Karl Marx’s Concept of Time: Its Validity for Contemporary Historical Interpretation

Karen Miller

Presented as part of the requirements for the award of the Degree of Doctor of Philosophy of the Curtin University of Technology

March, 2001
Abstract

While Karl Marx's concept of time has not received the same attention as other elements of his work, it is nonetheless an important aspect of his idea about history. Of those studies which have dealt with this problem, three questions stand. First, to what degree does time contain transhistorical and historically specific elements? Secondly, to what extent does human agency or deterministic forces underpin the construction of historical time? Thirdly, what is the nature of the relationship between absolute and relative time? In attempting to answer these questions, this thesis argues that Marx saw each of these elements as playing an important role in the constitution of historical time.

In particular, this thesis argues that Marx demonstrates that time is manifested in the material world through a process that expresses transhistorical features in the emanation of time through human creative activity, and historically specific elements in the socially constructed forms of time that reflect the material conditions of the particular society in which they appear. It suggests, moreover, that he shows how time is shaped by both human agency, in the form of class struggle over the appropriation and control of time, as well by deterministic forces as seen in the role of institutional structures and the movement and reproduction of capital. Again, it endeavours to show that Marx develops the notion that absolute time, which is an historically specific concept, plays a crucial role in capitalist society as a measure of exchange-value and labour time, and that it co-exists with relative time, which emanates through different production processes as multiple and discontinuous temporalities. It further argues that Marx saw capitalist society as giving rise to an historical time that is universal and directional, and that is changing in its nature in response to changes in methods and relations of production.

More generally, this thesis attempts to demonstrate that Marx's ideas about historical time have the inherent ability to transcend their place and time to be relevant to contemporary historical interpretation. Such an approach, it suggests, can help historians to understand the operation of historical time in the different phases of the development of capitalist society, the nature and functioning of temporal logics of non-capitalist societies, and how changes in the forms of time occur within and between different social forms. Above all, it argues that his concept of time is highly relevant to the interpretation of history in the postmodern phase of capitalist development and that, indeed, his idea of time both shares a number of similarities with Michel Foucault's idea about time, as well as goes beyond such an explanation.
# Contents

Preface ii

**Chapter One: Introduction: The Problem of Historical Time**
- The postmodern critique of historical time 1
- The modern concept of historical time 4
- The origins and development of modern historical time 8
- Marxism, post-structuralism and historical time today 17
- Outline of the thesis 20

**Chapter Two: The Historical Context of Marx’s Concept of Time**
- Introduction 32
- The philosophical basis of Marx’s concept of time 36
- The experiential basis of Marx’s concept of time 51
- The culmination of Marx’s idea of time 65
- Conclusion 72

**Chapter Three: Historical Time in Marxist Thought**
- Introduction 84
- Orthodox Marxist time 87
- Critics of Marxist orthodox time 91
- Ideas about time in “western Marxism” 102
- Conclusion 118

**Chapter Four: Moishe Postone’s Time, Labor and Social Domination**
- Introduction 128
- Postone’s interpretation of Marx’s understanding of time 133
- Is historical time transhistorical or historically specific? 140
- Do human agents or deterministic forces construct time? 147
- What is the relationship between absolute and relative time? 152
- Conclusion 156

**Chapter Five: The Social Construction of Historical Time**
- Introduction 163
- The construction of time in feudal and capitalist societies 170
- The construction of time through legislation 178
- The construction of time through experience and discourse 188
- Conclusion 193

**Chapter Six: The Nature of Historical Time in Capitalism**
- Introduction 203
- Absolute and relative time in capitalist production 205
- Time through the movement of ‘many capitals’ 214
- Changes in the historical constitution of time 220
- Conclusion 231

**Chapter Seven: Marx’s Concept of Time in a Contemporary Context**
- Introduction 242
- Mandel’s long waves of capitalist development 244
- Time in postmodern society 249
- Foucault’s concept of time 259
- Conclusion 277

**Conclusion** 285

**Appendix: Marx’s Citations Concerning Time in Capital** 293

**Bibliography** 351
Preface

Time is one of the most alluring and fascinating of subjects to study. Its enigmatic nature; its paradoxes and inherent contradictions; its many different facets; and its tendency to raise profound questions about the meaning of history, has meant that, for me, writing this thesis has been a fascinating journey that has taken me through many strange and beautiful intellectual landscapes.

I formulated the questions that are addressed in this thesis on the basis of research done for my honours dissertation, completed in 1994, in which I examined Michel Foucault’s concept of time. In the dissertation I concluded that, while Foucault’s contribution to thought about historical time was significant and valuable, there were inherent problems with his approach, problems that could perhaps be resolved by reference to Marx’s ideas about time. It seemed to me that a dialogue between Marxism and Foucauldian thought presented the opportunity to develop an understanding of historical time that was relevant and applicable to historical understanding today. However, the surprisingly limited number of studies into the role of time in Marx’s ideas, and the consequent frequent misunderstanding concerning it, made an investigation into his concept of time a pre-requisite to the development of such an understanding.

I completed the thesis with the financial support of an APA scholarship, while research funding provided by the Curtin School of Social Sciences enabled me to travel to London, where I utilized the resources of the City University Library and the British Library, and the facilities offered by Institute of Historical Research. I feel very fortunate to have had this practical support to research and write the thesis, as well as to have had wonderful help from individuals along the way.

Associate Professor John McGuire has been an outstanding supervisor in every way. Dr. Patrick Bertola, my co-supervisor, and Emeritus Professor Peter Reeves, the thesis committee chairman, have offered unqualified support. Geoffrey Kay and Scott Meikle asked the right questions and offered valuable comments. Many staff and students of the Curtin School of Social Sciences, too numerous to name, have made many helpful suggestions at various stages in the research and writing process. Christine Power, with her probing intellect, has been a source of inspiration, while all the members of the Philosophy of History Reading Group, through countless stimulating discussions over the past years, have sustained me. My parents, Tom and Helen Miller, have given welcome advice and encouragement. Bruce Sawyer has been constant in his support on many levels, and Stella, who arrived in the world last year, has provided the impetus for me to bring the thesis to a conclusion.

I thank them all.

K.M.
March 2001
Chapter One

Introduction: The Problem of Historical Time

*Time, to whom the victory ought belong,*
*may only make the dispute more doubtful.*

*Voltaire, Philosophical Letters*

The postmodern critique of historical time

In comparison to other disciplines such as literary theory and anthropology, the response of the discipline of history to the challenge posed by postmodernism has been a belated one. This is perhaps understandable given that the tenets of postmodernism strike at history’s very heart to the extent that it has resulted in speculation about the demise of the discipline itself. Indeed, while postmodern thought originated in the late nineteenth century with Friedrich Nietzsche and Wilhelm Dilthey, it was not until the 1960s that Roland Barthes and Michel Foucault, for example, denied the existence of the “real”, asserting that history is merely a discursive construct. Such arguments, frequently reiterated since, have been met with strong resistance from many historians who argue for the existence of an objective reality, a knowable truth, and hence the possibility of distinguishing “fact” from “fiction”.¹

One of the most useful, but unfortunately often neglected, ways to investigate the relationship between history and postmodernism is through an examination of the concept of historical time.² Indeed, time, which Philip Turetsky understands as the “boundary condition on phenomena,”³ lies at the heart of history itself. “Historical time,” Marc Bloch asserts, “is a concrete and living reality with an irreversible onward rush. It is the very plasma in which events are immersed, and the field within which they become intelligible.”⁴ Insofar as postmodernism has posed a challenge to both Marxism and the historical discipline, it has problematized historical time by challenging many long-held and cherished beliefs about it. As David Carr suggests, “it seems that the very idea of the postmodern forces us to question one of the deepest and most tenacious assumptions of our culture, that of historical time.”⁵
As suggested by the word "postmodern" itself, which implies a critique of, or a moving beyond, the "modern", the postmodern concept of time is defined by those features of modern historical time it rejects - that is, the notion of time as linear, universal, singular, homogeneous, continuous and directional. In contrast, postmodern time is characterized by non-linearity, multiplicity, discontinuity and fragmentation. It has been articulated by a number of writers, the most well-known being François Lyotard, whose investigation was inspired by an "incredulity toward metanarratives"; Jean Baudrillard, who explored the "vanishing of history"; and Gilles Deleuze, who reformulated Nietzsche's concept of "eternal recurrence." The most significant for the writing of history, however, is Foucault, who inquired into the discontinuous and multiple temporality of discourse.

Foucault rejects the notion of history that characterized the nineteenth century, or, what he calls, the "modern episteme", for its emphasis on human consciousness as the subject of historical development, and, thus, for conceiving time "in terms of totalization." He argues against notions such as tradition, influence, development and evolution, all of which give a special temporal status to successive phenomena and causal processes. Foucault aims to describe, rather than explain, the history of discourses, each of which has its own unique temporality. Displaying a greater concern for the synchronic over the diachronic, Foucault sees time as constructed through discourse, and, as such, characterized by plurality and discontinuity.

Since these early expressions, the numerous works devoted to postmodern time testify to an increasing interest in the subject. Not surprisingly, less sophisticated critiques tend to present a reductionist account of the constitution of modern historical time. Donald Wilcox, for example, argues that modern historians operate under the assumption of a continuous time-line, which they base on Newton's mathematical concept of "absolute time", and the idea that absolute time exists "in and of itself", independent of events and processes. According to Wilcox, historians - epitomised by Von Ranke - view the basic components of reality as a "series of discrete events that can be placed on a single time line and at a single point in space." To support his argument Wilcox selectively cites Bloch's assertion of the
importance of assigning historical events their “exact chronological place.”\textsuperscript{10} However, Wilcox conveniently overlooks Bloch’s emphatic distinction between historical time and a concept of time that is chopped up “into arbitrarily homogeneous segments, where time is nothing more than a measurement.”\textsuperscript{11}

That many commentators have felt compelled to argue that modern historical time cannot be reduced to either Newtonian absolute time or the related concept of the universal chronological time-line, suggests that misperceptions such as Wilcox’s are commonplace. As these writers assert, while the chronological time-line may be a “minimal precondition”, historical writing involves much more than merely writing a chronology and then seeking explanation in the temporal order of events.\textsuperscript{12} Indeed, James Johnson has demonstrated that the discipline of chronology, which was unconcerned with historical explanation, developed as a genre independently of, although related to, historical writing. In fact, chronology fell into disrepute at the same time - around the eighteenth century - as the modern concept of historical time fully emerged.\textsuperscript{13}

Of course, the chronological time-line is an indispensable tool of the historian. Dating events in a temporal sequence has, since Herodotus first developed a chronology for that purpose in the fifth century BC, been integral to the historian’s work. The calendar, as Jacques Le Goff notes, is the “fundamental temporal framework within which societies function,” and is the “product and expression of history.”\textsuperscript{14} Before the seventeenth century many different dating systems were in use, one of which was the AD/BC system. Dionysius Exiguus invented this system in the sixth century, while Bede introduced it into Western Europe in the eighth century.\textsuperscript{15} As Elizabeth Eisenstein notes, the accumulation, duplication and sorting of records, made possible by the invention of the printing press, underpinned the universalization of the AD/BC system. It reinforced the “premise of straight-line direction,” giving rise to a progressive, linear notion of history that harnessed the “narrative drive.”\textsuperscript{16} This notion of time, Eisenstein argues, has become so entrenched in Western historiography that, despite recent revisions, historians cannot easily dislodge it. There has, however, been a critique of this notion of historical time in twentieth century historiography, in that discontinuity and a “clutter of broken
historical perspectives” have increasingly preoccupied historians. The following section takes a closer look at the nature of this critique.

The modern concept of historical time

While the idea of absolute, linear time reflected in the chronological time-line is an unquestioned assumption underlying the work of many “conventional” modern historians, the contributors to an early *Beilage* devoted to the subject of historical time in *History and Theory* unanimously argued for a more complex understanding of historical time. Siegfried Kracauer, for example, suggested that the image of the linear “flow” of history only “veils the divergent times in which substantial sequences of events materialize.” However, unlike the post-structuralists, Kracauer did not deny the existence of a single historical time. Rather, two mutually exclusive propositions confronted the historian:

On the one hand, measurable time dissolves into thin air, superseded by the bundles of shaped times in which the manifold comprehensible series of events evolve. On the other, dating retains its significance inasmuch as these bundles tend to coalesce at certain moments which then are valid for all of them.

Kracauer’s investigation forced him to conclude that the “antinomy at the core of time is insoluble.”

