, very general comment on the matter. Self-evidently for a society aspiring to subsume production to the goal of generating 'rich individuality', the structure of need would reflect this in terms of an increasing need to 'win time for psychologically productive activity and communication'. This would be reflected in a shift in the productive forces to support the 'production of means of development'. There is a reciprocal reduction in the consumption of 'compensatory prestige' goods and in the 'means of enjoyment'. This shift further reveals the reduction in *compensatory* and rise in *emancipatory* needs, including the need to learn, that expresses a revolutionary imperative.

3) '(G)iving the reproduction process a harmonious character': the range of measures nestling under this policy schematic are directed at the 'abandonment of productivity that is bought at the cost of vital human energies'. The ecological themes are to the fore here, with the advocacy of simple reproduction activity; increase in preventive maintenance and repair work; enhanced durability; systematic saving of raw materials and energy; and ultimately, a reduction in the rate of growth in (and eventually, one presumes, in the absolute volume of) materials consumption. The same logic is also extended into the sphere of international relations and solidarity.

This is not a homeostatic conception of 'zero-growth', but rather, a vision of growth in capacities being directed to different ends than (in capitalist social formations) to the self-expansion of value itself. It was, of course, the further elucidation of this theme that led Bahro in the ensuing period to traverse a political space *From Red to Green*. The noteworthy element to his thinking in *The Alternative*, which in its ecological particulars, has been more concretely and persuasively analysed elsewhere, was the attempt to connect an ecological sensibility through the form of the productive forces with the *conditions for personal development*. This is a strategic though immensely difficult task, and Bahro is by no means successful in this purpose. The relation remains muddled and abstract, but the intent is an entirely valid one.

4) '(A)ccounting for a new economy of time': Bahro's proposals involve re-establishing a greater relative significance for concrete labour and the control of abstract activity to meet individual

development needs. A novel form of accounting adequate to the new systemic objectives is therefore required. Bahro is clear as to the basis of this.

‘What is needed to regulate the new economy, the rule of living labour over objectified, is a transition at the primary level of economic accounting from measurement in terms of value, or rather price, to direct measurement in terms of time equivalents’ (Bahro 1978:433).

Labour time accounting, Bahro contends, possesses two major advantages over conventional financial accounting. First, a common denominator running between all areas of social activity helps citizens to identify the pressure-points and choices in the time fund as between broadly different development options. These can be translated more or less easily into use-time change at the biographical level, for example into personal balances of necessary and free time. This is much more difficult where living labour is applied as an ‘isolated cost factor’ that is itself disappearing against the backcloth of an increasing mass of ‘objectified labour’.

Second, time accounting improves social decision-taking in the more restricted realm of the allocation of resources in production. In defining objectified labour in terms of S.N.L.Ts and living labour as ‘effective labour-time’ (which might, speculatively, be interpreted as a measure of value creation), the many distortions of financial accounting based on price might be avoided. Time-based accounting thus enables more accurate (‘comprehensible and penetrable’) cost accounting.

5) Ensuring the ‘structural conditions of individual initiative and genuine communality’: Bahro deals here with the problems of organising an objectively integrated structure of production in a manner that is organisationally comprehensible to and that can be appropriated by the citizens as part of a fuller democratic life. Stronger than this and reflecting the general inversion of social goals: the adequacy of the ‘*form* of economic regulation’ must be gauged in terms of its transparency; or dynamically, the degree to which its structure encourages the process of appropriation. Appropriation is then to be understood as a ‘socio-psychological and socio-educational process on a mass scale’.

Scale indeed holds the key: the institutional structure that Bahro proposes reflects the coincidence of the imperatives of social control, with a profound spatial element, with maximal transparency. There are three irreducible components to the proposal. *Unions* of associated citizens pursue ‘various specific purposes’ in the context of a self-defined territory or social space.

Unions, with their attendant specialisms, then associate in *communes* which thus embrace all aspects of social life as the sum and mediation of union interests. These communes would likewise be territorial in scope and egalitarian in structure. The communes are characterised (as is the administrative system as a whole) as a loose 'coordinative, federal structure'. The communes are viewed as 'autonomous collective subjects' that themselves 'mediate their insertion into the whole', the social totality. Again, the communes (largely) define functions that require a broader competence at the *overall social level*.

There are exceptions to this voluntary prescription, necessary integrative tasks that must, for Bahro, be lodged at this federal level. These are:

- * *the ratification of the 'scope and content' of social and individual need. The verb is carefully selected to reflect a high degree of passivity.*
- * *the technical translation of need into production targets (expressed in use-value terms as an aggregated 'assortment of goods') for communal action.*
- * *the focus for trans-communal issues, for the resolution of which it would oversee 'central material balances' and a distinct 'insurance fund'.*
- * *the manager of large scale investments and of large scale industry. The Alternative clearly seeks in overall terms to reduce the relative economic significance of such large productive units.*

The spirit of these proposals clearly imputes a decisive (intermediating) role to the *communes* as 'social microcosms' in social organisation and in managing production. Thus while the plan might set the use-values to be produced, all aspects of the conditions of production would be specified by the commune. Producer collectives would be subsumed, for strategic planning purposes, under communal direction. He is categorical on this point.

'The interests of the producers are particular interests among other particular interests' (Bahro 1978:441).

Bahro thus distances his Alternative from the ergatocratic tendencies associated with proponents of untrammelled workers' control. The principles of cross-delegation and voluntary federation of unions of producers to the communes would ensure a legitimate degree of producer

influence on local decision-taking. Generalisation of these organisational principles would brake undue accretion of influence at all levels.

The fundamental and wide-ranging nature of these proposals very clearly indicates the ubiquitous and deep-seated nature of the social barriers to individual development and the revolutionary measures required to bring about the realisation of a society centrally dedicated to the development of its citizens. There are almost inevitably, a host of objections that such a daring vision stimulates: these have been fully discussed elsewhere (Geoghegan 1987; Wolter 1980) and it is not intended to resume these here.

First, given that Bahro was considering the cultural revolution primarily from the basis of the actually-existing socialism of the former G.D.R., the concept of the 'planned surplus' would need further refinement for it to be relevant as a reform measure in the transition from a capitalist mode. (This is as a general statement also valid across the board.)

Under contemporary capitalism, the concept of planned surpluses (or slack) is of course, hardly unprecedented. The private monopoly utilities practice management of slack capacity in relation to uncertain peak demand. Under the Common Agricultural Policy of the European Community, regulation and subsidy persuades farming capitals to *set aside* land in the face of relative overaccumulation. Planned surpluses would clearly require new (tax) incentive mechanisms and strong monitoring processes, but are by no means inconceivable as a transitional measure. They would in fact bear a strong resemblance to the kind of proposals put in another context by Cohen (1991). Planned surpluses under capitalism would manifest as the deliberate amassing of what Marx termed *fallow* or *latent* capital.

It is also possible to translate many of the other proposals in Bahro's *oeuvre* in similar terms into the specific social context of the A.C.Cs.

Second, on need: those so-called *natural* bases for differentiating individual needs are themselves utterly contested. This naturalist appeal (and the ahistoricism that accompanies it) was one of the prime theoretical targets of the New Social Movements. What follows through from the proclamation of difference is, of course, that more complex and qualified understanding of egalitarianism, a concept which is treated in an inadmissibly undifferentiated manner in Bahro's *Alternative*.

There is a further major problem here. The *Alternative in Eastern Europe* is explicitly utopian: but it is a remarkably practical, definite utopia. Yet on this particular issue of need Bahro is exceptionally, restrained, claiming a non-prejudicial neutrality to the future. This is, to be direct, simply inadequate. There is a formidable political challenge to marxism that has been joined on the questions of ultimate human need. A haughty silence is no response to this. There is, besides, a thread in his work that does suggest a prioritisation of need.

Bahro certainly has a vanguard in mind for the transition from actually-existing socialism: the technical intelligentsia. Blessed with extended education and training, and with a labour process that often encourages synthetic understandings, the intelligentsia can lead the emancipatory process. As Geoghegan notes, these factors:

‘of necessity place intellectuals in the forefront of social change. Nor need this lead to the imposition of the special group interests of the intellectuals on society, for intellectuals can articulate the universal and general interests of the whole society’ (Geoghegan 1987:119).

The arguments for this historically (though not theoretically) unprecedented degree of universal beneficence from the intellectuals are, it must be said, simply not made: Bahro himself seems uncertain on the matter. One cannot rule the possibility out on *a priori* grounds, but there is certainly scope for considerable scepticism¹⁵. Where the case for universal representation cannot be made, then there is, of course, every reason to expect from all previous social forms that the complex needs of the whole will be reduced and resources usurped by the sectional and particularistic needs of these intellectuals.

The problems with this claim to universality endanger the egalitarian imperative too, since the two concepts so closely interweave. The connection is widely made in the history of marxism, as though the fact of repetition would itself bestow immanence on it. It is there in Marx and Engels, though the argument is a complex and shifting one.

The general prognosis is most clearly spelt out in *The German Ideology*. Here, the development of objective economic forces is brought together with an explanation of the subjective ‘actualization of ...communist mass consciousness’ (Mészáros 1986) to illustrate the teleology of revolution.