Simultaneous to Kracauer’s critique, in France, Fernand Braudel, the foremost historian of the *Annales*, was developing ideas about time along similar lines, in arguing that the traditional, narrative history represented by Ranke offered us only “meagre images” of the past that lacked both illumination and humanity. Instead, he notes that movements of history have different durations, directions and speeds, and that attempts to fit them into the same framework results in errors of perspective and reasoning. In exploring three different “levels” of historical time - “geographical time”, “social time” and “individual time” - in his *Mediterranean*, Braudel inspired shifts in the historian’s attentiveness to the plurality of time. Like Kracauer, Braudel argued for an homogeneous, universal time within which different times operate, thus acknowledging the inherently contradictory nature of historical time, and the particular dilemma that this poses for the historian. The different scales of
time, each with different units of measurement, present a different perspective. “It is the contrasts between the realities observed on different time-scales,” he suggested, “that make possible history’s dialectic.”

The dialectical nature of modern historical thought is also inherent in the relationship between past and present. Modernist historians recognize that they are writing from the standpoint of a perpetually changing present, resulting in constantly altering perspectives on an unchanging, permanent past. Bloch describes this process as writing history “backwards” from the present to the past. More recently, Le Goff has suggested that modernist history becomes a “history of the present,” a term that derives largely from Benedetto Croce’s famous phrase that “all history is contemporary history.” As Le Goff points out, the constantly shifting perspective of the historian is potentially problematic in regards to the question of objectivity in history. He suggests that an independently existing past can never be envisaged in its entirety, or as a whole, and that, as such, the past “becomes an object of history through a reconstitution that is constantly questioned.”

We can find many features of modern dialectical thought in the origins of the question and answer technique called “dialectics”, which Socrates developed, and Plato and Aristotle further refined. However, unlike classical Greek dialectics, where dialectics was inferior to formal logic, modern dialectical thought - the basis of which was developed by Kant and Hegel - recognizes that truth is found within processes, rather than external to them. In short, contradiction is inherent in reality itself. Dialectical thought provides a means by which historians can understand events, not as discrete units or facts, but in terms of their relationship to other events and processes. Thus, they gain meaning only within the context of the movement of the whole. This implies that no one viewpoint can claim access to complete truth, since it is impossible to grasp the multiplicity of changing relations that make up any totality. Thought can only ever arrive at truths appropriate to a particular historical moment.

What is clear, then, is that the critique of linear, homogeneous time is not unique to postmodernists. In fact, such critiques have been an ongoing feature of
historiographical writing for some two hundred years. In the late eighteenth century, for example, Johann Herder articulated the idea that time was internal to processes, and hence multiple, writing:

In actuality, every changing thing has the measure of its own time within itself.... No two worldly things have the same measure of time.... There are therefore (one can state it properly and boldly) at any one time in the universe innumerable many times. 30

Consequently, we can understand the modern notion of time as a much more complex and diverse concept than the postmodern critique portrays. What postmodernism sees as constituting modern historical time is only a part of it. The features that characterize postmodernist time as "relative", such as multiplicity and discontinuity, are also evident in the modern concept of time, paradoxically coexisting with the notion of time as "absolute".

Absolute time is a mathematical concept represented as a straight geometric line that is evenly divisible. It acts as an objective measure of processes occurring in time: it is independent of events, existing "in-and-of itself." As Isaac Newton put it:

Absolute, true, and mathematical time, of itself, and from its own nature, flows equably without relation to anything external, and by another name is called duration.... All motions may be accelerated and retarded, but the flowing of absolute time is not liable to any change. The duration of perseverance of the existence of things remains the same, whether the motions are swift or slow, or not at all. 31

In the case of historical time, absolute time relates to the idea that there is an unchanging, objective "reality" of events that historians can locate in a temporal sequence. It resembles McTaggart's B-series of time, ("before-after"), which sees time as unrelated to context and to the relationship of the observer. Relative time, on the contrary, is inherent within events and processes, and, as such, is both multiple and discontinuous. It relates to the idea that time is continually in flux and consequently the present standpoint of the historian is continually changing. Relative time resembles McTaggart's A-series of time, ("past-present-future") which sees events as perpetually in motion, relative to the time and context in which they occurred and in which an observer views them. McTaggart found the A-series and the B-series to be incompatible, and therefore concluded that time was not real. 32
It is possible, however, to see time as inherently contradictory, which allows it to have both dynamic and static properties. The historical consciousness, as Louis Dupré points out, "is itself rooted in an acute awareness of a tension between the transient and the permanent 'moments of Being'." While the idea of temporal contradiction exists in many societies, writers did not articulate its particular expression as modern historical time until the eighteenth century. It is possible to gain a greater understanding of the nature of modern historical time by examining the terminology surrounding the phenomena.

Reinhart Koselleck explores the emergence of the modern understanding of historical time by tracing the semantic history of the "modern". While people began to make greater use of the term in the Renaissance (as they did with the term "Renaissance" itself, which means "rebirth"), it developed a new meaning during the Enlightenment, whereby it retrospectively signified a period that people conceived to be "new". As a periodization concept, the term "modern age", or, in German, *neue zeit*, embodied the belief that the year 1500 constituted the epochal threshold between the middle ages and modern times, thus giving the modern age a relative unity: "In the eighteenth century, therefore, the idea prevailed that for the last three hundred years, one had been living in a *neue zeit* which was, emphatically, a specific period distinct from that which preceded it."

Koselleck argues that the idea of a "modern age" provided historical time with a new quality that he refers to as a "temporalization of history." There was, he suggests, an "inversion in the horizon of expectations", from the belief that the world is about to end, to the belief that "acceleration of time is a task of men leading to an epoch of freedom and happiness, the golden future." He describes this experience as one in which there was a sense of an increasing difference between past and present, so that "lived time was experienced as a rupture, as a period of transition in which the new and the unexpected continually happened."

Koselleck suggests that this new perspective of time led to a different understanding of history. During the eighteenth century, the idea of "history in general", or history
“in and of itself” emerged. History became both its own subject and object, and, as such, became a unitary history that we can distinguish from “the manifold histories of an earlier time.” The emergence of the German term Geschichts at this time marks this shift. It is a term that denotes history as representation, thus creating an ambiguous relationship with the term Historie, which denotes the events of history. History, as a unified process, presupposes a particular understanding of time:

Time is no longer the medium in which all histories take place; it gains a historical quality. Consequently, history no longer occurs in, but through, time. Time becomes a dynamic and historical force in its own right. From that time on, Koselleck argues, “it was possible to investigate historical events and sequences for their own internal time.” Paradoxically, aided by the geographical opening up of the globe that brought to light various, but co-existing, cultural levels that scholars could order diachronically, “the internal time of individual histories structured the whole of history.”

Koselleck’s study shows modern historical time-consciousness to have emerged gradually from the sixteenth century until its full articulation in the eighteenth century. Significantly, he also notes that the historical structures and temporal experience that characterize modern historical time were formulated well before its emergence, and are attributable to both the classical Greek and the Judaic-Christian traditions. Both traditions explored the idea of temporal paradox, encapsulated in the contradictory ideas of the ultimate reality of both permanence and change. Together, they formed the basis of the constitution of modern historical time.

The origins and development of modern historical time

When it came to the subject of time, the philosophers of ancient Greece attempted to understand the perplexing relationship between permanence and change, eternity and time. The earliest mythology of time includes Hesiod’s story of Kronos, who opened up a gap between earth and sky, a myth that spoke of time as the division between the human world and the divine. The first recorded mention of chronos, other than in myth, is in Anaximander’s portrayal of time as a judge. In early pre-Socratic thought, philosophers proposed opposing views of time. Heraclitus, for example, espoused
the idea that reality was constantly in flux, while Parmenides and Zeno stressed the static nature of true reality, and hence the unreality of time. This latter assertion became the prevailing view, and underpinned the philosophical ideas about time of both Plato and Aristotle.

Plato argued that time was the “moving image of eternity,” positing time, and the material world, as inferior to the eternal world of ideal forms. Only the transcendence of time - to which humans strived, but could never attain - would reveal unchanging truth. Plato saw time as integral to movement, and in particular the cyclical movement of the planets: Time had no beginning; like matter it had always existed.43

Aristotle shared Plato’s view that time was integral to matter and motion, and that it was cyclical in nature. Like Plato, he also gave priority to the eternal over time; his formal logic, which encompassed the principle of non-contradiction, sought unchanging truths. Nonetheless, Aristotle objected to the notion of the multiplicity of time inherent in Plato’s view that time expressed the motion of the planets. In so doing, he explored the idea that time was singular, proceeded at an even rate, and could act as an independent measure of motion. He did not, however, entertain the idea that time could exist independently of matter, and so, although he anticipated absolute time, he did not formulate the concept explicitly.44

Because truths were eternal and unchanging, Aristotle saw little value in history. He is renowned for asserting that poetry was more “philosophical and more weighty than history,” which simply told “what Alcibiades did, or what he suffered.”45 Aristotle’s view was typical of the classical Greeks, who, in general, were unconcerned with history. In this regard, Herodotus and Thucydides were exceptional. Herodotus attempted to establish a chronological time-line on which to date events, while Thucydides was concerned with factual accuracy in the construction of an historical narrative. Ultimately, however, the pervasive world view of their society bound them: Herodotus looked to the myths to explain the distant past, while Thucydides saw history as cyclical, bound to repeat itself.46 Similarly, Roman historiography advocated a cyclical view of history, as seen for example, in Polybius’ model of
cycles of government. However, chronology also concerned the Roman historians, particularly among those exposed to the impressively detailed Jewish record of past events.

The chronologies and narratives of Judaic tradition, found in the Old Testament, tell the story of the Jewish nation, including its emancipation from Egyptian slavery and its search for the "promised land" of Israel. Judaic time was linear, in that it had a beginning, Creation, and an end, the Day of Judgement. History was the divine intervention of God in time, and, as such, people interpreted events as either displaying His mercy or justice. Christianity reinforced the irreversible nature of linear time by attaching central significance to the advent of Christ's Incarnation, which Christians regarded as a unique event in history. Moreover, Christianity made the nature of historical time more universal than either the Greek or the Judaic narratives, by opening up the possibility of salvation. In Augustine's portrayal, this meant entry into the temporally based City of God, potentially for all of humanity.

Augustine reinforced the notion of linear time against the cyclical views of the Greek "pagans". However, in other ways, classical Greek thought, particularly neo-Platonism, profoundly influenced his view of time. Like Plotinus, Augustine saw that time was an imperfect reflection of eternity, attaching great significance to time, as it was in time that an individual achieved salvation. In this view, Dupré suggests, the "eternal is permanently incarnated in time and the full meaning of existence consists in representing the past." Augustine's emphasis on the importance of the individual's time, together with his assertion that time was a subjective aspect of consciousness, was a significant step in the development of the notion of absolute time. Moreover, Augustine questioned whether time could exist independently of matter. If the movement of the celestial spheres stopped, as they did in the Book of Joshua when God made the sun stand still for a day, then this meant that time continued independently of the motion of matter. However, Augustine ultimately saw time as integral to matter, as inherent within the historical process. Thus, the idea of relative time - expressed in the biblical verse, "to everything there is a season, and a time for every purpose under heaven," and seen in the cyclical elements of both religious practice and Scripture - was an important feature of the pre-modern
Christian view of time until the thirteenth century. In fact, during this period, notions of time as both absolute and relative coexisted in an uneasy tension.

It was not until the end of the medieval period that scholars fully recognized and articulated the notion of absolute time. As a result of revived theological disputes about whether time continued if the planets stopped revolving, Bishop Tempier decreed in 1277 - against Aristotelian arguments - that time could exist independently of motion. Debates about the nature of eternity - whether it was simply infinite time, or something qualitatively different - also lent support to the idea that time could attain attributes of absoluteness previously exclusive to eternity. Thus, from the thirteenth century, time itself began to assume features that scholars had associated with the realm of the eternal. This meant that people began to seek truths in the temporal realm, and see human action, rather than an external force, as determining the historical process.

In the centuries that followed, scholastics developed the idea that there were two times, which Nicolas Bonet, for example, called "mathematical time" and "natural time". The development of the mechanical clock, from the thirteenth century on, was a tangible expression of this new, mathematical understanding of time. Gradually, Bruno, Gassendi, Barrow, and finally Newton, formulated the notion of absolute time, which predominated by the seventeenth century. When the notion of absolute time emerged, so, too, did the idea that, if time could exist independently, "in and of itself", then, so could history. It would take many centuries, however, for this notion of history to achieve its full articulation. This development was of fundamental importance to the gradual emergence of the modern notion of historical time, a process that began to emerge in the Renaissance.

During the Renaissance, inspired by the revival of classical Greek literature, but remaining within a Christian world-view, historians recognized both the plurality and cyclicality of time, together with the singularity and linearity of time. Machiavelli, for example, utilized Polybius' cyclical model in writing his histories, while at the same time acknowledging that history was not endlessly repetitive but directional:
historical change did occur, although usually for the worse. Thus, Machiavelli’s concept of time can be best represented as a downward spiral.

The Renaissance’s backward-looking reverence for authority did not remain unchallenged for long. During the seventeenth century, the idea developed that knowledge, and hence time, was progressive. Francis Bacon, for example, contended that time usurped the knowledge of classical antiquity, writing that:

it shows a feeble mind to grant so much to authors, and yet to deny time his rights, who is the author of authors, nay rather of all authority. For rightly is truth called the daughter of time, not of authority.58

Bacon was a precursor to the famous literary war waged throughout the seventeenth century and lasting well into the eighteenth, which became known as the “battle of the ancients and the moderns.” Consequently, the term “modern” became closely associated with belief in “the infinite progress of knowledge and in the infinite advance toward social and moral betterment.”59 People came to conceive the advance of science, through which scientists progressively accumulated knowledge and refuted, modified and reformulated theories, as representative of time. As Nathan Rotenstreicher puts it, the structure of science’s advance “corresponds to the structure of the continuum of time itself.”60 The prevalence of this view, together with the notion of absolute time, so central to Newton’s classical physics, is evident in the widespread use of the mechanical clock, through the seventeenth and eighteenth centuries, as a metaphor for the world.61

During the Enlightenment, scholars extended the idea of intellectual progress to the progress of humankind. They believed that they could understand human society in the same way as the natural world. Through the use of reason and scientific method, they could ascertain the eternal and unchanging “laws” of society, rectify errors, and thus achieve the perfect society. Such a view underpinned the historical writing of the philosophes, who, celebrating Newton as their hero, aimed to turn history into a science. As such, they premised their histories on a linear sense of time, upon which they located events. History, which they wrote to persuade and instruct, narrated the story of the progress of reason. However, while the assumption of absolute time underlined the philosophe’s world view, in their willingness to recognise variations
between cultures, they anticipated the relativism that characterised the historical time of the nineteenth century.⁶²

In many ways Kant signalled the transition to the fully articulated modern concept of historical time. He remained an Enlightenment thinker in that he regarded time as absolute, existing independently of events. However, he shifted time from being a feature of the objective world, or noumena, to an a priori of the mind’s apprehension of phenomena. Kant also posited as a priori the principle that the observer is situated in the subjective present, looking at an objective past.⁶³ Contained within this notion is the idea of “universal history”: While Kant did not reject the historian’s task of writing history as an aggregation of events, he recognized history to have its own purpose or teleology. History would realize reason, not through individuals, but the species as a whole.⁶⁴

Kant was a forerunner of the German Romantic Idealist tradition, which emerged in the late eighteenth century, in part as a reaction against Enlightenment thought. Underpinning Romantic Idealism was the notion of organic time, which, in contrast to the mechanistic time of the earlier period, saw social and historical development as a process of birth, growth, development, decay, death and rebirth. In this respect, the influence of Aristotle’s teleological view of change was significant, in that he argued that we should understand both natural and human affairs in their development, as a way of understanding their final cause, or end. Everything has its aion, its period, outside which no natural development can fall, for there is an order controlling all things. In this respect, Rotenstreich argues that, in the hands of the Romantic Idealists, the idea of progress implicit in this concept not only presupposes the “continuity of time, the regularity of nature, and the unity of history”, but also that “human reality harbors potentialities to be translated into actuality in and through the historical process.”⁶⁵

Although Aristotle’s organismic significantly influenced Hegel, he departed from Aristotle in contrasting natural change with historical change. Change in nature shows only a cycle of endless repetition; it does not produce any novelty. Historical change - distinctive in its “dialectical” character - reveals a line of necessity mediated
by human action, through human needs, passions, interest and will. The historical process develops a nature through successive forms, arising from a whole with an essence that undergoes a transformation of form. Essences, then, are unities in contradiction, between what exists and what is in the process of coming-to-be. History passes through stages that are a manifestation of the Idea, in each of which society attains a higher level of human consciousness of freedom. The end, or telos of history, is the eventual overcoming of time, the attainment of the Absolute.\textsuperscript{66}

Underpinning Hegel’s concept of the historical process is the notion of relative time. Against the eighteenth century concept of absolute time, he writes that “\textit{everything does not appear and pass in time}; time itself is this \textit{becoming}, arising and passing away.” Things are “themselves that which is temporal.... It is therefore the process of actual things which constitutes time.”\textsuperscript{67} Undoubtedly, Hegel articulates, in his own way, the modern experience of time, with its emphasis on the present as transient and in constant flux. He writes, for example, that the “present makes a tremendous demand, yet as the individual present it is nothing, for even as I pronounce it, its all-excluding pretentiousness dwindles, dissolves and falls into dust.”\textsuperscript{68} However, it was Karl Marx, inspired by Hegel, who was to articulate most profoundly the idea of modern historical time. Marshall Berman suggests that Marx encapsulates the modern experience of time as a “paradoxical unity, a unity of disunity,”\textsuperscript{69} in the passage from the \textit{Communist Manifesto} that inspired the title of Berman’s book, \textit{All That Is Solid Melts Into Air}:

\begin{quote}
Constant revolutionizing of production, uninterrupted disturbance of all social conditions, everlasting uncertainty and agitation distinguish the bourgeois epoch from all earlier ones. All fixed, fast-frozen relations, with their train of ancient and venerable prejudices and opinions are swept away, all new-formed ones become antiquated before they can ossify. All that is solid melts into air, all that is holy is profaned, and man is at last compelled to face with sober senses, his real conditions of life, and his relations with his kind.\textsuperscript{70}
\end{quote}

According to Berman, Marx correctly saw that modern temporality was a product of many changes ultimately underpinned by “an ever-expanding, drastically fluctuating capitalist world market.”\textsuperscript{71}
Indeed, Marx does explore the contradictory nature of historical time, with its unity and disunity, its singularity and multiplicity. In *Capital*, he sees that the concept of absolute time, represented by the mechanical clock, is a crucial construct as a measure of labour-time, and hence of surplus value. Absolute time imposes universality on production, whereby the multiple temporalities and rhythms of individual production processes become subsumed within a single, objectified time. The cyclical movements involved in the reproduction of capital, abstracted from the labour process, also play a crucial role in the construction of time under capitalism. The particular dynamic of capitalist time, arising as a result of inherent contradictions, and expressed in long-term economic cycles, propels the historical process forward at an accelerating rate, and in a directional, spiral movement. In these ways, capitalism constructs the changing nature of the time of individuals, classes and whole societies. Although Marx’s ideas reflect nineteenth century concerns, the impact of his, and indeed Hegel’s, ideas on historical thought did not make itself felt until the twentieth century. Meanwhile, during the nineteenth century, the dominant intellectual tradition following the demise of romanticism was positivism.

Positivism continued some of the ideas of the Enlightenment concerning time, including the idea of linear, directional progress. However, it underwent important modifications as a result of the influence of nineteenth century scientific developments such as thermodynamics and entropy, biological evolution, and advances in geology and palaeontology. People began to see time as inherent within history, whereby fundamental changes could occur over time. Just as the *philosophes* translated scientific knowledge of the natural world to the study of human society, so, too, did nineteenth century theorists see history as developing according to laws of development that could be scientifically verifiable. For example, social evolutionists like Auguste Comte, Lewis Morgan and Herbert Spencer, in attempting to establish a positive science of social development, argued for an overall progress of humankind through unilinear stages evolving from barbarism to civilisation. At the same time, they recognized that societies developed at various rates, along different lines, and often unevenly. In historical writing, Leopold Von Ranke expressed the positivist view of time.
Ranke advocated the notion of a universal history that records events "as they actually happened," inherent in which is the idea that the past is an objective reality that historians can know through the application of historical procedure modelled on empirical scientific method. Commentators have frequently derided Ranke for exemplifying a concept of historical time that is little more than a linear chronological time-line. However, Ranke recognized both the objective and subjective aspects of history. While historians were concerned with the particular, they always related it to a larger context; historical realities corresponded to both the individual and the universal perspective. Moreover, Ranke recognized that each generation imposes its own values upon history, writing "history is always being rewritten." In this sense, Ranke can be seen as significant in the development of the historicist tradition.  

The central idea of historicism is that history moulds all cultures, and that a group's historical experience produces the customs and beliefs of that group. It challenges the Enlightenment idea of historical process as a straight line passing upwards through various improving stages of social organization. According to the historicist view, history takes place within a framework of separate cultures, each of which has its own intrinsic worth, its own time. As F.R. Ankersmit notes, the historicist position, which is inherently contradictory, posits the idea of a continuous historical process that disintegrates into its many components. This results in a conception of history in which the different phases of historical evolution tend to become independent of each other. In this way, Ankersmit suggests, historicism anticipates the postmodern attitude toward the past.  

Indeed, it was the most significant contributor to historicist thought, Dilthey, who anticipated postmodernist thought. In exploring the psychological experience of the individual's apprehension of the past, Dilthey suggested that time is experienced "as a restless progression, in which the present constantly becomes the past and the future the present." In time, "life exists in the relation of parts to a whole, that is, as a context." The whole, determined by time, contains a paradox between "its ephemeral nature and its continuity through the unity of the self." As J.R. Hall
suggests, Dilthey observed that meaningful connections of actions "tend to 'transcend' the stream of unfolding time; they are enmeshed in non-sequential subjective contexts of meaning, which give an extra-chronological character to unfolding social life." Dilthey's hermeneutics, in which he developed the idea that we could discover the meaning of the past through an interpretative process, inspired the thought of Nietzsche, one of the most acute perceivers of the modern dilemma.

Nietzsche extended the implications of the historicist position, declaring that there was no underlying reality beneath the interpretation. He claimed to reveal time and reason for what they were - simply a chimera. The only true affirmation of life was to embrace, wholeheartedly, the idea of eternal recurrence, of endless, meaningless repetition. Nietzsche's ideas have been influential in the development of many of the major traditions of twentieth century philosophical thought that include existentialism, phenomenology, structuralism and Marxism. Of these, Marxism has had the most profound influence on the idea of history, although it has been challenged in recent years by structuralism and its offspring, post-structuralism.

**Marxism, post-structuralism and historical time today**

Today, Marxism, like the historical discipline, is apparently undergoing a "crisis" in response to the challenge of post-structuralism. For Foucault, the inextricable link between Marxism and history is not surprising. As he notes:

> It is impossible at the present time to write history without using a whole range of concepts directly or indirectly linked to Marx's thought and situating oneself within a horizon of thought which has been defined and described by Marx. One might even wonder what difference there could ultimately be between being a historian and being a Marxist.

Marxism has come under attack by post-structuralists for, among other things, positing a mechanistic/deterministic, or a teleological/essentialist view of historical time. Both views give an overall coherence and direction to the historical process, espouse a linear, universal homogeneous concept of time, or, in short, construct a "grand narrative". Marxists like Neville Kirk have responded to such critiques with accusations of reductionism and by pointing out that Marxist historians have been
highly attentive to complexity and diversity. However, while these debates tend to highlight the basic differences between Marxism and post-structuralism, the latter is fuelling, and in turn being fuelled by, ongoing tendencies within Marxism.

The development of “post-Marxist” thought - that is, attempts to revise Marxism in the light of post-structuralism - is, somewhat facetiously, epitomized in the phrase: “Until now the philosophers have interpreted Marx; the point, however, is to change him.” However, commentators on both sides of the divide acknowledge the necessity for a constructive dialogue between Marxism and post-structuralism. On the one hand, Marxists recognize the necessity, supported by Marx’s ideas themselves, for an ongoing revision of Marxism in the light of changing material conditions. On the other hand, post-structuralists are realizing that such a wholesale rejection of Marxism fails to recognize important continuities between the two traditions.

The recent trend of much post-Marxist thought, however, is problematic for the discipline of history. It attempts to expunge the historical elements from Marx’s thought, and, in so doing, limit Marxism to the analysis of contemporary society. The Althusserian-inspired Hindess and Hirst notoriously expressed this view, writing in the 1970s that “Marxism, as a theoretical and a political practice, gains nothing from its association with historical writing and historical research. The study of history is not only scientifically but also politically valueless.” Perry Anderson’s response was an unequivocal assertion that Marxism must, above all, be a theory of history, and that we cannot abdicate from the attempt to comprehend the past. Anderson accounted for the rise of this ahistorical trend as due to the neglect of the relationship between historiography and theory within Marxism as a whole. More recently, Peter Osborne has confirmed this diagnosis by suggesting that postmodernism “is the revenge of the philosophical discourse of modernity upon Marxism for neglecting problems in the philosophy of history.”