It begins with the centralisation of capital and the development of dense linkages between the branches of modern industry. This process objectively welds the means and instruments of production into an increasingly integrated totality. The collectivisation of labour follows in step. The objectification of the means and relations of production also deepens the alienation of individual workers, with the productive forces presenting the image of a 'world for themselves, quite independent of and divorced from the individuals'.

The local quality of crafted labours is dissolved in the formation of the mass, general operative, but the legacy of craft specialisation continues to shape the labour process. This results in the miserable repetition of simple machine-minding. While all possibility of 'self-activity' in abstract labour ceases, the restrictions of a 'limited intercourse' are also eliminated.

Degradation of work and the need to re-establish self-actualisation both contribute to the formation of a revolutionary consciousness. The massification of workers homogenises this consciousness as the common lot of the working class. The recognition of objective interdependence in the totality of the productive forces permits of only one effective revolutionary response: the collective appropriation of the *totality* of the productive forces (the 'universal interdependence' necessitating a 'universal union'). In the terms of the famous closing sweep of section II of the *Manifesto*, the revolution demands:

'an association in which the free development of one is the free development of all' (Marx & Engels 1968:53)

This is obviously the egalitarian thrust.

Gorz summarises Marx's position on the proletariat in *The German Ideology*. It is:

'...a class for whom *work* is directly *social* labour determined in its contents by the functioning of society *as a whole* and which, consequently, has a vital, overriding interest in taking over the social process of production in its totality' (Gorz 1989:24).

Here is the coalescence of the objective and subjective around the twin themes of universality and equality.

Sève also makes a similar connection in relation to *scientific humanism*. In tones that deliberately echo the universalist rhetoric of the *Manifesto*, he proclaims that the practical end of marxist

personality theory ‘...is above all to pose the problem of organising for the full psychological development of all’. More precisely, it is:

‘...to create the historical conditions in which *every individual* may succeed without external restraint in assimilating the wealth of the objective social heritage, and this class society is quite unable to do’ (Sève 1978:111, emphasis added):

A particular patterning of abstract labour drives the formation of a mass consciousness of the need for revolution: a universal need that is also universalist. In Bahro, the intellectuals in particular, but laggardly, all citizens develop a ‘surplus consciousness’ of the need for rich individuality: a universal need that is also (among the intellectuals) immediately universalistic. The whole argument pivots on the process of consciousness-formation; of how objective (economic) conditions force on workers ‘the *full consciousness* of their historic mission’ (*The Civil War in France*). The argument is transcendental in nature and Hegelian in inspiration. It would be put with considerably greater circumspection, and indeed in many ways rebutted, in *Capital*.

There is simply no *unmediated* connection, where needs have assumed a complex, non-subsistence character, between the structure of use-time and that of need. At the material limit, perhaps, there may be, but not beyond this. As has been indicated, Marx became increasingly uncomfortable with this projection for the A.C.Cs: and quite rightly too. Beyond this, beyond neurophysiology and use-time, in the realm of concrete individuality, the relation is further attenuated by that superstructure of ideology and *structure of feeling* (Williams). This relation has not been systematically explored either here or elsewhere. Meanwhile, such gestures will remain a mystical variant on compatibilism¹⁶.

The claims to universality have furthermore, served another, political purpose, the working through of which has had untoward effects for active socialist conceptions of general democracy. As Mészáros notes:

‘...in virtue of its determination as *mass consciousness*, (the communist consciousness)... protects the socialist forces involved in the struggle from internal divisions and from the establishment of new hierarchies’ (Mészáros 1986:17).

This universal consciousness then forms the foundation for a universal (class) social solidarity. It then all too easily translates into the identification of singular responses to historically presented circumstances, and the ‘most advanced’ sections of what was claimed to be an

objectively and subjectively integrated bloc then give political cohesion and voice to this correct response.

‘The “world-historical process”, and the forms of socialist thought which developed within its influence, have been typically unilinear and singular’ (Williams 1989:295).

What follows from this is perhaps unsurprising, that:

‘since there are many peoples and cultures, there will be many socialisms. What is happening is still, in this sense, a world-historical process, but it is visibly escaping from the old singular and unilinear model’ (Williams 1989:297).

Bahro’s Alternative retained a leading role for a *League of Communists*, which with its factional rights and ‘open window’ to society, could represent all strictly political interests in the transitional period (see Geoghegan for a criticism of this as Bahro’s ‘cloven hoof’ of marxism-leninism). It is of course, quite tenable to claim a principled democratic principle for such party organisation. To found the Party under the leadership of so narrow a social vanguard as the intelligentsia is, though, to court disaster.

Beyond this, what is far more damaging is the insinuation of ‘a’ plan, put in the singular and repeatedly so, for the organisation of the transition (for example, Bahro 1978:440-4). Could there possibly ever be but one valid or ‘correct’ plan that would, for example, merely ‘ratify’ the meeting of social need in terms of a particular bundle of use values and a given mix of the means of development, enjoyment, production, subsistence, *et cetera*?

With the complex of needs undergoing unparalleled shift towards emancipatory needs and the structural and allocative shifts in resources that this would undoubtedly require, could there be but one (optimal) response? Most important, a point that Bahro entirely misses: is the democratic decision to elect ‘rich individuality’ as society’s prime need and objective itself irreversible? Is it in fact as Habermas might argue, the ultimate expression of the transhistorical need for ‘human liberation’ that, once revealed becomes unchallengeable?

The ways that such arguments have been played out under actually-existing socialism are indicative of their intolerant and dangerous quality. The push for rich individuality might be the aspiration and project of the League of Communists, but other social groups are surely entitled to challenge this with their own plans and projects.

No modern thinker has argued the case for planning conceived as a pluralist activity, a necessity in democratic life and in communication, with such passion and clarity as Raymond Williams. As he observes:

‘It is only from the intellectual presumptions of the singular model that it is supposed that the planning process must be singular. It is then at (the) ...earliest and most fundamental stages of planning that the need for varying and alternative plans, brought to a stage of specificity where they can be rationally assessed and compared, is evident in any but especially in a socialist economy’ (Williams 1989:299).

The degree of current differentiation of need and concrete individuality permits, in sum, ‘no unilinear progression of “free consciousness”’. The chasm between ‘the sphere of mental possibility and the local imperatives of specific modes and types of production’ (Williams 1980:10) can only be bridged by open, plural political organisation and argument.

Third, on the ‘harmonious’ development of the productive forces: Bahro evidences a deep mistrust of the means and forces of production as developed under capitalism. Thus the ‘Marxist tradition’ has apparently accepted:

‘...technique, industrialism, Americanism, Fordism *as a destiny*, and represented us communists as the proper executors of human adaptation to modern technology and machinery. Marxists do not often stop to think that humanity must not only transform its relations of production, but must also fundamentally transform the overall character of its mode of production, *i.e. the productive forces as well*’ (Bahro 1978:261-2).

The imperative tone is far too strong here. In light of new social objectives, each and every inherited technique of production must indeed be critically reappraised. Yet the nuanced reading of capitalist modernisation increasingly evident in Marx is entirely defensible. Even the detestable assembly-line, as Gartman (1979) notes, has something of a transhistorical benefit from the vantage point of labour:

‘...the assembly line contains certain nonexploitative features, purely technical advantages that would be desirable in any system of production, regardless of the social relations of production- e.g., the mechanical conveyance of heavy and bulky parts relieves workers of much backbreaking work and mechanical coordination ensures that work flows smoothly’ (Gartman 1979:204).

In terms of materials and energy saving, and the requirement for quality in production, the efficiency gains made under the *Japanisation* of Fordism are worthy of sustained reappraisal. This appropriation can and indeed should, under socialist reform, be launched from the perspective of the worker. The general conclusion is clear though, that '(w)hile capitalist efficiency and socialist efficiency are quite different concepts, there is some overlap between them' (Blackburn 1991:217).

Two examples indicate what might be lost from an unqualified ejection of the capitalist historical baggage:

** the technical integration of production that now serves the narrowest of valorisation imperatives, also objectively opens up a vast space for both specialist and general communication. The reforms that would be required in order to bring these techniques into the service of common social development would be wide-ranging and radical in themselves; but the possibilities are there in terms of serving the ends of 'genuine communality', Bahro's fifth theme. He is at other points cognizant of these possibilities, but then only in a most mechanistic and reductionist manner. Thus apparently, '...the problem of a general assembly of the people is solved from the quantitative and technical aspect by modern computers and means of mass communication' (Bahro 1978:301, emphasis added). It most certainly is not!*

The electronic integration of production might also assist in the planning and social control of those 'large scale industries' that would, Bahro concedes, continue to function into the communist future (Bahro 1978:447, 452).

** the lessons of the recent overhead offensive and the compaction of the technical collective worker, carefully worked through in the Japanese factory, are important in terms of the limitations and possibilities in the restructuring of the collective worker and in the division of labour. These changes are inspired, it goes without saying, by the sophisticated application of the Babbage Principle and can have ruinous effects for the workers.*

Yet the connections with the compaction of bureaucracy and the redivision of labour, two of the guiding themes of Bahro's transition, are manifold and too important to be glibly discarded.