Nonetheless, while the broad historiographical question may have been ignored, there has been an ongoing critique of interpretations of Marx’s concept of time, particularly that espoused by orthodox Marxism. Anderson’s musings on historical
time are representative of some of the ideas being explored in recent years. He criticizes Berman’s account of Marx’s concept of historical time as denoting:

homogeneous historical time, in which each moment is perpetually different from every other by virtue of being next, but - by the same token - is eternally the same as an interchangeable unit in a process of infinite recurrence.87

According to Anderson, Berman presents Marx’s theory of capitalist development as “a continuous flow process in which there is no real differentiation of one conjuncture or epoch from another save in terms of the mere chronological succession of old and new, earlier and later.”88 In contrast, Marx’s own concept of historical time was “of a complex and differential temporality, in which episodes or eras were discontinuous from each other, and heterogeneous within themselves.”89 However, rather than advocate a purely relative view, consisting of a plurality of times with no overriding unitary temporality, Anderson argues that these differential times exist within a “plenary social time.”90 In so doing, he distinguishes his position from that of the postmodernist.

Postmodernism departs from a Marxist standpoint in denying the validity of absolute time and its association with the notion of linear, homogeneous historical time.91 However, a Marxist reading of the postmodern phenomena tends to highlight the continuities between the two traditions. Writers like David Harvey and Fredric Jameson understand the postmodern concept of time as historically specific, and hence a changing construct that reflects the characteristics of late twentieth century capitalism. In the twentieth century, capitalism’s drive to accelerate and fragment production and develop electronic and information technologies, among other changes, resulted in relative time assuming a growing importance in the capitalist production process. Consequently, society is increasingly experiencing and perceiving time as relative, and, as such, has significantly altered the way in which it understands history. However, absolute time continues to be a major factor in the construction of capitalist time.92

It can be argued, in fact, that Marxist and postmodernist ideas about time are integral to one another in a number of ways. First, while Marx was a “man of his times”, in that many of his ideas reflect nineteenth century concerns, he also saw beyond the
confines of his own society to anticipate future, now contemporary, issues. Secondly, Marxism developed concurrently with, and, in so doing, was influenced by, other intellectual movements out of which postmodernism arose, and thus shares common interests with postmodernism. Thirdly, the current work on the subject of Marx and time, as well as critiques of this work, are framed to a certain extent - although not necessarily explicitly - in the context of issues which the postmodern movement has shaped. Fourthly, while there are clear and obvious differences, Marx shares with postmodernists a recognition of the socially and culturally constituted nature of time. Fifthly, Marx, like postmodernist thinkers, recognizes the centrality and importance of “relative time”, including notions of multiple and discontinuous time. Finally, as contemporary theorists have demonstrated, Marx’s ideas have proved to be remarkably adaptable to explaining contemporary conditions and, moreover, have exerted a profound influence on the development of some aspects of postmodern thought. 93

Outline of the thesis

It follows, then, that a study of Marx’s concept of historical time can best be addressed by examining, among other things, the links between these two modes of thought. Indeed, the object, in part, of this thesis is to examine such relationships in the context of historical time. More specifically, this thesis, in attempting to address the question of Marx’s relevance to contemporary historical understanding, will focus on three interrelated themes that inform an understanding of Marx’s notion of historical time: the extent to which time contains transcultural and historically specific features; the degree to which human agency and deterministic forces underlie the construction of time; and the nature of the relationship between absolute and relative time.

First, in attempting to demonstrate that the concept of historical time contains both transcultural and historically specific features, the thesis will argue that there are some essential or transcultural elements to the notion of historical time, including the recognition of, and attempt to reconcile, the contradictory nature of time, which involves the notion that time embodies permanence and change as well as absolute
and relative features. It will also attempt to illustrate that each concept of historical time explores the contradiction of time differently, and thus that each has unique characteristics that reflect the specific historical context in which they were formulated. Indeed, as has been noted, while historical time has evident continuities that link the different understandings together, it is nonetheless an ever-changing concept. Moreover, as has also been noted, while early, pre-modern thinkers grappled with the contradictory nature of time, it was not until the modern notion of time emerged that scholars were able to understand the particular dilemmas this posed, and to explore more fully the implications of this contradiction for historical understanding, including those in relation to the transhistoricity and historical specificity of historical time. In this context, the thesis will argue that Marx profoundly understood the relationship between the transhistorical and historically specific aspects of historical time, before assessing his position in relation to the postmodern idea that time is a purely social construct, and thus can only be comprehended in its historical specificity.

Secondly, in endeavouring to show that both human agency and deterministic forces underlie the construction of historical time, this thesis will examine the question of what guides or causes the actions and events of history, whether it be forces beyond, or within, human control. As has been indicated in this chapter, this question has been a major issue underlying ideas about historical time, especially for those who see time as emanating out of the events of history. Certainly, as has been demonstrated, pre-modern concepts of historical time have tended to explain time with reference to external factors, such as divine beings, fate or natural forces, while modern notions of historical time have incorporated the idea that human agency can affect the historical process and, in so doing, have variously combined both explanations. In this respect, the chapters which follow will argue that Marx recognised that both deterministic forces and human action played a role in shaping historical time, and will appraise his position in terms of postmodernism's disregard of the role of human agency and general lack of concern with questions of historical explanation.
Finally, in attempting to explain how features of both absolute and relative time are contained within concepts of historical time and how their respective roles, and the nature of their relationship within historical time, have varied considerably, this thesis will endeavour to show that, while the concept of absolute time was not articulated fully until the early modern period, elements of it are present in pre-modern concepts of historical time, co-existing with the notion of relative time. However, as has already been noted, it was not until the late eighteenth century that the idea that both absolute and relative time are inherent in historical time was articulated, an idea which subsequently became the major issue of debate about historical time. In taking up this issue, subsequent chapters will argue that Marx, perhaps more deeply than any other thinker, understood the nature of the relationship between absolute and relative time and that, consequently, the relationship of his ideas to postmodernism, which endorses relative time at the expense of absolute time, is of considerable significance.

In addressing these themes, Chapter Two examines Marx’s concept of historical time by focussing on the historical, social and intellectual context in which he formulated his ideas about time. Broadly, it considers the extent to which both the Enlightenment and Romantic Idealist traditions of thought influenced Marx. This chapter then discusses the way in which Marx’s philosophical understanding of time, derived from his critique, informed his ideas concerning “historical materialism”. In this way, it considers the extent to which both transhistorical and historically specific features of historical time characterize historical materialism, in that, while all human activity constructs time, in responding to different material conditions time assumes different features and characteristics.

Having demonstrated how Marx formulated his philosophical idea of historical time, Chapter Two goes on to show how Marx’s activities and experiences also shaped his understanding of time. In so doing, it considers the way in which Marx’s political concerns, which focussed on creating change in the present, were central to his understanding of the relationship between past, present and future. The chapter also examines the way in which the vicissitudes of Marx’s life shaped his understanding of the broader human experience of time, and considers the extent to which the
question of the role of human activity was a feature of Marx’s ideas about the forces underlying the shaping of historical time.

Finally, Chapter Two discusses the way in which Marx brought all of these considerations together in his writings of the 1850s and 1860s, including the Grundrisse and Capital, the latter of which established Marx’s reputation as the undisputed leader of international communism. It examines the ways in which Marx further developed his ideas about time from the late 1860s to his death in 1884, considering, in particular, the extent to which Marx was influenced by the predominant positivist intellectual climate within which he was operating, and within which people received, and interpreted, his ideas.

Chapter Three begins where Chapter Two ends, with the interpretation of Marx’s ideas. Broadly, it endeavours to show that the development of various strains of Marxist thinking about time throughout the twentieth century testifies to the multi-layered, and often opaque, ways that Marx approached the question of time. This chapter demonstrates that Marx’s legacy opened up a range of different possibilities for the exploration of historical time by outlining the different ways in which Marxist philosophers and historians have interpreted Marx’s understanding of time.

Beginning with the earliest development of Marxist thought, Chapter Three discusses the way in which a positivist reading of Marx, which emphasized the unilinear, mechanistic, and deterministic features of historical time, became the basis of Marxist orthodoxy and has continued to be influential in Marxist historiography. In particular, this chapter is concerned to analyse how Marxist historians, in the context of the debate about the transition from feudalism to capitalism, have both supported and critiqued the idea of a unilinear succession of modes of production. In this respect, it looks at the extent to which they supported the idea of co-existing modes or social formations, and, correspondingly, a multilinear concept of historical time. It also examines the idea that social forms are distinct from each other in the different ways in which certain groups or individuals appropriate and control the time of others to extract a surplus.
The chapter then notes that an Hegelian and Aristotelian-based interpretation of Marx, which sees time as manifested through the activity of labour, underpins the multilinear view of historical time. In this way, it goes on to consider how Hegelian-inspired ideas concerning the nature of the historically constituted time of capitalist society, in conjunction with other philosophical traditions of the twentieth century, led to different ways of theorizing about time as expressed by “western Marxists.” Broadly, it outlines the different approaches of various representatives of schools of thought including critical theory, existentialism and structuralism, all of which reject the positivist view of unilinear, absolute time. It concludes by noting that the more recent development of “post-Marxist” thought poses particular problems for the theorization of historical time, and discusses some alternative ideas that point to a means by which historians can understand historical time as both absolute and relative, multiple and unitary, in different social forms, as well as in the historical process as a whole.

While Chapter Three analyzes the ideas about time of a number of noteworthy Marxist theorists, it reserves an analysis of the most significant recent work, Moishe Postone’s Time, Labor and Social Domination, for Chapter Four. After placing Postone within the intellectual context of the Marxists discussed in the previous chapter, Chapter Four outlines his general argument which suggests that Marxist theory should be understood as an epistemological, critical theory specific to capitalist society rather than as an universally applicable set of ideas. Next it outlines, in more detail, Postone’s interpretation of Marx’s concept of historical time, which describes time as an historically specific construct which is unique to capitalist society, and which is constituted by two forms of time that Postone refers to as “abstract time” and “concrete time”. The chapter then delineates Postone’s understanding of how historical time in capitalism forms a directional, dynamic totality and the particular implications that this position holds for the notion of human history as a whole.

Having established Postone’s position in relation to the subject of historical time, Chapter Four then critically analyzes it by reference to the three themes underlying this thesis. First, it discusses the difficulties that arise from Postone’s rejection of
transhistoricity and his claim that Marx’s concept of historical time is historically specific to capitalist society, noting how this position precludes an understanding of how change occurs within non-capitalist social forms, and between one social form and another. Secondly, it considers the implications of Postone’s stance concerning the extent to which human agency and deterministic forces underlie the construction of time, in which he emphasizes the latter at the expense of the former by arguing that, in capitalist society, capital, rather than human agents, constitutes the Subject of history. Finally, it discusses Postone’s position in respect of the relationship between absolute and relative time, by noting that this aspect of Postone’s analysis overlaps significantly with the argument of this thesis in the way it acknowledges that two opposed concepts of time constitute the “whole” of capitalist historical time. At the same time, it points to significant differences in each argument’s understanding of the role, nature and function of concrete, or relative time.

Taking up some of the issues raised by Postone, Chapter Five examines how historical time is constructed through a process that gives rise to various social and cultural forms of time. It does so in two ways. First, it outlines the means by which both feudal and capitalist societies measured time with the aim of demonstrating how time-measurement is a fundamental aspect of the construction of historical time. Secondly, it gives a general overview of the relationship between the measurement, understanding and experience of time, and the development of capitalism. It then notes specifically how Marx understood the social and cultural forms of time by arguing that he perceived their construction, in both feudal and capitalist societies, to revolve around the notion of the appropriation and control of time spent in productive activity.

Having located the function of the bourgeois and working classes in the social construction of time, Chapter Five then considers their role in more detail by examining Marx’s understanding of how time also emanates from economic and moral discourses concerning rights to control and appropriate time. It argues that both classes presented opposed, and competing, discourses that reflected their very different experiences of time, as evidenced by Marx’s many citations of illustrative source material used in Capital.
Chapter Six continues to explore Marx’s ideas concerning time in the context of issues raised by Postone. Broadly, it considers the way in which the processes that characterize capitalism change in relation to one another, and, in turn, shape the nature of time. Arguing that time is manifested in value, this chapter examines the idea that two forms of contradictory time - relative and absolute - are manifested in the use-value and exchange-value of the commodity. It shows that this manifestation occurs through the expenditure of concrete labour and abstract labour, and through the methods of producing relative and absolute surplus value. In this context, it demonstrates that the co-existence of these two forms of time gives the overall process a unity and direction.

Again, this chapter further explores the nature of capitalist historical time by investigating Marx’s analysis of the circulation and reproduction of capital. It also elaborates on Marx’s argument by showing how historical time has a contradictory nature, as evident in the existence of both discontinuity and continuity as features of capitalist historical time. Finally, Chapter Six argues that, while historical time in capitalism is constantly changing in its nature, it has at the same time certain inherent features. It demonstrates that one of the most important changes to occur in the development of capitalism, which arises out of the increasing shift to the predominance of relative surplus value production, is the growing significance of relative time to the production process and a corresponding decline in the centrality of absolute time. In this context, it raises the possibility of whether Marx’s ideas can provide a framework through which we can understand the postmodern concept of historical time, to which relative time is central.

Chapter Seven explores the possibilities for understanding Marx’s concept of time in light of the issues raised by postmodernism. In so doing, it considers the extent to which Marx’s ideas have the capacity to be as relevant to historical understanding today as they were in the nineteenth century. In this respect, it draws on Ernest Mandel’s Late Capitalism and Long Waves of Capitalist Development, in which Mandel effectively demonstrates Marx’s ongoing relevance in that he explains global economic developments over the past two centuries by reference to Marx’s analysis,
and by arguing that historical time can be understood as a unitary process characterised by a series of "long waves".

On the basis of Mandel’s argument, Chapter Seven then examines the implications of the increasing prevalence of relative time as a product of "late capitalism" in relation to the cultural phenomenon of postmodernism and the development of post-structuralist theory. It discusses the arguments of Jameson and Harvey, who understand, and explain, the postmodern concept of time from within this Marxist framework. This chapter also considers how other, less successful, attempts to understand Marx from a postmodern point of view, fail to consider a fundamental aspect of Marx’s concept of time; that is, time as a unitary "whole". In attempting to address this issue, it endeavours to show how Foucault’s ideas provide a means by which we can develop an understanding of historical time that is appropriate to the contemporary context, but which retains Marx’s essential insights into time.

Finally, the thesis concludes by drawing the central argument together through a discussion of each of the three themes in relation to how they have been addressed in the thesis. By dealing with each of the themes in turn, the conclusion highlights the key issues that link together the chapters, which, as a whole, argues that Marx’s concept of time is a valid means of historical interpretation today.
Endnotes


14 Le Goff, History and Memory, p. xix.


17 Ibid., pp. 36, 48.


19 Kraus, “Time and History”, p. 68.

20 Ibid., p. 73.

21 Ibid., p. 77.


27 Ibid., p. 108.
32 For a discussion of McTaggart, see Turetsky, *Time*, chapter 9.
34 Koselleck, *Futures Past*, p. 244.
36 Ibid., p. 257.
37 Ibid., pp. 93-94.
38 Ibid., p. 246.
39 Ibid., p. 247.
40 Ibid.
41 Ibid., pp. 96-100.
44 Ibid.
51 Dupré, "Is the History of Philosophy Philosophy?", p. 472.
53 "Ecclesiastes", *The Holy Bible*, III/1.
54 As argued by Trompf, *The Idea of Historical Recurrence in Western Thought* and Momigliano, "Time in Ancient Historiography", among others.
55 This debate stemmed from the old philosophical controversy discussed by Augustine, whereby the biblical account in Joshua of when the "sun stood still" for a whole day appeared to refute the Aristotelian claim that the celestial bodies always move, and, in so doing, undermined the foundation of his relational concept of time. To resolve the issue, Bishop Tempier decreed that "God could have created other worlds beyond the sphere of the fixed stars and moved the whole spherical cosmos along
a straight line into an outside space which obviously transcends and contains our finite geocentric universe." See M. Capek, "The Conflict between the Absolutist and the Relational Theory of Time before Newton", p. 608.

71 Ibid., p. 100.
74 Berman, All That is Solid Melts into Air, p. 16.
79 Ibid., pp. 232-233.
84 T. Bennett, "Texts in History", in Jenkins (ed.), The Postmodern History Reader, p. 226.


Ibid.

Ibid.


This situation necessarily involves a rejection of the dialectical nature of time. For a discussion of this, see C. Altieri, “Temporality and the Necessity for Dialectic: The Missing Dimension of Contemporary Theory”, *New Literary History*, vol. 23, (1992), pp. 133-158.


Chapter Two
The Historical Context of Marx’s Concept of Time

Time-of-a-life-time Life, that can extend
from contradiction into contradiction!

Rainer Maria Rilke

Introduction

As Marx himself understood, and expressed through his writings so profoundly, time is, in part, a contradictory construct where the specific historical and social conditions that form it determine its nature. As such, it is expedient to see the nature of Marx’s own concept of time as similarly determined. Indeed, Marx’s concept of time cannot be fully understood outside of the context in which it was shaped. The aim of this chapter, then, is to examine the factors that contributed to the development of Marx’s idea of time.

Marx’s life, which lasted from 1818 to 1883, spans a significant part of the nineteenth century. In many ways, his ideas reflect the concerns and preoccupations of that period, especially a sense of continual transition or movement. For example, in his study of Victorian time, J.H. Buckley points out:

The Victorian, looking outwards, could see his whole age in perpetual motion.... So widespread and rapid were the changes wrought by the nineteenth century in the material conditions of living that no one, however much he might wish to dwell in the spirit, could altogether escape a sense of almost physical exhilaration or bewilderment rushing in upon him.\(^1\)

Again, the French scholar and critic Ernest Renan conveyed this sense of flux, transition and change when he wrote in 1852:

The great progress of criticism has been to substitute the category of becoming for the category of being, the conception of the relative for that of the absolute, movement for immobility.... Formerly everything was considered as being: one spoke of philosophy, law, politics, art, poetry, in an absolute manner; now everything is considered as in the process of becoming.\(^2\)
In highlighting the shift in emphasis from being to becoming, Renan articulated the change that had occurred in the perception of time itself from that of the Enlightenment to that of Romanticism. In the case of the former, the dominant view was that time was objective and absolute, flowing in a straight line, and existing in and of itself. In the case of the latter, the prevailing perception emphasized the relative and subjective nature of time, where time was inherent within events and processes, and operated as an organic, dialectical process.

However, nineteenth century society did not completely renounce the Enlightenment concept of time. Rather, elements of it continued to influence perceptions of time during this period. For example, the notion of absolute time remained an important constituent of the positivist tradition, although the notion of directional development underpinning the nineteenth century natural sciences differed in that scientists saw fundamental change to occur over time.

In fact, both elements of time came together in the historical thought of the period. In the positivist historicist outlook, the notion of universal history, or the idea of history “as a whole”, gave historical time a universal and directional nature. Similarly, Romantic-Idealism saw history as a whole, sometimes progressing, sometimes regressing, but ultimately developing toward an end point. Despite the differences in approaches, historians describe historical thought during the nineteenth century as “historicist”, a mode of thinking which acknowledged the necessity of understanding the context of historical events. In so doing, it emphasized the subjective and objective aspects of time, including both its unilinear and multilinear aspects. In short, there was an awareness of a particular contradiction at the heart of the nineteenth century experience of time and history.

This temporal contradiction was viewed in terms of an opposition between two co-existent concepts of time - absolute time and relative time. According to Buckley, these two concepts of time can be classified as “public time” and “private time”, the former of which has been recognized by science and the latter of which by poetry. On the one hand, the scientists “still dealt in an objective linear time to be measured quantitatively,” and, on the other hand, the poet “was prepared to value only the far
more complex private time, a qualitative force to be experienced. While "public time" is objective and absolute, "private time", or "human time", is subjective and relative, "continuous yet variable in tempo - now fast, now slow." Defying:

scientific analysis and measurement: contracting and expanding at will, mingling before and after without ordered sequence, it pays little heed to ordinary logical relations. It is intelligible only as duration, as a constant indivisible flow in which life will be a continuous, enduring unity of change.

It is possible to see Marx as both the scientist and the poet, the former an inheritance from the Enlightenment, the latter deriving from the Romantic tradition. Consequently, a continual tension is evident in Marx's work, reflecting both the contradiction he detected at the heart of historical time, and the ambiguities or contradictions in his writings.

Marx was exposed to both the Enlightenment and Romantic traditions from an early age. He was born in Trier, a Rhineland town that had been part of Napoleonic France until just a few years before his birth and whose residents were consequently familiar with, and generally enthusiastic about, the ideas of the French Enlightenment thinkers, particularly Saint-Simon and Fourier. Marx's father, a lawyer, who was described by Eleanor Marx as "a man of great talent...strongly imbued with French eighteenth-century ideas of religion, science, and art," was sympathetic to the ideals of the French rationalists, introducing Marx to Enlightenment writers like Voltaire and Lessing. At the same time, in keeping with the nationalistic German Romantic movement that had arisen as a reaction against the French Enlightenment, Marx's cultured neighbour and friend of the Marx family, Baron Von Westphalen, instilled in Marx a life-long passion for the romantic poetry of Goethe, Schiller and Heine, as well as the great classic literature of Aeschylus, Homer, Cervantes and Shakespeare.

Enlightenment thought profoundly influenced Marx's view of time. In particular its notion of progress, its emphasis on materialism and the centrality of time to labour were significant. Certainly, occasional comments by Marx on the nature of the historical process as a unilinear succession of modes of production share similarities with a positivist approach. Of course, Marx also critiqued Enlightenment thought, particularly the "utopian socialists" and classical economists, for their Enlightenment
belief in the existence of immutable, eternal, laws underlying the development of
society. However, Marx nevertheless saw absolute time as an important element of
the constitution of historical time.

From Romanticism, and in particular, Hegel’s writings, Marx adopted the idea that
the concept of absolute time was not an invariable “truth” but was socially
constituted. On this basis, Marx developed an organic understanding of time, seeing
it as emanating out of the material conditions of society - specifically through human
productive activity - in a dialectical manner. However, he also critiqued this
tradition, including Hegel’s privileging of the eternal over time, instead seeing time,
which incorporated the material, concrete world, as the basis of reality.

The extent to which the Enlightenment or the Romantic Idealist tradition was
ultimately more influential on Marx’s concept of time is still the subject of debate
today. What is clear, however, is that Marx drew on an enormous diversity of writers
that extended well beyond the range of these two traditions. Bakunin wrote of him:
“very few men have read so much and, it may be added, have read so intelligently, as
Marx.”9 Indeed, a prolific reader of a wide range of subjects, including philosophy,
literature, history, politics, economics, the natural sciences and mathematics, which
he read in at least eight languages,10 Marx developed his ideas through a process of
rigorous engagement with, and critique of, many authors, a technique he learnt with
the Young Hegelians, where “criticism” was the major form of exposition.11

Marx’s critical stance was accentuated by his marginality to his society, owing to
factors such as his Jewish background, his radical political stance, and his complex
personality. Situated on the margins, he was able to perceive society in different
ways to those existing within the mainstream. Consequently, while Marx’s idea of
time reflected many of the elements of the nineteenth century understanding of time,
he also profoundly criticized it. Transcending the boundaries of his age, Marx
created a new way of understanding historical time, the implications of which were
that neither people nor society felt the full impact of his ideas until the following
century. Perhaps we are yet to fully comprehend them. In examining the historical
context within which Marx formulated his ideas about time then, it may be asked
how he developed a philosophical basis for his understanding of historical time and how, in so doing, he perceived the relationship between the transhistorical and historically specific aspects of time.

The philosophical basis of Marx’s concept of time

At various points from the late 1830s to the late 1840s Marx was influenced by a range of writers from diverse intellectual traditions, each of whom played a role in shaping the various aspects that constituted his philosophy of time. This section outlines how Marx developed these ideas by synchronically focussing on the nature of the ideas themselves as a whole, more than on the chronological development of those ideas, although a diachronic trend is observable as Marx moves from his study of ancient Greek philosophy, in the late 1830s and early 1840s, to a critique of Romantic Idealism and Classical Enlightenment thought, through which he reached a philosophical understanding of historical time in his formulation of the notion of “historical materialism” by the mid-1840s. In so doing, it shows how Marx, through an investigation of the relationship between the concepts of “time” and “eternity” came to an understanding of how historical time contains both transhistorical, and historically specific features. It begins with the adolescent Marx and his philosophical quest, which occurred within the context of Romanticism.

At the age of eighteen, Marx left Triers for Bonn University with the ambition of becoming a poet. Indeed, although he enrolled in law, he spent much of his first years of university writing romantic poetry dedicated to Jenny Von Westphalen, his childhood friend, with whom he had fallen in love, and to whom he became secretly engaged. Much of this poetry reflects the typically romantic concerns about man’s alienated senses, the attempt to form a connection between freedom and aesthetic activity, the image of the romantic hero, and the idea of immortality through fame. Time, in its subjective and emotive aspects, was a present, albeit minor, theme.