As a specific example, Sirianni's nuanced attitude to synchronisation is illustrative of the more critical reappraisal that the implements and techniques of capitalism require.

Next, to the fourth area of Bahro's concrete proposals, the need for a new temporal accounting framework: this has already received much intellectual consideration elsewhere. Blackburn (1991:186-216) resumes these arguments lucidly. In relation to Bahro's proposals, the central point was made by Che Guevara in 1964. He asserted that S.N.L.Ts were calculable in principle, but that these would be of decaying accuracy in practice as a result of technological change led from the capitalist world. Guevara asserts that these changes could be ignored only in the medium term and that price-based valuations would be necessitated for both internal and external trade. In Bahro's conception, the rate of decay arising from technical change might fall, but the principle behind Guevara's observation remains.

There is then the pragmatic consideration that labour contribution conceived as use value creation would itself be profoundly difficult to calculate. As Cohen (1991) notes:

‘...measuring contribution in a non-market society requires questionable assignments of product to heterogeneous labours, and to labours of different skill levels’ (Cohen 1991:16).

Even assuming that the direct accounting regime could be established in the sphere of production, another large question would then present, as it were, from the other side of social reproduction: how does one represent needs? These are, as already observed, altogether more complex and potentially contradictory than Bahro allows. One might go further and assert with Otto Neurath, that needs are so ‘intuitive and indivisible’ that no *numéraire* is possible at all.

To make these observations is not to suggest that the principle of labour time accounting is undesirable, or that attempts should not be made, at least on an experimental scale. Bahro does not reflect the manifold difficulties that present at virtually level in his accounting structure. It is, more generally, not clear from his comments in *The Alternative* that the framework that he proposes would entirely satisfy a social requirement: to display progress towards general emancipation. As Filipcová & Filipec (1986) observed, the methodologies for measuring the development of personality are deeply contested. In the meantime, a more approximate but still valuable methodology for gauging the ‘richness of life’ might be provided by the further development of the proposals submitted by Richard Meier in 1959. He calls for a new set of ‘social accounts’, detailing:

** the 'variety of life', where an 'increase in variety almost always reflects an enhancement in social integration'.*

**the comparative volume of 'uncommitted time' liberated by different urban forms (Meier 1959:27).*

This concept of uncommitted time roughly corresponds with free time. One would clearly need to develop this further in order to disaggregate the temporal elements and activities that were, in Bahro's terms, compensatory from those that were emancipatory.

Meier's social accounts would draw on information derived from time budget studies, marketing research and labour force and other statistics collected on for example, divorce, by government: that is wherever possible, from existing data series. These would be augmented where necessary by sample polling. This data would be consolidated into 'a significant index for social progress-variety in the pattern of life'. As he observes:

'...if it can be shown that more people are choosing to use their time for a wider range of activities, one has as significant an indicator of socio-economic growth as increased per capita income' (Meier 1959:29-30).

It would, of course, be just as important for the index to show any reduction in temporal diversity!

Meier writes with the technocratic requirements of the urban planner firmly in mind, and this renders his proposals unsatisfactory from many perspectives. The problems with time budgeting are extensive; the individualist underpinning reveals a narrow conception of biographical development, which is profoundly socialised. Notwithstanding all of this, his schema has the overwhelming attraction that it is so obviously attainable.

There are, furthermore, potentially promising avenues of further work which his indices could stimulate. For example, Meier is insistent that the structure of the new accounts should wherever possible mirror the National Income accounts. This would indeed be valuable, for it would encourage the drawing of international comparisons concerning the relative indifference of different capitalist and other social formations to the conditions of personal development¹⁷.

This could usefully inform political activity. Likewise, the indices on the temporal dynamic of different urban forms could lend shape to the interminable and largely speculative debates on the

relative efficacy of different spatial forms. Bahro is clearly convinced, for example, that albeit in the 'distant future', 'the dissolution of the present urban agglomerations, which already lead to absurd results in many places', would nonetheless be a communist desideratum. The case for the smaller social unit as a freestanding spatial form has simply not been made. It would appear that these indices could, with further work, be invaluable in the preparation of serious scenarios for social communication.

In general then, the social accounts that Meier outlines, for all of their problems, offer considerable scope for further research. There may well be more to gain in the near future from pursuing these than the more difficult proposals made by Bahro.

Finally, on institutional structure and dynamics: it would again be possible to translate much of Bahro's thinking into forms and systems that can be negotiated within a reformist project. There are, for example, experiments in the Nordic region in redefining the relations of locale and nation that merit serious theoretical examination and propagation.

The basic problem with Bahro's analysis, which will only be signposted here, is that it projects a remarkably *non-conflictual* or self-regulating civil society. The line between this and the reading of uniformity of social needs, of a unitary political form and the monolithic quality of social planning is vanishingly thin. When the possibility of conflict is admitted, Bahro's narrative falters. He cannot, then accept the possibility of socialist *free-riding* in the commune system.

'The principle of solidarity requires quite decisively that every commune, indeed every organized interest, should demonstrate a normal degree of effort... Otherwise it could not be ruled out that the *road* to communism, in particular, could tend to collapse into a process of cultural decline' (Bahro 1978:449).

This argument is equivalent to a 'raising of the stakes' and would issue in reality in extremes of confrontational behaviour. To posit that the central triad of institutions could always reach what has elsewhere been characterised as *negotiated co-ordination*, which is what Bahro basically suggests, is merely to displace the issue. Priorities in major investments will inevitably be contested for so long as any unevenness (or indeed, purely physical difference) in development continues. Asymmetries of size and scale will continue in the productive base, though Bahro makes it clear that he sees these as being of a reducing order. There is, in truth, no way of evading the issue. The issue has been more sharply posed by Blackburn (1991) in a commentary on Devine's work on planning:

‘...in a process of negotiated coordination, how are differences decided? Clearly, it would not do for larger enterprises to prevail over smaller ones, or for those in a strategic position always to have their way’ (Blackburn 1991:n.79).

The constitutional dynamic that Bahro proposes rules these real objections out of court by theoretical *fiat*.

Many of the objections made above on Bahro’s work point in the same direction and towards a deeper problem, one that concerns his underlying conception of the future. There are many examples in *The Alternative* of what Blackburn (following Martov) has called a *simplification* hypothesis. This relates a futurology in which, ‘once capitalism is swept away the problems of production, or of law, or of political action will be easily manageable’ (Blackburn 1991:180). Some of the keywords of such a perspective are: absolute transparency; homoeostasis; resolution. There are other clues too, arising from an abstracted utopian thought: arcadian or rural motifs; the quasi-theological language of the *chiliasm*. The ‘end of history’ is then presented as a restful domain.

Bahro’s work cannot simply be aligned in this way. He is for example, mindful of the need to conserve the ‘species’ dynamic impulse’ through the ‘renunciation of economic growth’ (Bahro 1978:266). At other points though, there are signs of the homoeostatic themes yet to come. There is for example, the deep mistrust of extended forms of social intercourse. He declares that ‘the greater and more complex the social association, the more subaltern people become’. ‘Subaltern’ is a specific rendering of alienation. Yet he also seeks the means to convene ‘assemblies of the people’, in recognition of the absolute necessity of communication at these aggregative levels.

There is the larger problematic of the relation with the natural systems. He talks of the replacement of the ‘sphere of metabolism with nature’ as the ‘major impulse’ of human activity with social and individual ‘regulation’. This translates into a move from a preoccupation with quantity of commodities and an instrumental perspective on the ecology to quality and the amassing of resources for personal development. Bahro states this thesis in terms of the tempo of reproduction.

‘The communist association... can only be a system of quantitatively simple reproduction, or at most very slow and well thought out expanded reproduction’ (Bahro 1978:265, emphasis removed).

The proposal is then not quite that of economic stasis. The emphasis in what follows is, though, firmly on the simplification aspects to the reproductive process. The 'dynamic impulse' retreats, in consequence, from view. One is left with something akin to a *natural-limits* position, though one that could not be characterised in any straightforward Malthusian manner as 'epistemic conservatism' (Benton 1991).

Ecological concern largely motivates Bahro's inclination to simple reproduction and to a general simplification of productive activity in the communist Alternative. The argument is itself troublingly simple. The natural relation is properly conceived in a reciprocal manner, as *constitutive* of practical (human) activity. As soon as one admits this, then the nuances in the productive relation begin to come through. These break down in turn the simpler equations of quantity and degradation.

Benton's (1991; 1992) work can be viewed as the beginnings of an attempt at disaggregating this constitutive relation. Marx had in *Capital* defined the invariant (transhistorical) form of the labour process as the procession of three elements:

raw material —————> transformation —————> product.

These elements are combined in a unique configuration dependant on the specific end in view, the *intentional structure*. Yet as Benton observes, this is but one species of productive activity. There are a range of human activities in which the 'conditions, contexts and media... are not *transformed* in or *used* by actors but, rather, *presupposed* in their activity' (Benton 1992:59). Different intentional models are thus required to capture the distinct modes of intercourse with natural systems. These may be located on a spectrum ranging from transformation through appropriation to adaptation, that reflects their degree of '*relative non-manipulability*':

* *eco-transformative*: this activity is the 'historical precondition of all "eco-regulation"'. It enables the construction of a new system of eco-regulation by transforming the conditions of an existing natural regime. Activities include 'burning or cutting down forest, building irrigation channels, reclaiming coastal marshes by building sea walls, and so on'.

* *eco-regulatory*: activities aimed at 'sustaining and optimizing conditions for the organic development of selected species or varieties of organisms, rather than of transforming a raw material into a useful product'. These include 'horticulture, pisciculture, pastoralism, agriculture, silviculture and so on'.

* *primary appropriation*: activity designed to secure 'materials, objects and living beings (which) already exist in nature in a form appropriate to human uses'. This selective appropriation does not itself transform the objects themselves. Included under this rubric are 'hunting, gathering, mining, fishing and so on'.

* *capacity-enhancing*: activities that expand 'our capacity to survive and flourish despite unfavourable environmental conditions, as distinct from enabling us to transform those conditions themselves' [Benton 1991:262]). He cites the development of shelter, clothing and medicine under this head.

These activities very clearly ramify on the ecology in different ways: the degree of relative non-manipulability varies accordingly. There are also, Benton notes, whole regions of even the local environment that continue in basic ways to elude manipulation of any form. This mapping startlingly resembles Williams' concept of *reach* (Benton 1991:261ff; 1992:59-68).

Bahro practically conflates all contemporary production with the *productive-transformative* model. What results is a premature foreclosure of options for the future. Technique and technical change can serve multiple ends including those of for example, a restorative quality. Activities can be moved between intentional structures and the resulting changes in activity and possibilities for personal development rationally assessed against differentiated social needs. Benton is then right to call for:

'the construction of concepts of each of the principal economic forms of society, or modes of production, as specific forms of *structured articulation* of a set of systematically interconnected material mechanisms, conditions and contexts *together with* a social-relational form with its intrinsic dynamic tendencies and/or contradictions' (Benton 1991:266).

It may be noted that this formulation is very close indeed to the Althusserian hypotheses set out in Chapter 1 above. It is also much more open to the possibilities of planned technical change and complexity than the primitive simplification position adopted by Bahro.

Bahro's position in this regard was idiosyncratic (but hardly unique) in the marxist tradition that he then espoused. In Blackburn's judgement, marxist futures have generally been marked by *increased complexity*:

‘in Marx, and in the tradition more generally, there is a ...stronger commitment to the idea that human social powers are cumulative, dialectical and various, and that in a socialist society some forms of complexity may be removed but others will be added’ (Blackburn 1991:180-1).

If one puts a simplification strategy together with a narrow interpretation of natural limits and a conception of production that emphasises functional integration of labour (*hetero-regulation*), then a bizarre new projection of the effects and ends of a ‘liberation of time across the whole of society’ can result.

The Terminus?

André Gorz’s long term research project has been founded on these contentions. His work assumes a social dynamic that leads inexorably to a *liberation from work*.

‘What is involved is the transition from a productivist work-based society to a society of liberated time in which the cultural and the societal are accorded greater importance than the economic’ (Gorz 1989:183).

The debt owed by Gorz to Bahro in the development of this project has been noted elsewhere (Byrne 1985). It is not intended here to offer anything like a substantial criticism of his work or his prognoses: this is a task that has already been undertaken elsewhere (see the bibliographies in Byrne 1985 and Sayers 1987).

There is one aspect to his work though, that cannot be passed over and that Sayers has well captured. Gorz suggests that automation is driving down the objective volume of necessary paid labour and creating liberatory possibilities. Necessary labour is at the same time losing all liberatory potential. Hetero-regulation, defined as the combination of functional (machine-based) labour with hierarchical regulation and production for general exchange, coupled with the ideological capture of the institutions of labour, forbid any recourse to ‘working-class humanism’. As Byrne comments, ‘(w)e can look to those forces for neither the social nor the material bases of change’.

These propositions are hardly novel: but the interesting aspect lies in his response, which has been developing over some time. Gorz calls for the construction of new forms of socialised work activity, a sphere of *autonomous activities*. These activities are characterised in generous terms.

‘They ...have to be free of all necessity: they have to be motivated by nothing but the desire to bring the Good, the True and the Beautiful into the world. In other words, they have to stem from a conscious choice which nothing forces me to make’ (Gorz 1989:168).

More explicitly, acts are autonomous where ‘...the action which achieves the goal is as much a source of satisfaction as the achievement of the goal itself’ (Gorz 1989:165, emphasis removed). These formulations are, to understate, rather obscure. The examples that Gorz gives are perhaps more enlightening. Autonomous acts are the ‘lived forms of community relations, solidarity, mutual aid and voluntary co-operation’. Specifically: ‘(a)rtistic activities... political campaigning, charitable work, worship, scientific or philosophical research’. The manifestations of autonomy can be seen in ‘the growth in popularity of religious, charitable, associative and alternative- in short, disinterested- activities’ (Gorz 1989:99). These acts are already, in Gorz’s view, assuming increased significance in the context of mass unemployment. This is, as Byrne caustically remarks, a ‘debateable ethnography’!

There is a band of activities here that would span a range from concrete labour through to what are now generally classed as leisure activities. The expansion in such activity that liberated time makes possible is, as Sayers (1987) notes, conditional on the creation of an infrastructure of ‘collective facilities’ and of self-provisioning networks: reductions in worktime do not of themselves induce such changes in social activity. The dichotomy of autonomy/heteronomy, Gorz asserts, supersedes that of freedom/necessity in contemporary conditions. The essence of the liberatory project is quite simply, that of ‘reconquering spaces of autonomy’.

Gorz has been remarkably consistent in arguing his vision. The criticisms of his earlier work made by Sayers therefore retain their force. In the first instance, Sayers restates the centrality of abstract labour in the formation of contemporary biography. It follows, he observes, that the ‘active, free and creative’ appropriation of discretionary time is itself the product of that same process of temporal discipline and organic sociality. In all preceding epochs, free time was ‘a time of mere torpor and idleness’. This process of free time restructuring is yet incomplete. In this sense, the effective development of free time is contingent on participation in the most advanced forms of abstract labour.

Gorz’s view, conversely, is that the evacuation of living labour from production is a liberation from a ‘false and unnatural compulsion produced by modern society’ (Sayers 1987:24). ‘It is’, Sayers contends, ‘nothing of the kind’. The active appropriation of free time (and the flowering of autonomous activity) is solidly linked to the development of abstract (heteronomous) activity.

To attempt to sunder that link would be to undercut the basis for autonomy itself:

‘...he writes as if autonomous and creative leisure activities will flourish quite naturally when we are freed from the coercive need to work. He fails to see that the desires and needs for these activities are equally social and historical products’ (Sayers 1987:23).

The realm of autonomy displays all of the characteristics of a homoeostatic regime. The ‘dynamic impulse of the species’ (Bahro) is to be met from activities that are very local, unambitious and introverted. This *ruralisation* clearly reflects Gorz’s ‘liberal/individualistic autonomy perspectives’ (Byrne 1985), his simplifying futurology. In the sense that Gorz (1989) simply disregards the problems in his sphere of heteronomy as being structurally insoluble, then he also accepts the legacy of inequity in access to that vital part of the time fund. It may be that much of the sphere of heteronomy could be replaced in the long run by autonomous activity, but this could be a very long run, and there are, as Gorz concedes, clear limits to any process of *deproletarianisation*. At this level, the liberation from work is partial and what remains is an alienated and unequal residue. This is the basis for the many criticisms of the political implications of Gorz’s work levelled over recent years¹⁸.

Gorz has nonetheless posed a severe challenge to marxism. He argues from a clear normative perspective on the ideal forms of human activity, an ontological prescription for the future- a *telos*. Marxism has exhibited in many ways justified and defensible suspicion of such claims. To project from a bastardised present to an emancipated future is an essentially partial and speculative activity. It is one, moreover that is far more difficult to undertake from a *complexification* than a simplification perspective, such as Gorz’s. Yet given the disbelief and hostility that socialist claims now evoke from ‘an informed and sceptical audience’ (Williams 1980), and the influence of libertarian writers like André Gorz, there is practically no choice left in the matter.

Sayers recognises this challenge. Yet he is much stronger when criticising Gorz’s hypotheses than when he comes to give his own answer to this formidable problem. He posits from a reading of Marx a transcendental *need to work*. Thus:

‘the modern need to work, although it is undoubtedly a historically developed need, should not be judged “false” or “artificial” simply for that reason. On the contrary, it is a *real and ineliminable feature of contemporary psychology*’ (Sayers 1987:23).

Gorz might of course, respond by observing that this need to work as a product of a particular structure of social activity (historical relativity), can and should be undone by conscious social intervention in the future. This is the problem with any sovereign conception of need. Indeed, at one point, Sayers does appear to recognise the static underpinnings to his need-centred conception of individuality. He argues that:

‘(t)hrough the activity of labour, man develops his powers and capacities, and creates new needs- including the need to work’ (Sayers 1987:21).