The subject of time was explored through Marx’s use of the imagery and themes of the Promethean myth, which symbolized, among other things, the age-old
philosophical question about the relationship between time and eternity, change and permanence.\textsuperscript{14} Prometheus was the wisest of the Greek gods who stole fire - a symbol of self-consciousness - from Zeus and gave it to humankind. The myth tells how, as punishment, Zeus had Prometheus chained to a marble pillar in the Caucasian mountains, where a vulture tore at his liver all day, year in and year out. There was no end to the pain, as every night his liver grew whole again. Prometheus' eternal suffering eventually ended when he exchanged his immortality for mortality, enabling him to die, and hence end his suffering.\textsuperscript{15}

This classical Greek myth inspired Marx in his unfinished tragedy \textit{Oulanem}, where the subject of time found its clearest and most dramatic expression. The Promethean-like protagonist undergoes a psychological conflict between the two seemingly overwhelming forces of Time and Eternity. \textit{Oulanem} rants in a soliloquy:

\begin{quote}
All lost! The hour is now expired, and time
Stands still. This pigmy universe collapses.
Soon I shall clasp Eternity and howl
Humanity's giant curse into its ear.
Eternity! It is eternal pain,
Death inconceivable, immeasurable!
An evil artifice contrived to taunt us,
Who are but clockwork, blind machines wound up
To be the calendar fools of Time; to be,
Only that something thus at least might happen;
And decay, that there might be decay!\textsuperscript{16}
\end{quote}

Marx's exploration of the notions of time and eternity soon found a different avenue, however, when his interest in poetry gave way to a fascination with philosophy. In a letter to his father, Marx wrote about falling in love and his related attempts at poetry that he eventually abandoned, feeling the "urge to wrestle with philosophy." In it, he notes his first philosophical encounter with the question of the relationship between time and eternity, which he now understood in terms of the relationship between the "real" and the "ideal".

He then went on to describe how he had made himself ill attempting to resolve this question, by working his way through the Romantic-Idealist philosophers - Kant, Fichte, and Schelling. Driven against his will, and as if by necessity, to adopt an
Hegelian position, he wrote: “this work, my dearest child, reared by moonlight, like a false siren delivers me into the arms of the enemy.”\textsuperscript{17} Indeed, Marx’s Promethean instincts were antithetical to Hegel’s stance concerning time and eternity, whereby eternity - the realm of mind or idea - was the sphere of true reality. Like that of Prometheus, who Marx referred to as “the most eminent saint and martyr in the philosophic calendar” who is “against all heavenly and earthly gods who do not acknowledge human self-consciousness as the highest divinity,”\textsuperscript{18} Marx’s ambition was to relocate the arena of truth to the realm of time, or the material, concrete world. This was a task that Marx confronted in his doctoral thesis, which he wrote between 1839 and 1841, and which was entitled “On the Difference Between the Democritean and Epicurean Philosophy of Nature.”

In the thesis, Marx attempted to establish the concrete nature of mind, an idea he had addressed several years earlier, when he wrote to his father, “the nature of the mind is just as necessary, concrete and firmly based as the nature of the body.”\textsuperscript{19} According to Marx, the ancient Greek atomist materialist thinker, Epicurus, sought to explain how both the mind and its concepts arise, or derive, from material, concrete conditions. He saw that Epicurus perceived a contradiction inherent in the concept of the atom (the concrete) between form and matter, and, in so doing, established a link between the world of appearance and essence so that the nature of appearance is integrally related to time. For Epicurus, Marx wrote:

\textit{Time, excluded from the world of essence, becomes for him the absolute form of appearance. That is to say, time is determined as the \textit{accidens} of the \textit{accidens}. The \textit{accidens} is the change of substance in general. The \textit{accidens} of the \textit{accidens} is the change as reflecting itself, the change as change. This pure form of the world of appearance is time.}\textsuperscript{20}

Time is the “active form” of matter, the active form of appearance. It is, wrote Marx, “just as much the real form which separates appearance from essence, and posits it as appearance, while leading it back into essence.”\textsuperscript{21} Again, because time is the abstract form of sensation, he points out that the necessity arises for time to be:

fixed as a nature having a separate existence within nature. The changeability of the sensuous world, its change as change, this reflection of appearance in itself which constitutes the concept of time, has its separate existence in conscious sensuousness. \textit{Human sensuousness is therefore embodied time, the existing reflection of the sensuous world in itself.}\textsuperscript{22}
Moreover, as he adds:

The interconnection between sensuousness and time is revealed in such a way that the temporal character of things and their appearance to the senses are posited as intrinsically one. For it is precisely because bodies appeal to the senses that they pass away.\textsuperscript{23}

By arguing for the concrete nature of mind, Marx asserted the locus of truth, or consciousness, to be in the realm of the material, which he explicitly linked to the phenomenon of time. Marx’s interpretation of Epicurus’ concept of time reflected the Hegelian idea that the objective, material world manifested time, through human activity in particular. As such, time was inherent within events and processes. However, Epicurus also provided a starting point for Marx to critique Hegel, and, in so doing, to transform Hegel’s concept of time. According to Marx, Hegel saw that time, although manifested in the material world, was the product of thought, or the idea and, as such, Hegel posited time as secondary to the “eternal”, and thus to be transcended. Marx, in contrast, posited time, which is concretely manifested in the material world, as the primary, or true reality.

While his doctoral thesis provided a starting point for his understanding of time, Marx’s concept of time developed further when he left university in 1843 to become a journalist and editor for the radical journal, the Rheinische Zeitung - an experience which saw him turn decisively toward socio-economic questions and “material interests.”\textsuperscript{24} In so doing, he immersed himself in a huge range of political, historical, economic and socialist writings,\textsuperscript{25} all of which provided him with a formidable arsenal with which to critique Hegel. To begin with, he focussed on Hegel’s notion of “civil society” and the “state”, a notion that facilitated his understanding of the concept of time.\textsuperscript{26} Indeed, his critique dealt with Hegel’s view that the state represented the universal entity, or “eternity”, and was thus timeless and absolute; that civil society created time and actualized the spirit; and that civil society consisted of a system of needs mediated socially through human labour.\textsuperscript{27}

While Marx accepted Hegel’s concept of civil society, he critiqued it by arguing that civil society is the more fundamental sphere of human activity. Further, he argued
that the state is not “eternal” but is rooted in civil society, specifically in relations of private property. In this way, he retained the Hegelian notion of praxis, or human activity, as the basis for historical development. He also adopted Hegel’s model of “objectification” as one in which man’s “self-constituting activity” - the realization of the subject through the process of transforming objects - occurred through civil society. In other words, he argued that labour is man’s act of self-creation.

Importantly, then, Marx saw Hegel as correctly grasping the nature of work, or the essence of labour. Thus, in the “Theses on Feuerbach” he acknowledged his debt to Hegel’s idealism for recognizing the positive side of labour and the “active side” of human activity. Moreover, in the Economic and Philosophic Manuscripts, Marx suggested that:

Hegel conceives the self-creation of man as a process, objectification as loss of object, … as alienation and as supersession of this alienation; that he therefore grasps the nature of labour and conceives objective man - true, because real man - as the result of his own labour.

He then went on to note that:

Hegel grasps man’s self-estrangement, alienation of being, loss of objectivity and loss of reality as self-discovery, expression of being, objectification and realization. In short, he sees labour - within abstraction - as man’s act of self-creation and man’s relation to himself as an alien being and the manifestation of himself as an alien being as the emergence of species-consciousness and species-life.

Marx brought labour to the forefront by arguing that historical actuality was situated in civil society, in the realm of “time”, rather than in the Spirit or the state - that is, the “eternal” realm. In so doing, he reaffirmed the priority of real time over the abstract concept.

If both Hegel and Marx agreed that human activity constructed time, they differed in their ideas concerning the nature of the activity that constructed it. While for Hegel mental activity constructed time, for Marx physical and mental activity constructed time. Indeed, in noting “The only labour Hegel knows and recognizes is abstract mental labour,” Marx saw both physical and mental activity as labour, believing that consciousness, or reason, was a vital element of action, and thus was integral to the process by which material productive activity constructed time. In emphasizing
the purposive character of the labour project, he saw that humans have an inbuilt tendency to develop human productive powers, and that labourers were capable of employing reason in the choice of means to achieve their purposes and to enhance their productive capacity. In short, Marx developed a teleology of labour, which involved the notion of “objectification”.

Carol Gould describes “objectification” as a two-sided process in which individuals transform themselves through forming objects to satisfy their needs. She argues that this activity of transforming objects according to a purpose is a meaning-giving activity, and thus a teleological or intentional activity, with the created objects embodying intentions and purposes. In characterizing this activity as “self-realization”, in which the subject creates value and recognizes value in the object, she notes how “This process of objectification is therefore one in which the world becomes endowed with values.” In referring to Marx’s idea that activity creates value as a property of the object, which takes an objective form, Gould suggests that he derived his notion of objectification from Aristotle’s account of made objects through productive activity or art. For both Marx and Aristotle:

laboring activity is a purposive activity that gives form to matter...
produced objects are distinguished from natural objects in that the form is given by labor, which transforms nature in accordance with its purposes.

Marx used Aristotle’s notion of productive activity as a basis for understanding the capitalist production process. He argued that capitalism introduced a distinctive mode of objectification – alienation, a position that was both similar to, and different from, Hegel. Like Hegel, Marx saw that the relations between subject and object were external relations, in that each stood to the other as an object, and that this relation in capitalism was one of alienation, where the subject was “estranged” from the object. Marx saw, however, that for Hegel, every instance of objectification was alienating, and the whole dialectic was a succession of such alienations that are finally overcome at the end of the process. Moreover, Marx argued, the process of alienation was a process of consciousness, which then became embodied in external form:

When, for example, Hegel conceives wealth, the power of the state, etc., as entities estranged from the being of man, he conceives them only in their
thought form.... They are entities of thought, and therefore simply an estrangement of pure, i.e. abstract, philosophical thought. Therefore the entire movement ends with absolute knowledge.... The entire history of alienation and the entire retraction of this alienation is therefore nothing more than the history of the production of abstract, i.e. absolute, thought, of logical, speculative thought. Estrangement, which thus forms the real interest of this alienation and its supersession, is the opposition of in itself and for itself, of consciousness and self-consciousness, of object and subject, i.e. the opposition within thought itself of abstract thought and sensuous reality or real sensuousness.37

According to Marx, then, Hegel adopted the standpoint of modern political economy, in that he "sees labour as the essence, the self-confirming essence, of man; he sees only the positive and not the negative side of labour. Labour is man's coming to be for himself within alienation or as an alienated man."38

For Marx, on the other hand, objectification was the intrinsic character of every productive activity. Alienation occurred only when the object was separated from the subject's activity that created it, and was no longer related to the subject as its own, but as belonging to another. Marx wrote, for example:

the worker is related to the product of his labour as to an alien object.... The externalisation ... of the worker in his product means not only that his labour becomes an object, an external existence, but that it exists outside him, independently of him and alien to him, and begins to confront him as an autonomous power; that the life which he has bestowed on the object confronts him as hostile and alien.39

Marx saw this process of alienation as a process of real social life in that the alienation of labour, which was the separation between labour and property in the product of labour, was established in the sale of labour-power. He argued that this transaction separated living labour from labour's capacity to produce value from the means for its realization in production (for example, land, materials and instrument), and from the product of its activity that belong to capital.40

The differences between Hegel and Marx extended to their views on freedom from alienation and its relationship to time. Hegel saw freedom in the social sphere as occurring through the state, which he equated with the "eternal". Hegel wrote, for example: "In the finite-teleological view is to be found the correct premise that
nature does not contain the absolute end within itself." Moreover, Hegel saw that alienation was inherent in the activity of consciousness, and thus was an essential, eternal aspect of human existence, or, an unchanging, inherent phenomenon. Thus, according to Hegel, humans could not achieve freedom from alienation "in time", but only beyond it, through society's transcendence of time, which meant that true freedom was not possible for an individual agent.

Marx differed starkly from Hegel in his conception of how and when social freedom became historically possible, noting that the political state was only the illusory form given to people's true common life in civil society. Indeed, for Marx, people would achieve genuine freedom only when their true common life, in civil society, was the object of "the will of united individuals" who were no longer subject to class divisions. In arguing that alienation was an historical, and thus temporary, phenomenon, a result of universal wage-labour under capitalism, Marx believed that humans could achieve freedom from alienation "in time".