The emphasis here is so obviously on activity, that his immediate return thereafter to his central category, the ‘fundamental’ need to work is truly perplexing. The problem recurs later, when he emphasises the ‘productivist’ bases of marxism. He observes that marxism ‘regards production as “man’s essential activity” and as a primary human and social value’. It is through *activity* that the future development of capacities and the satisfactions that attend that process are to be derived: as he states, on the foundation of a liberation *of* work.

Sayers’ own discussion seems therefore to undercut the arguments for a need-centred analysis. The approach is fundamentally flawed when viewed from the perspective of Sève’s theory of personality. There is another problem that might superficially be associated with this ‘need to work’, and that may be claimed more generally to typify marxist responses: an *ascetic* predilection.

This is a point that Clarke (1990) takes up in his critique of Gramsci’s ‘utopian’ monograph, *Americanism and Fordism*. Gramsci hypothesised that the Fordist worker would generalise the traits of calculation and rational instrumentality in the process of production to all aspects of life. These aspects of rationalisation were seen positively as harbingers of the communist future. They translate into characteristics of sobriety and monogamy. This austere vision is, Clarke sardonically observes, one that the workers themselves practically and decisively rejected.

‘Despite its best efforts to provide hard work and a frugal life, supported by edifying art, music and literature, with extensive facilities for healthy Fordist sports, the state was unable to protect the working class from blue jeans, rock music, Coca Cola, alcohol, modern art, fornication, homosexuality...’ (Clarke 1990:146).

Clarke’s point is well made. There is an absolute requirement for an improved vision of a personal future that can encompass hedonistic impulses in a more satisfactory manner.

These observations indicate that a wider project of reappropriating temporal rationalisation for emancipatory purposes is sensitive. The value of Sirianni's careful work becomes evident in this light. It is not adequate, given the depth of alienation with socialist ideas, merely to counterpose to this the classic themes of worker control at the point of production, for this simply postpones questioning of the deeper purposes of labour itself.

Marx's own comments on the personal characteristics of communist life are, understandably given his overall scepticism of future speculation, all too brief and cryptic. In Soper's (1991) phrase, the communist future was (and remains) *under-defined*. There is little more than a sketch of a polymathic individual, working through a varied daily diet of hunting, fishing and critical criticism. Even this is intended as something of 'a jibe' (Soper). Soper's own courageous attempt at addressing this problem from the perspective of an ecological reclamation of marxism is unsatisfactory. Marx, she observes:

'reveals socialism as the possibility of idleness; and in this idleness, one may argue, lies one of the most important eco-friendly resources available to human societies at the present time. For in the last analysis, it is only if we stop working, in the sense of devoting labour time to the production of resource-hungry material commodities... that we shall stave off the barbarism of ecological collapse' (Soper 1991a:288).

The contrast between these possibilities for creative idleness and Sayers' work imperative starkly reveals how deeply that under-determination of the future in marxism runs. Soper's observation on choice hardly squares with the magnitude of this task.

'...the important point is that it is only under a socialist economy that a society is placed in a position to *choose* the forms of embodiment of its labour time' (Soper 1991a:287).

It is an important and classic point, but it does not seem adequate any longer in a social formation that has truncated its general anticipatory capabilities. There remains then, a formidable lack of clarity as to what the communist project might actually aspire to. This is where the resources for that Journey of Hope are most lacking: in a vision of a fulfilled life.

The 'Journey of Hope' Assessed:

The comments made in this Chapter build more or less explicitly on a conception of time as the most precious resource for the further development of personality, the construction of 'rich

individuality'. The projects of Sirianni and Bahro, starting from different perspectives on the 'limits of the possible' and practically founded, of course, on the basis of radically different social formations, represent, in effect, minimal and maximal programmes for reform in the time fund. No attempt has been made to reconcile the two prescriptions, nor to locate them within a dynamic conception of a process of reform.

It is this that, incontestably, constitutes the utopian element in the foregoing, not the proposals themselves, which are both desirable and objectively attainable.

The millennial impulse that Norman (1991) for example criticises in marxism is valuable in itself, a part of Bloch's 'warm stream', an anticipatory instrument. It is in this context that humanist thought begins to recover a philosophical legitimacy. To repeat: humanism has absolutely no place in the objective appraisal of either the present or of any preceding period in human history. All modes of production to date have been at best indifferent to the developmental needs of their human *Träger*. It is a different matter altogether when it comes to composing images of the possible, wherein human development is recentred. This is what Filipcová & Filipec (1986) call for, an:

'historically momentous change in direction that would apply the enlarged reproduction of capital to a society aimed at the enlarged reproduction of the personality' (Filipcová & Filipec 1986:28).

Thus, after a prolonged period of what might ironically be termed structural unemployment, humanism comes to serve gainful ends- in the informing of the means and ends of a projected post-capitalist society.

The central condition for this concrete utopian work is a racination with the political economy. This is recognised in Williams' (1980) review of Bahro, when he observes that:

'...there are good grounds for believing, with Bahro, that the decisive engagement will be with the problems of "the economy". Yet it is clear that the form of this engagement, as distinct from the now dominant and preoccupying "programmes of economic survival", has to begin in some new and unfamiliar ways' (Williams 1980:15).

What is being related here is a supersession of a mode of production in which the economic reintegrated and subordinated in a new cultural complex. This subordination reallocates

dominance to the practice of the enlarged reproduction of personality. As Mulhern (1984) observes, the economic would still retain its determinate (basic, material) quality: but it would be 'organized in the service of an optimum common livelihood' (Mulhern 1984:19).

The deepening of the contemporary capitalist economy does indeed form the irreducible basis for critically apprehending the future-any future. The collective or transindividual organisation of production, now spanning integrated sectors of production in novel Development Blocks, is a principal aspect to this growth. It is then notable that the progressive aspects in this principle of transindividuality are hardly touched on in the proposals made by both Bahro and Sirianni.

It is, one suspects, merely to compound oversight into error then to embrace theoretical structures that eschew transindividual categories. The so-called *rational choices* of Analytical Marxism are innately individualist and lead to a damaging truncation in the analysis of the structure-subject relation. The effects are evident in Cohen's rejection of (an 'Hegelian') conception of '...humanity rising to consciousness of and control over itself' as an *end* of social transformation. As he suggests:

'(i)ndividual self-direction, a person's determining the course of his own life, may have value *per se*, but collective self-direction does not' (Cohen 1991:17).

What is remarkable in this reconstruction is the utter dearth of reference to the infrastructure and dynamic of the productive forces.

While theory thus erases transindividuality, the traces of the displacement of individuality become increasingly empirically visible in concrete personality. This semi-conscious recognition continues to destabilise the conditions of personal development and to pose contradictory questions to critical consciousness, as Kate Soper (1991) recognises.

The consciousness of displacement is founded on a recognition of what she terms the 'anti-humanist challenges to the sovereign subject'. The reflexive cognition is painful and confused, as the following ruminations illustrate:

'...we may feel an existentialist responsibility to changing the social forces through which we acknowledge ourselves to have been "constructed"; but at the same time- and here is the rub- in recognizing the extent to which we are "constructed" selves, we also recognize and pay due heed to all those reasons we are so resistant to altering our ways, and may indeed not manage to achieve this, however hard we try' (Soper 1991:127).

One returns full circle, at this point: to Plekhanov's work on individuality...

Final Thoughts:

There is a tendency in projects of this kind to elide the ending of a discrete argument with at least a pretence at epistemological or practical completion. No such claim will be attempted here. It is, in fact, disappointing to reflect on the very limited results achieved over the preceding Chapters. There is a long research agenda stretching out ahead that encompasses at least three key areas of controversy and which are but resumed below:

** the dynamic of need formation and satiation. The elaboration of this theme would require, at a minimum, a critical reappraisal of the hypothesised trend to commodification of areas of activity. There would also be value in reanalysing the fundamental and increasing contradictions between the realms of production and consumption. The generalisation of A.W.S. in the retail and distribution sectors, with specific implications for women workers, reflects real tensions in the separated social identities of producer and consumer. The awkward quality of the choices involved here recalls the nuancing in the concept of equality and the challenges posed by particularism in the foregoing analysis. One need not search hard for practical illustration of these problems:*

'...what is more important- that postal workers should be able to choose their hours of service and, for example, not have to work on Saturdays and Sundays, or that the post office should be open at times that suit the general public?' (Rezsohazy 1986:45).

** the articulation of common interest, understanding or experience in collectivities. This involves, centrally, an analysis of how affiliation transmutes into activity, or alternatively, the formation and execution of strategies from delimiting structures (Jessop 1988). The issue, in received terms, translates into the transformation of class-in-itself' to 'class-for-itself'. This is, as Jessop observes, a 'reciprocal recursive' process.*

** the theoretical processes underpinning the formation of concrete individuality. This has been lightly touched on in Chapter 4. The construction of concrete individuality raises the formidable problem of ideology in the context of a triple determination of synchronic and diachronic concepts. This process culminates in the formation and contradictory development of identity.*

** the theoretical exploration of that other great universe of conditioning presented by the physiological and biological nature of individuality. Marxism has evidenced some historical strength in its relationship with the natural sciences. This seems to have weakened recently, under the impact of the criticisms of post-modern relativists. The work of Williams and Timpanaro began to unravel the peculiar contribution that a refined materialist conception of human activity could make in this regard.*

It is in many ways regrettable that these promising lines of inquiry have not been seriously pursued in the subsequent period. There is irony here too, for progress in the physical sciences has accelerated recently, and the provisional conclusions certainly do not contradict many of the marxist theses resumed in the preceding Chapters.

It would be appropriate in these closing comments to pause briefly to comment on some of these.

Some inkling of the issues at stake may be had from a consideration of four highly suggestive observations made in a recent review of the complexities in the relation of 'Mind and Brain'. There is, in the first instance, an explicit recognition of the adaptability of individuality to environmental change. This is registered in changing mental representations (*maps*) of the soma. This implies a demonstrable relation of neurophysiology to the structure of acts. More precisely:

'...cortical maps are subject to constant modification based on use of sensory pathways. Since all of us are brought up in somewhat different environments, are exposed to different combinations of stimuli and are likely to exercise our sensory and motor skills in different ways, the architecture of our brains will be modified in slightly different ways. This... contributes to the biological basis for the expression of individuality' (Kandel & Hawkins 1992:60).

This relationship pivots on one centrally important and familiar class of acts: learning. As Kandel & Hawkins conclude:

‘the study of learning may help connect cognitive psychology to the molecular biology of the organism more generally’ (Kandel & Hawkins 1992:60).

This is incontestable but incomplete. The precise mechanisms of learning (considered in some abstracted [asocial] sense) are indeed theoretically interesting. Yet the argument presented here suggests that the social context of activity (the psychosocial, as represented in the structure of use-time) sets strict limits on the development of capacities. The evidence suggests that these conditions predominate over and determine the cognitive potentialities of concrete individuality. (Unequal) access to the social time fund is in the end decisive to the attainment of capacities.

There is more. Research indicates that any biologist fatalism with regard to neurological ageing is unwarranted. (At points, Bahro 1978 evidences such tendencies.) Research findings point to the following, stimulating conclusion, that:

‘the brain is capable of dynamic remodeling of its neuronal connections, even in the later years and that therapy of some kind might augment this plasticity’ (Selkoe 1992:98).

Commenting on experiments with adult rats, Selkoe notes a specific *environmental* counter to ‘neuritic atrophy’ (the tendency for certain species of neurons in key processing areas of the brain to degenerate). The trigger to creative neural remodelling was provided by exposure to a ‘visually stimulating environment’. The conclusions are provisional and the prospects for a long term therapy contentious. There is thus a:

‘lively debate over whether maintaining or increasing mental activity can protect against cognitive decline late in life. Unfortunately, rigorous data on the subject remain elusive’ (Selkoe 1992:103).

In short, these observations suggest that marxist personality theory, which at root studies the different possibilities and restrictions in biography posed in the psychosocial realm, has much to gain from a more systematic appropriation of neurophysiological work. The same holds true for marxism in its relation to the physical sciences *tout court*. The converse of this is that many of the theses of marxist personality theory appear to be extremely *robust* in light of such evidence.

The research agenda outlined above is formidable. The fruits of that process are manifold too, though. Not least among these products would be the theoretical retrieval of the promise of communism itself, with the temporary fall of which has come a new depth of cynicism and

telescoping of the future. Yet the dynamic of the productive forces, shaping the resources of time and the capacities of the population, now pulse with historically unprecedented vitality.

No matter the generous intent in Fukuyama's conceptualisation of the *end of history*, the objective possibilities for the future have perhaps never been so open¹⁹.

NOTES TO CHAPTER 6

1. Though as late as 1865 in his Report 'Wages, Price and Profit', Marx suggests that only *free time* could be designated as the 'time of human development'; conversely, that a worker:

'whose whole lifetime apart from the mere physical interruptions by sleep, meals, and so forth, is absorbed by his labour for the capitalist, is less than a beast of burden. He is a mere machine for producing Foreign Wealth, broken in body and brutalised in mind' (Marx & Engels 1968:219-220).

*Polemics suggesting a condition of absolute mutilation and fragmentation of the labourer run throughout the earlier works, most notably, the **Economic & Philosophical Manuscripts of 1844**. This is a polemical thrust that would be deeply qualified by the time that volume III of **Capital** and the **Grundrisse** were drafted (see Adler 1990 for a fuller presentation on this contested issue). The process of production under modern industry is then more familiarly cast as a collective activity that calls up its own characteristic bundle of (relativised) worker capacities. The time of labour is then also (but not primarily or intentionally) a decisive moment of learning.*

As Adler observes, this position recasts the nature of the transition to socialism as conceived by Marx and Engels away from the revolutionary (Blanquist) coup.

*The terminology also bifurcates. Marx then begins to differentiate the notions of free time and the realm of freedom as the aggregate discretionary fund of time beyond the historically determined subsistence (the realm of necessity) from the narrower problematic of the development of individuals under existing production arrangements. In relation to the latter, the **Grundrisse** talks of the objective socialisation (transindividuality) and universalisation of capacities that modern industry permits as a necessary historical prelude to the transition to socialism (Adler 1990).*

2. Some writers, most notably Rudolf Rezsö, assert that the new economy of time associated with capitalism 'first emerges among the class that spearheads economic and social transformation', that is, the bourgeoisie (Julkunen 1977:9). Dichotomisation is a central part of that rationalised temporality. The contradictory observation that the use-time of the Turinese bourgeoisie is so integrated then suggests either:

* that the time sense of the bourgeoisie in general has not been rationalised, or if it has, then that rationalisation has taken a form that is not yet understood or codified.

* that the time discipline of the bourgeoisie was required for only the transitional period and that the class was then able to revert to a relaxed, pre-capitalist arcady. This is as tenable as the successive (re-)making of the workers in Thompson (1980).

* or, that the personifications of Italian capital are extremely weak or exceptional in some other way. Given the continuance of parasitical elements in the social formation, this might explain perhaps a part of this apparent contradiction.

These problems indicate the need for further research into the use-time of the exploiters and of parasitical (rentier) elements.

3. Nearly 7% of the labour force of the O.E.C.D. bloc countries was officially recorded as being unemployed in 1991. Projections for the year 2000 differ: in a recent survey, Paul Ormerod predicted western European unemployment to be '...of the order of 15 percent... in a central projection... (U)nder a scenario of rapid growth, which is unlikely, it will not fall below 10 per cent'. E.C. registered unemployment stood at 8.9% in 1991. Ernest Mandel was characteristically more categorical:

'(m)y estimate is that real unemployment in Western Europe, not the "cosmetic" government-OECD figures, will go towards 30-35 millions; 50 millions in all the "metropolitan" countries' (Mandel, cited in *European Labour Forum 'Is recovery possible?' European Labour Forum 8 summer 1992*).

4. The tendency to dichotomy of use-time can percolate what Therborn labelled as inclusive-existential ideologies and condition concrete individuals to its effects. Raymond Williams saw this larger picture in the spatial relations of country and city.

'Often we try to resolve (the contradictions of capitalist development)... by dividing work and leisure, or society and the individual, or city and country, not only in our minds but in suburbs and garden cities, town houses and country cottages, the week and the weekend' (Williams 1973:293-4).

5. *A humanist aspiration that is not too dissimilar from the ambitions of the **Time League** in the early post-revolutionary U.S.S.R. The popular, activist orientation of the latter is rather different to the ideology of contemporary advocates of Time Management, which is tinged with technocratic themes and methods.*

6. *'La révolution du temps choisi': a famous slogan proclaiming the need for greater popular determination of use-time and coined in 1980 by the **Echange et Projets** group in Paris.*

7. *See Cohen (1991) for a trenchant criticism of proposals for so-called **market socialism** from the vantage-point of social equity. As he scathingly notes:*

'(r)eward for contribution implies recognition of what I have elsewhere called the principle of self-ownership... while market socialism may remove the income injustice caused by differential ownership of capital, it preserves the income injustice caused by differential ownership of endowments of personal capacity' (Cohen 1992:16).

*The recent rebirth of interest in market socialism was stimulated in large part by the work of Alec Nove: in the mid-1980s, the **Radical Philosophy** journal featured an illuminating exchange between Boris Frankel and Nove himself on the key themes of Nove's seminal work, **The Economics of Feasible Socialism** (see **Radical Philosophy** 39 1985:24-33).*

8. *Pronovost defines Time Management policy in typically technocratic terms as:*

'...a comprehensive scheme, co-ordinated by the political and administrative authorities, for introducing new ways of regulating social and individual time' (Pronovost 1989:87).

9. *Sirianni gives a brief glimpse of the potential of these 'social service' projects.*

'In one company, an engineer developed the computer systems for the regional and then national Muscular Dystrophy offices on successive leaves, and others have engaged in alcohol and drug rehabilitation work' (Sirianni 1988:40).