Marx, then, critiqued Hegel for positing the primacy of the eternal over time, for seeing time as an abstract concept, as "absolute method"; time was the "purely logical formula of movement" where Hegel understood movement as existing within the realm of the abstract:

Just as by dint of abstraction we have transformed everything into a logical category, so one has only to make an abstraction of every characteristic distinctive of different movements to attain movement in its abstract condition - purely formal movement, the purely logical formula of movement. If one finds in logical categories the substance of all things, one imagines one has found in the logical formula of movement the absolute method, which not only explains all things, but also implies the movement of things. It is of this absolute method that Hegel speaks in these terms: 'Method is the absolute, unique, supreme, infinite force, which no object can resist; it is the tendency of reason to find itself again, to recognise itself in every object'.... So what is this absolute method? The abstraction of movement. What is the abstraction of movement? Movement in abstract condition. What is movement in abstract condition? The purely logical formula of movement or the movement of pure reason. Wherein does the movement of pure reason consist? In posing itself, opposing itself, composing itself; in formulating itself as thesis, antithesis, synthesis; or, yet again, in affirming itself, negating itself and negating its negation.
Marx’s critique of Hegel shared some similarities with his critique of the Enlightenment thinkers, reflecting, perhaps, the extent to which Hegel himself remained within the parameters of Enlightenment thought.

Marx highlighted the relationship between Hegelianism and Enlightenment thought when he critiqued Proudhon, who, in Marx’s view, reduced Hegel’s dialectics to “the meanest proportions” when he turned his attention to political economy. In the *Poverty of Philosophy*, for example, Marx argued that Proudhon aimed to give an historical account of the economic categories, a history, not “*according to the order in time, but according to the sequence of ideas.***“ Yet, as Marx pointed out, Proudhon’s attempt to put the categories into an order or sequence - which then becomes the basis of historical reality - was flawed:

> The production relations of every society form a whole... In constructing the edifice of an ideological system by means of the categories of political economy, the limbs of the social system are dislocated. The different limbs of society are converted into so many separate societies, following one upon the other. How, indeed, could the single logical formula of movement, of sequence, of time, explain the structure of society, in which all relations coexist simultaneously and support one another?

Where Proudhon wanted to arrange the categories diachronically, Marx emphasized their synchronic nature. Thus, Marx understood the categories in their structural relations with each other, as co-existing simultaneously and existing only insofar as the economic relations exist. According to Marx, Proudhon failed to understand that the “economic forms in which men produce, consume, and exchange, are *transitory and historical.*“ Incapable of following the real movement of history, Marx wrote, Proudhon “does not feel it necessary to speak of the seventeenth, the eighteenth or the nineteenth century for his history proceeds in the misty realm of imagination and rises far above space and time.” He continues: “In short, it is not history but old Hegelian junk, it is not profane history - a history of man - but sacred history - a history of ideas.” Marx argued that, in not perceiving that economic categories are only abstract expressions of historically changing relations and only remain true while these relations exist, Proudhon:

> falls into the error of the bourgeois economists, who regard these economic categories as eternal and not as historical laws which are only laws for a
particular historical development, for a definite development of the productive forces.\textsuperscript{50}

Marx’s intellectual engagement with both “bourgeois” and “socialist” economists added an important materialist dimension to his development of a philosophical understanding of time. Like his critique of Hegel, it was based on an extensive reading of political economy that he began in 1843. By spring 1844 he had read and excerpted all the main economists from Boisguillebert and Quesnay in the late seventeenth century to James Mill and Say in the nineteenth century.\textsuperscript{51} Marx’s critique of the classical economists was aided by his extensive reading of socialist economists like Buret, Pecqueur, Leroux, Fourier, and Sismondi. He was impressed and influenced, in particular, by The Condition of the Working Class in England, whose author, Frederick Engels, was largely responsible for introducing Marx to the English “Ricardian” socialists like Gray, Bray, and Hodgskin, and to ideas about English trade unionism, working class life, Chartism, Owenism, and Icarianism.\textsuperscript{52} Marx also read widely on American socialist and communist movements, as well as the sociology and politics of the United States, including Tocqueville, Beaumont and Hamilton.\textsuperscript{53}

As K.G. Ballestrem points out, Marx partly derived his materialism from the Scottish materialists in their “natural history of civil society”, as developed by Adam Smith, Adam Ferguson, John Millar and others, thinkers who held that labouring individuals were the subject and motor of history.\textsuperscript{54} Basing their argument on comparative anthropological and historical studies, the Scottish materialists argued that while all societies followed the same developmental stages (hunters, shepherds, farmers, merchants), they were nonetheless unpredictable. Indeed, they interpreted history as a “dialectic of advances and setbacks”; history was open and linear, with no goal or return to the past. In noting the regressive aspects of capitalism such as poverty and conflict, they anticipated the socialist’s critique of bourgeois society.\textsuperscript{55}

Marx agreed with Smith that history is a process of development through labour, and suggested that Smith’s greatest achievement was in acknowledging labour as a central principle. According to Marx, Smith was the first to see that the time spent in
labour measured value, something which Ricardo went on to grapple further with in examining the theoretical problems posed by the labour theory of value. However, while Marx was clearly indebted to the classical economists, he was also aware of their limitations.

Marx’s main critique of the classical economists was that they saw the capitalist mode of production as based on inherent, immutable principles, inherent to all societies:

> When the economists say that present-day relations - the relations of bourgeois production - are natural, they imply that these are the relations in which wealth is created and productive forces developed in conformity with the laws of nature. These relations therefore are themselves natural laws independent of the influence of time.\(^{57}\)

In contrast, Marx argued that all concepts and ideas were historical, arising out of changing material conditions. Thus, time as a measure of labour was specific to capitalism, arising out of the relationship between labour and capital, a relationship which was based on wage labour.

In making this critique, Marx was indebted to the socialist economists, in particular Richard Jones, a little recognized economist who was the chief representative of evolutionary ideas in economics. In criticizing the classical economists from the standpoint of the historical school, Jones attacked their attempts to deduce economic laws valid for all times and all countries, and was particularly critical of the supposed universality of Ricardo’s laws, arguing they had but limited historical validity. In investigating the historical preconditions of capitalism, Jones considered the transfer of independent producers to wage labourers and espoused the idea of a sequence of economies through which every nation must pass. He saw capitalism as an historical and transitory form of production that was a necessary stage on the road to a more advanced economy. Although Marx recognized the limited, “bourgeois character” of Jones’ horizon, he called him the first representative of the “true science of political economy.” He also made frequent references to Jones’ superiority over classical economists, including Jones’ attempts to test and correct theories against actual historical developments.\(^{58}\)
Marx's philosophical ideas about historical time, then, owed much to a wide range of thinkers with whom he engaged on an intellectual level throughout the 1840s. Clearly, he was indebted to classical Greek philosophy, through the very different materialist outlooks of Epicurus and Aristotle; to Hegel's understanding of time; as well as to Enlightenment thought, in particular the classical economists and materialists. From a thorough critique based on wide reading, Marx developed the idea that time emanated from the material conditions of society, particularly productive activity. This notion underlined "historical materialism", which was a set of ideas about history that only a few of Marx' works, mainly *The German Ideology*, outlined. Through the concept of historical materialism, Marx expressed the ideas about time that he had developed through his earlier critiques specifically in relation to the historical process.

The basis of Marx's materialist view of historical time lay in his early exploration of the theme of the relationship between time and eternity, which led to the Promethean ambition to make time the realm of the "real". Indeed, this theme underlay the idea that the first premise of human history was "the existence of living human individuals" and the "activity and the material conditions under which they live, both those which they find already existing and those produced by their activity." The first historical act, Marx asserted, was:

> the production of the means to satisfy these needs, the production of material life itself. And indeed this is an historical act, a fundamental condition of all history, which today, as thousands of years ago, must daily and hourly be fulfilled merely in order to sustain human life.

History occurred in the realm of the material, in the world of "appearance", and on the mundane level of time, not in the realm of the Idea, the world of "essence" and at the level of the eternal.

Thus, Marx argued that it was temporal civil society and not the eternal state through which time, and hence history, was manifested:

> The form of intercourse determined by the existing productive forces at all previous historical stages, and in its turn determining these, is *civil society*.... Already here we see how this civil society is the true source and theatre of all
history, and how absurd is the conception of history held hitherto, which
neglects the real relationships and confines itself to high-sounding dramas of
princes and states.\textsuperscript{61}

He contended that the state was secondary, a product of the activity of civil society.
For example, Marx wrote that:

The social structure and the State are continually evolving out of the life
process of definite individuals, but of individuals, not as they may appear in
their own or other people’s imagination, but as they \textit{really} are; i.e., as they
operate, produce materially, and hence as they work under definite material
limits, presuppositions and conditions independent of their will.\textsuperscript{62}

Indeed, Marx maintained that the state, although divorced from the real interests of
individual and community, was always based “on the real ties existing in every
family and tribal conglomeration ... and especially ... on the classes, already
determined by the division of labour.”\textsuperscript{63} This conception of history, he went on:

depends on our ability to expound the real process of production, starting out
from the material production of life itself, and to comprehend the form of
intercourse connected with this and created by this mode of production (i.e.,
civil society in its various stages), as the basis of all history; and to show it in
its action as State, to explain all the different theoretical products and forms
of consciousness, religion, philosophy, ethics, etc., etc., and trace their origins
and growth from that basis; by which means, of course, the whole thing can
be depicted in its totality.\textsuperscript{64}

Marx understood, then, that human productive activity constructed historical time
and that it consisted of both physical and mental activity, which were integrally
related. He wrote, for example, that the “production of ideas, of conceptions, of
consciousness, is at first directly interwoven with the material activity and the
material intercourse of men, the language of real life.”\textsuperscript{65} However, he maintained
that it was physical labour that took priority: just as time was prior to the eternal, so
too, the abstract idea, or consciousness, was secondary to material considerations:

we do not set out from what men say, imagine, conceive, nor from men as
narrated, thought of, imagined, conceived, in order to arrive at men in the
flesh. We set out from real, active men, and on the basis of their real life-
process we demonstrate the development of the ideological reflexes and
echoes of this life process. The phantoms formed in the human brain are also,
necessarily, sublimates of their material life-process, which is empirically
verifiable and bound to material premises. Morality, religion, metaphysics,
all the rest of ideology and their corresponding forms of consciousness, thus
no longer retain the semblance of independence. They have no history, no
development; but men, developing their material production and their material intercourse, alter, along with this their real existence, their thinking and the products of their thinking. Life is not determined by consciousness, but consciousness by life.\textsuperscript{66}

Marx's ideas concerning the manifestation of time in history through human productive activity provided a basis for a transhistorical understanding of time. Marx identified, as the force underlying the constitution of historical time in general, a dialectical process of contradiction between the forces and relations of production. He argued that, in this process, "the material productive forces of society come into conflict with the existing relations of production" which then "turn into their fetters."\textsuperscript{67} Marx's statements in this regard appear to be applicable to understanding all societies, and to comprehending human history as a whole, as a process that transforms itself through various successive forms. Indeed, he argued that the process of self-activity, and later the fetters upon it, "form in the whole evolution of history a coherent series of forms of intercourse."\textsuperscript{68} All collisions in history, Marx asserted, have their origin "in the contradiction between the productive forces and the form of intercourse."\textsuperscript{69}

While Marx alluded to the "various stages of development in the division of labour" as different forms of ownership (tribal; ancient communal; feudal or estate property),\textsuperscript{70} he did not necessarily see these stages as successive forms, constituting history as a whole, and thus historical time as purely transhistorical. Indeed, Marx noted that world history, or a unified historical process, was specifically a product of capitalist development, and thus historically specific. Marx argued that:

\begin{quote}
only with this universal development of productive forces is a \textit{universal} intercourse between men established, which produces in all nations simultaneously the phenomenon of the 'propertyless' mass (universal competition), makes each nation dependent on the revolutions of the others, and finally has put \textit{world-historical}, empirically universal individuals in place of local ones.... World-historical existence of individuals, i.e., existence of individuals which is directly linked up with world history.\textsuperscript{71}
\end{quote}

Further, he wrote:

\begin{quote}
this transformation of history into world history is not indeed a mere abstract act on the part of the 'self-consciousness', the world spirit, or of any other metaphysical spectre, but a quite material, empirically verifiable act, an act
\end{quote}
the proof of which every individual furnishes as he comes and goes, eats, drinks and clothes himself.\textsuperscript{72}

Marx's critique of Hegel's concept of time was, in part, a critique of Hegel's belief in the transhistorical, abstract nature of time; that is, of "real" time as existing independently of events and processes, outside of time in the realm of the abstract or eternal. Marx writes, for example that:

The whole of nature only repeats to him in a sensuous, external form the abstractions of logic.... His intuiting of nature is therefore only the act of confirmation of his abstraction from the intuition of nature, a conscious re-enactment of the process by which he produced his abstraction. Thus, for example, Time is equated with Negativity referred to itself. In the natural form, superseded Movement as Matter corresponds to superseded Becoming as Being. Light is the natural form of Reflection-in-itself. Body as Moon and Comet is the natural form of the antithesis which, according to the Logic, is the positive grounded upon itself and negative grounded upon itself. The Earth is the natural form of the logical ground, as the negative unity of the antithesis, etc.\textsuperscript{73}

For Marx, this view led to a linear view of history that divorced historical time from real, material conditions. Instead, Marx acknowledged the synchronous nature of time, seeing time as occurring on different levels or "strata". While he did not totally dismiss the role of linear, objective time, he nonetheless saw it as playing a secondary, facilitative role:

When reality is depicted, philosophy as an independent branch of knowledge loses its medium of existence. At the best its place can only be taken by a summing-up of the most general results, abstractions which arise from the observation of the historical development of men. Viewed apart from real history, these abstractions have in themselves no value whatsoever. They can only serve to facilitate the arrangement of historical material, to indicate the sequence of its separate strata. But they by no means afford a recipe or schema, as does philosophy, for neatly trimming the epochs of history. On the contrary, our difficulties begin only when we set about the observation and the arrangement - the real depiction - of our historical material, whether of a past epoch or of the present.\textsuperscript{74}

The distinction Marx made between objectification and alienation highlighted the transhistorical and historically specific nature of time. Whereas objectification was the process through which time in general was manifested, and was thus transhistorical, alienation was a specific form of objectification, particular to capitalist society, which produced a particular form of historical time. Thus, the form
in which time appeared was historically specific, in that it varied from society to society. We can understand all societies in terms of their “economization of time.” As Marx wrote: “Economy of time, to this all economy ultimately reduces itself.”