Sirianni does not make it clear whether such projects can formally draw on the resource bases of the employer (the donating organisation). In many English cases of volunteering and secondment to voluntary organisations, this kind of infusion does indeed take place, more or less explicitly!

10. Sirianni recognises that the push to greater collective control and decision-taking may itself begin to lay claim to unacceptable proportions of the available time fund and of the biographies of individuals. The democratic space also requires 'the techniques of time rationalisation':

'lest undefined and open-ended boundaries for discussion and decision undermine the willingness or ability of citizens to participate, narrow the spheres of social life in which they might effectively do so, or provide the opportunity for unrepresentative minorities to determine agendas and outcomes by unilaterally escalating the time costs of "voice" (Sirianni 1988:27).

11. Whereas traditionally, even the most vigorous (Austrian) apologists for market capitalism contended that markets were themselves amoral, that the terms were unrelated, arguments have been put recently by for example, Thomas Haskell to the effect that the market system is morally virtuous!

12. In the so-called 'lower phase', the means of production are brought into common ownership while the means of consumption are distributed (after subtraction) on an individual basis according to labour contribution. This principle recognises 'bourgeois right', as Marx scathingly noted, in its reward for unequal individual endowments and in its patent disregard for differing need. Yet one is dealing with all of the limitations imposed on social progress by the capitalist economic heredity. In the 'higher phase of communist society', with the abolition of the division of labour and the accelerated 'all-round development of the individual', a new distributional maxim may prevail:

'(f)rom each according to his ability, to each according to his needs' (Marx & Engels 1968:317-21).

*The superiority of the latter lies in its explicit recognition of the tensions within the concepts of equality presented by different capacities and needs. Marx had lifted this famous slogan from contemporary French socialism. It was Lenin in **State and Revolution** who popularised the correspondence of the 'lower phase' with socialism, and the 'higher phase' with communism. It was then the stalinist C.P.S.U. that announced in 1934 (with the apparent completion of the conditions for the 'lower phase') a significant revision of that slogan, now to become:*

from each according to his ability, to each according to his work'.

*The implications of this seemingly marginal shift are profound (see K. Coates **Beyond Wage Slavery** Spokesman Books 1977).*

13. *There can be little doubt as to the direction in which social policy formulation is being led by the emphasis on difference, even among those sympathetic to arguments for equality. Phillips relates the trajectory of Julian Le Grand's work on the impact of social service provision as a typical example of the theoretical movement over recent years.*

'His argument initially favoured a more radical egalitarianism that would directly equalize incomes, but has become more generally associated with voucher systems as a means of equalizing individual claims' (Phillips 1991:146).

14. *Though there was considerable vacillation on this score, as Geoghegan's (1987:22ff) analysis amply demonstrates. As he concludes:*

'Marx and Engels thus left an ambiguous legacy in which vigorous attacks on utopianism accompanied clear utopian speculation' (Geoghegan 1987:34).

Since at every other point, Bahro's work is in practice a positive contribution to utopian thought, his hesitation on this issue must have been due to quite other factors than this declared modesty before the future.

15. *Williams puts the criticism with less circumspection:*

'...it would be disastrous if in the West the idea of cultural revolution were given this kind of social location' (Williams 1980:17)!

16. *The ethical concomitants that are then ascribed through such compatibilism are particularly objectionable. These are apparent in an article by Oskar Negt.*

'What happens in the socialization of production happens also in the relation between the individual and the community. The ethical responsibility felt by the worker relates to the whole of society' (Negt 1985:174)

The underpinning to this extraordinary claim is remarkably similar to Bahro's claims for a revolutionary intelligentsia, if its bearing is wider. There is an active process of 'supersession of particular one-sided "skilled labour" by a general function involving planning, supervision and direction'. The trend is perhaps overstated in its scope but nonetheless there in contemporary capitalism. What follows from this though?

'(This) has brought about a change in the social character of the worker... a change in total attitude, in self-understanding and understanding of reality as far as labour is concerned' (ibidem:174-5).

The technical integration of workers leads, in other words, the universal development of a new ethos and new moral commitments in social individuality. This does not either theoretically or empirically follow!

*17. One of the pragmatic advantages to this is that workers in other fields are also working to embody their concerns into the United Nations System of National Accounts. For example, the World Resources Institute has been working to incorporate the depreciation of 'environmental assets' into the accounting framework. Its study of the recent macroeconomic development of Costa Rica when the effects of ecological denudation are accounted for is fascinating: see Robert Repetto 'Accounting for environmental assets' *Scientific American* vol. 266:6 June 1992.*

18. In Therborn's assessment, Gorz's 'farewell to the proletariat and his welcome of "the non-classes of non-workers"' has strengthened 'attacks on the labour movement- through the claim that it represents a "privileged minority"'. Recent development has undermined his constituency, as the 'drop-outs celebrated by Gorz are scattered to the four winds' while his arguments have 'made a significant contribution to contemporary unemployment'.

*These observations may overstate the importance of theoretical activity in the development of the practices of the labour movement. Yet the basic thrust seems accurate: see G. Therborn 'Leaving the Post Office behind' in Nicolich (ed) *Socialism on the Threshold of the Twenty-first Century* (1985), Verso London.*

*19. See McCaurney's favourable comments on Fukuyama in *Radical Philosophy* 62, 1992:35-8.*

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AUTHOR INDEX

The following list of Names is incomplete in two respects: first, not all of the Authors to whom allusion has been made in the foregoing are referenced here. The Index only details those whose work has been substantively addressed in this Essay: second, the names of Louis Althusser and Lucien Sève have been omitted below. This is because their influence has been too pervasive to permit any sensible listing!

- Adler *Paul* 3, 167, 172, 178-9, 181-2, 183, 185, 224, 230, 232, 263-4, 267, 269, 271, 341.
- Aglietta *Michel* 51, 74, 95.
- Amsden *A.H* 247, 251, 261, 265, 269.
- Anderson *Perry* 22, 24, 26, 39-42, 77, 78, 94, 129, 145, 153, 191.
- Attewell *Paul* 140, 239.
- Bahro *Rudolf* 291, 311-19, 321, 322, 324-5, 327, 330, 336, 337, 345
- Balibar *Etienne* 29-30, 34.
- Belloni *Maria* 294-6, 300.
- Benton *Ted* 329-30.
- Bienefeld *M.A* 155.
- Blackburn *Robin* 324, 325, 327-8, 330-1.
- Braverman *Harry* 168, 171, 173, 175, 198.
- Brody *David* 154, 159, 194, 196.
- Clarke *Simon* 334.
- Cohen *G.A* 47, 308, 309, 318, 325, 337, 343.
- Coombs *Rod* 84, 90, 92, 178, 204-7, 211, 255.
- Dahmen *Erik* 66, 87-89.
- Devine *James* 181, 182-4, 199, 264, 291-2.
- Doray *Bernard* 60, 61, 65, 68, 71, 91, 93, 211, 238, 285.
- Duncan *Mike* 262.
- Elam *Mark* 280.
- Elliott *Gregory* 19, 27, 28, 36, 45.
- Filipcová & Filipec 293-4, 297-8, 325, 336.
- Form *William* 168, 169, 172, 174.
- Gaillie *Duncan* 230-1, 232.
- Geoghegan *Vincent* 4, 318, 319, 325.
- Geras *Norman* 49, 309.
- Glyn *Andrew* 210, 212-3.
- Gorz *André* 304, 320, 331-4, 346.
- Gramsci *Antonio* 76-83, 85, 225, 334.
- Greenall *Ray* 250.
- Henderson *et al* 59, 187-90, 192, 194, 199.
- Hirschhorn *Larry* 205, 270-1.
- Hopkins *Eric* 157, 161.
- Horrell & Rubery 241-3, 265.
- Jenson *Jane* 238, 277, 290.
- Julkunen *Raija* 146, 272, 293, 301, 305, 342.
- Jürgens *Ulrich* 251-4.
- Kohn *et al* 191.
- Lazonick *William* 171, 177.
- Leonard *Peter* 132, 133, 143.
- Lipietz *Alain* 213, 220.
- Mackenzie *Donald* 158, 166-7.
- Luria *Dan* 260, 274, 276, 277, 278-9, 280, 282-4.
- Maier *Charles* 59, 68.
- Malone & Rockart 261, 263, 267.
- Mandel *Ernest* 146, 342.
- Marglin *Stephen* 153, 170-1, 176.
- Meier *Richard* 326-7.
- Mephram *John* 32, 34-5, 47.
- Molina *Victor* 21, 30-1, 33-5.

- Murray *Fergus* 268, 275, 276-7.
 Neifer-Dichmann *Elisabeth* 218, 220.
 Norman *Richard* 309, 336.
 Nyland *Chris* 60, 63, 160, 215-8, 222-3, 265.
 Oliver *et al* 248, 249.
 Palloix *Christian* 224-5.
 Parker & Slaughter 252-3, 254, 288.
 Piore & Sabel 209, 272-3, 274-5, 277, 279, 280, 281, 290.
 Pronovost *Gilles* 216-7, 285, 297, 300, 302, 303, 343.
 Phillips *Anne* 345.
 Raff *Daniel* 68, 69-70.
 Réé *Jonathan* 48.
 Reid *Douglas* 157, 159, 160.
 Sabel *Charles* 275, 277, 280.
 Samuel *Nichole* 298-9.
 Samuel *Raphael* 45, 94, 164-5, 171.
 Sirianni *Carmen* 299-300, 301, 302-8, 309-11, 325, 336, 337, 343-4.
 Saul *S.B* 159, 162.
 Sayer *Andrew* 249, 251, 261, 265, 288.
 Sayers *Sean* 297, 331-4.
 Scherrer *Christoph* 210, 224.
 Smith *Chris* 273, 274, 275, 280, 282.
 Soper *Kate* 147, 149, 335, 337.
 Spenner *Kenneth* 174-5, 228-30.
 Steinberg *Ronnie* 239-40, 286, 287.
 Therborn *Göran* 189, 199-201, 342, 346.
 Thompson *Edward* 36, 39-40, 44, 150, 152-3, 155-7, 163-4, 190-1, 194, 197, 302.
 Tidd & Bachtler 255-6.
 Timpanaro *Sebastiano* 38, 48, 101, 133, 134, 136-40, 141, 143, 147.
 Tolliday & Zeitlin 208, 209.
 Tomaney *John* 252, 273, 285.
 Vallas *Peter* 173, 198, 230, 231, 270, 286.
 Walby *Sylvia* 236, 239.
 Walker *Richard* 204, 249, 259, 261.
 Wallach *Scott Joan* 236-7, 287.
 Wheelock *Jane* 125, 297-8.
 Whipp *Richard* 164, 196-7.
 Williams *et al* 209, 211, 245, 256, 273, 278, 280-2.
 Williams *Raymond* 46, 101, 104, 138-9, 148, 321, 322.
 Wood *Stephen* 272, 313, 323, 330, 333, 342-3, 345.

SUBJECT INDEX

- acts 104-6, 107-11, 113-5, 119, 132, 140-1, 315-6, 339.
* *abstract* 100, 108-10, 132, 300, 307.
* *concrete* 100, 110, 132.
* *sequencing* 297.
- agency 11-12, 41.
- biography 101, 143, 147, 264.
* *epochal biographical forms* 152.
* *task orientation* 152-61, 162, 164, 176, 272, 295.
* *temporal rigidity* 165, 215-6, 293.
- biology 98, 101, 136-9, 339-40.
* *ageing* 138.
- capacities 106, 114-7, 120, 141, 147, 179, 185, 186, 291.
* *learning* 312, 339-40.
- capital 310-11.
* *centralisation* 162, 271, 289, 320.
* *fallow* 318.
* *turnover time of* 66, 67, 178.
* *utilisation* 213, 279-80.
- capitalism
* *manufacturing period* 55, 153, 191, 196.
* *modern industry* 51, 58-9, 67, 72.
* *putting out* 153, 197.
* *transition to* 51, 54, 153-6, 190, 192, 194.
- class 139, 338.
* *consciousness* 319-22.
- communism 312, 322, 327-8, 334-6, 340-1, 344-5.
* *social simplification* 3, 328, 330-1, 333.
- compatibilism 4-5, 191, 321, 345-6.
- consumption 109, 283-4, 338.
- Development Block 66, 67, 73, 87-9, 95, 211, 216.
- dichotomy 120-2, 166, 292, 301, 303.
- differential temporality 24-6, 42, 43, 99, 112, 125, 145, 150, 197.
- domestic labour 110-11, 134, 240-1, 287, 296-8.
- ecology 25, 104, 315, 328-30, 335.
* *& labour* 315, 329-30.
* *& reach* 100, 101, 330.
- egalitarianism 309-10, 318, 319, 320, 345.
- epochs 57, 83, 86, 186.
- Flexible Specialisation 272-84.
* *Third Italy* 275.
- Fordism 65-75, 76, 78-80, 82-3, 150, 202, 209-12, 223, 251, 254, 259, 274, 276.
* *General Motors* 208.
* *Line working* 159-60, 210, 227, 280, 285, 323.
* *mass production* 210, 273.
* *plant size* 71, 119, 124, 159, 173, 247-8, 274, 278, 285.
- gender 287, 294-8.
* *separation* 171, 241, 242, 244, 276-7, 287, 294.
* *skills differential* 239-41, 277.
* *women workers* 158, 195, 236-9, 272, 290, 297.
* *labour times (see worktimes)*
- household structure 124-5, 133.
- humanism 20-2, 96, 149, 320-1, 336, 343.
* *anti-humanism* 28-9, 30, 147, 337-8.

- ideology 71, 82, 186-7, 190-2, 199-200, 298, 339.
- * *Americanisation* 68, 81, 151, 186-7.
 - * *Habituation* 187-92.
- individuality 1-5, 14, 31, 147.
- * *rich* 311-2, 322.
- Japanisation 219, 245-58, 259-60, 261-2, 264-5, 267-8, 276, 280, 282, 288-9, 324.
- * *Just-in-Time* 248-9, 257-8, 260, 261-2, 265.
 - * *keiretsu* 247-8, 267-8, 288.
 - * *overhead compaction* 251, 259-60, 285, 324.
 - * *quality* 250, 252.
- labour collectivity 225-8, 262-4, 267, 272, 286, 292, 300, 320.
- * *aristocracy* 274, 275.
 - * *mental labours* 311, 319.
- machinery *intermediation of* 9, 151, 158-60, 223.
- mechanisation 168, 177, 179, 195, 199, 202, 206-7, 214, 255-6, 259-64, 271-2, 278, 279-80, 289.
- * *Babbage Principle* 167, 170, 237, 259, 272, 324.
 - * *forms of* 206, 259-60.
 - * *Hard Automation* 205, 255-6.
 - * *Integration* 205, 256-7, 258, 260, 261-4, 267, 269-70, 282, 289, 303-4, 324, 346.
 - * *robots* 255-6, 278, 288.
 - * *transfer systems* 66, 205.
 - * *transformation sites* 204, 255.
 - * *Ure-type* 167, 176, 256, 287.
- nation-state 78-9, 306-7, 317.
- needs 103-4, 107, 109, 111, 116, 119, 126, 127, 130, 132, 147, 309, 314-5, 318-9, 322, 333-4.
- * *wants* 126.
- non-correspondence 43, 80, 98, 150-2, 163-4, 166.
- personality
- * *determinants of* 97.
 - * *infrastructure* 102.
 - * *organic composition of* 117.
- personification 31-5, 43, 44, 342.
- product diversity 280-4.
- psychological superstructure 113, 123, 139.
- rationalisation 75-9, 81, 303.
- skill 168-71, 173- 179-86, 188, 193, 198, 224, 228-35, 268-72, 286, 292, 346.
- * *compositional shift* 175, 185, 229.
 - * *credentialism* 224.
 - * *deskilling* 168, 174, 186, 198, 229, 269.
 - * *multiskilling* 253, 258, 276, 277, 303.
 - * *polarisation* 173, 230, 257.
 - * *relative* 228, 231-3, 234, 269, 276.
 - * *S.N.L.Ts* 181, 316, 325.
 - * *S.N.T.Ts* 181-2, 183, 185.
- surplus labour 313-4, 331.
- surplus value 179, 185, 219, 220-1, 227.
- * *absolute* 53-4, 155, 158, 163, 252, 265.
 - * *relative* 52, 53-4, 65, 66.
- structural indifference 31-5, 43, 44, 342.
- synchrony & diachrony 55-6, 142-3.
- Taylorism 59-65, 71-5, 77, 83, 90, 94, 162, 172, 224, 262, 275.
- time budgeting 112, 147-8, 272, 294-6, 300.
- Time Fund 299-300, 308, 310, 314, 331-2, 33.
- * *Free Time* 219, 305, 310, 316-7.

transindividuality 202, 224-8, 292, 337.

- * *systematic interdependence* 267, 271.
- * *team-working* 253-4, 257, 263, 265-6, 274, 299-300.
- * *vectored sequencing* 224, 267, 271.

unemployment 135, 297-8, 342.

unions 63-4, 305, 310, 316-7.

use-time 100, 111-19, 121, 123, 131, 143, 165, 188, 189, 294-6, 298-9, 310-11, 316, 342.

- * *accounting* 294, 316, 325-6.
- * *balance (proportionality)* 244, 294, 299-300, 302, 311.
- * *densification* 215, 222-3, 265-6, 271, 293, 302.
- * *karoshi* 223, 254, 265, 292.
- * *organic composition* 115, 117-8, 143.
- * *segregation (see also gender separation)* 268, 276.
- * *synchronisation* 302-5.

utopia 95, 311, 336-7, 345.

worktimes 52, 66, 155-8, 214-5, 216-22, 265, 271-2, 275, 285, 332, 335.

- * *Alternative Work Schedules* 220, 243, 265, 299, 303-4, 306, 338.
- * *gender difference in* 235, 241-3, 244.
- * *St Monday* 157, 195.