Clearly, then, there is a tension in Marx’s work between the transhistorical and historically specific aspects of time. His early philosophical writings appear to suggest that there are both general or universal features of the nature of time, as well as specific characteristics of time that vary significantly both within and between different societies. This means that, in relation to historical understanding, Marx understood historical time to contain universal and particular, unilinear and multilinear aspects, with many histories contained within a unitary history, or history “as a whole”.

Marx shows, then, that the nature of time under capitalism assumes universal and totalizing aspects, subsuming all histories within it. The historian imposes a unity, finding justification for this in the transhistorical aspects of historical time, which revolve around human activity. This enables the historian to trace, and analyze, continuities and change over time, both within and between different societies and, consequently, different economic formations. In this way, both transhistoricity and historically specificity, essence and appearance, are integral aspects of Marx’s concept of historical time, and, coexisting together, invite, but constantly elude, reconciliation.

**The experiential basis of Marx’s concept of time**

Marx’s experience of time, including his political, social, and personal activities, played an important role in shaping his understanding of time. Indeed, material and practical concerns were central to his theoretical ideas, suggesting that the activities that Marx engaged with were integral to his intellectual development, and as such, had an impact on his understanding of time. Certainly, both his political activity and his creative, intellectual work were two of the most defining features of Marx’s life. In particular, these aspects impacted on his understanding of the role of human agency and deterministic forces in the construction of historical time.
That Marx was destined to be a radical revolutionary activist was not evident in his early upbringing. Perhaps the young Marx was impressed by Hugo Wytttenbach, his high school history teacher, school principal, and family friend, who was threatened with dismissal by State officials for his outspoken stance against press censorship, a cause which Marx himself vigorously took up in the early 1840s and which resulted in his own arrest and trial. Not insignificantly, in his last year of school Marx wrote a highly idealistic essay for Wytttenbach entitled “Reflections of a Young Man on the Choice of a Profession.”

Undoubtedly, Marx’s father, through his advocacy of the French Revolutionary ideals of liberty and equality, had instilled in his son a strong sense of justice, which stemmed, in part, from personal experience. Heinrich Marx had converted to Protestantism several years before Marx’s birth, as, under Prussian law, Jews were unable to hold a position in the service of the state. However, although Heinrich was connected with the Rhineland liberal movement, and possessed sympathy for the rights of the oppressed, his ideas were tempered by a certain Prussian patriotism. His conformism is evident in a letter written to Marx while at university, when, resigned to his son’s then ambition to be an academic, he exhorted Marx to write on Prussian history. In so doing, he urged Marx to select “a crowded moment of time where, however, the future hung in the balance.” He then went on to suggest that “if executed in a patriotic and German spirit with depth of feeling, such an ode would itself be sufficient to lay the foundation for a reputation, to establish a name.”

Ironically, Marx did fulfil his father’s wishes, although perhaps not in a manner of which Heinrich would have approved. He certainly established a name for himself, but as an enemy of the state, not as a patriotic German citizen. Moreover, while the question of history primarily concerned him, the “crowded moment of time” that Marx selected as the focus of his concerns was his own present, the 1840s. To Marx, like many of his contemporaries who were fully engaged in the turbulence of protest and political revolution during this period, the future did, indeed, appear to hang in the balance.
A revolutionary ferment that had been simmering, and frequently bubbling over, since the French Revolution characterized this short, but eventful, decade of European history - certainly a “crowded moment of time” by any standard. It was fuelled by the loud protests of the propertied and educated bourgeoisie, who demanded reform for political democracy and economic liberalization from an absolutist government. The revolutionary fervour was most pronounced in France, which was the most industrially advanced nation on the continent and where an economic crisis in the mid-1840s had radicalized a rapidly growing, and increasingly self-conscious and organized proletariat. It gave an impetus to the development of socialism, which emerged as a countermovement to liberalism, and which, together with its more revolutionary-orientated cousin, communism, was an important stimulus to the revolution that broke out in February 1848 in Paris. This revolution, in turn, sparked a series of revolutions across Europe - led by the bourgeoisie and ending in failure - during 1848.\(^\text{80}\)

Marx’s interest in socialism and his engagement in related political activities began in 1842, soon after he left university and began a journalistic career publishing articles - masterpieces in “polemical exegesis”, according to David McLellan - concerning freedom of the press and religion in politics in Arnold Ruge’s radical periodical *Deutsche Jahrbücher*, and then in the Rhineland journal *Rheinische Zeitung*. This latter journal aimed to campaign for measures that would help the expansion of industry and commerce, and aspired to uphold:

the principle of equality of all citizens before the law, and ultimately to bring about the political and economic unification of all Germany – aspirations that necessarily led them to oppose Prussia’s religious policies and semi-feudal absolutism.\(^\text{81}\)

The journal’s opposition to the Prussian government became even more strident when Marx was made editor-in-chief. Under Marx’s editorship the circulation of the paper more than doubled in the first months, and in the last months of 1842 it began to acquire a national reputation.\(^\text{82}\)

Marx was expelled from Germany following the suppression of the journal in 1843 (as he was later in 1849 when he attempted to start the *Neue Rheinish Zeitung*).
Following this event Marx and Jenny lived in Paris, a city described by Isaiah Berlin as a "social, political and artistic ferment," noted for its "wide intellectual hospitality" that "gave asylum to exiles and revolutionaries of many lands." Here Marx played a prominent role, organizationally and intellectually, in the establishment of an international communist movement. Through this involvement he met many prominent intellectuals and activists, including Engels, and travelled extensively across at least five European countries - Germany, France, Belgium, Holland and England. As a result of his engagement in revolutionary activities, the authorities arrested him twice, tried him once (but acquitted him), and on five occasions forced him into exile.

Marx’s political activities during the 1840s, which focussed his attention on creating change in the present, were important in shaping his outlook on time. His involvement in working class politics led to an engagement with the ideas of the Enlightenment thinkers Saint-Simon, Fourier and Owen, all of whom had reflected on the nature and characteristics of the ideal society they hoped to help bring about. Marx’s initial interest in their ideas, sparked by Engels’ enthusiasm, soon turned into a critique which played a significant part in shaping Marx’s ideas about the process of historical change and the relationship between past, present and future.

According to Marx and Engels, these “utopian socialists”, as they pejoratively labelled them, lacked an understanding of historical change in that they wrenched “isolated moments from their proper places in the process of development.” Marx and Engels argued that the utopian socialists appealed to society in general to understand, and, in so doing, accept “the best possible plan of the best possible state of society.” According to Marx and Engels, Saint Simon and Fourier among others, developed “blueprints" of an ideal society, and then searched “after a new social science, after new social laws, that are to create these conditions,” rather than allow the conditions for the emancipation of the proletariat to develop. Thus, Marx and Engels saw that they lacked understanding of the process of development by which these changes would occur:

Historical action is to yield to their personal inventive action, historically created conditions of emancipation to fantastic ones, and the gradual
spontaneous class organization of the proletariat to an organization of society specially contrived by these inventors. Future history resolves itself, in their eyes, into the propaganda and the practical carrying out of their social plans.

In contrast to the utopian socialists, Marx very rarely discussed the form of the future communist society. However, as Vincent Geoghegan points out, he saw that a positive view of the future was necessary for the process of historical and social change to occur. Certainly, he emphasized that the conception of communism implied a transformative synthesis, which required a notion of the desirable - and hence positive - view of the future. Thus, Marx objected, not to their goals of the future, which held merit, but to their lack of understanding about the process of transformation by which society could effect such change. Indeed, Marx recognized that such ideas were a necessary part of the historical development of socialism, and praised their critical nature. He wrote, for example, that these “fantastic pictures of future society” or “castles in the air”, which people attempt to attain by peaceful means and by small experiments doomed to failure, were “painted at a time when the proletariat is still in a very undeveloped state.” According to Marx, their attack on “every principle of existing society” is valuable for the “enlightenment of the working class.” However, he argued, as the “modern class struggle develops and takes definite shape,” these forms of socialism “lose all practical value and all theoretical justification.”

Marx saw that the future must be grounded in the present. “In bourgeois society”, he wrote, “the past dominates the present; in Communist society, the present dominates the past.” As he noted many years later, in response to a revival of utopian socialism in the 1870s, the “doctrinaire and inevitably fantastic anticipation of the programme of action for a revolution of the future only diverts one from the struggle of the present.” On another occasion Marx wrote:

Utopian socialism which for decades we have been clearing out of the German workers' heads with so much effort and labour - and it is their freedom from it which has made them theoretically (and therefore also practically) superior to the French and English - utopian socialism, playing with fantastic pictures of the future structure of society, is again rampant, and in a much more futile form, not only compared with the great French and English utopians, but even with Weitling. It is natural that utopian theories, which before the era of materialist critical socialism contained the rudiments
of the latter within itself, can now, coming belatedly, only be silly, stale, and basically reactionary. 100

Indeed, Marx saw that communism, grounded in the present, was not a goal society would reach, but a process that was occurring in the present, through class struggle. He wrote: “Communism is the necessary form and the dynamic principle of the immediate future, but communism is not itself the goal of human development - the form of human society.”101 Thus:

Communism is for us not a state of affairs which is to be established, an ideal to which reality [will] have to adjust itself. We call communism the real movement which abolishes the present state of things. The conditions of this movement result from the premises now in existence. 102

Again, Marx wrote of the proletariat: “They have no ready-made utopias to introduce.... They have no ideals to realise, but to set free the elements of the new society with which old collapsing bourgeois society itself is pregnant.”103

This change, Marx believed, would occur through a process of critique of existing society. For him, the aim was to bring about the change, rather than try to predict the nature of society once change had occurred. As he notes:

every individual must admit to himself that he has no precise idea about what ought to happen. However, this very defect turns to the advantage of the new movement, for it means that we do not anticipate the world with our dogmas but instead attempt to discover the new world through the critique of the old.... If we have no business with the construction of the future or with organizing it for all time there can still be no doubt about the task confronting us at present: the ruthless criticism of the existing order, ruthless in that it will shrink neither from its own discoveries nor from conflict with the powers that be. 104

Or again, as he points out:

Criticism has plucked the imaginary flowers on the chain not in order that man shall continue to bear that chain without fantasy or consolation but so that he shall throw off the chain and pluck the living flower. 105

More specifically, he states that:

Our programme must be: the reform of consciousness not through dogmas but by analysing mystical consciousness obscure to itself, whether it appear in religious or political form. It will then become plain that the world has long since dreamed of something of which it needs only to become conscious for it
to possess it in reality. It will then become plain that our task is not to draw a
sharp mental line between past and future but to complete the thought of the
past. Lastly, it will become plain that mankind will not begin any new work,
but will consciously bring about the completion of its old work.\textsuperscript{136}

In the 1840s, then, Marx held an optimistic view of the future, and believed in the
possibility of true freedom. He had faith in the potential for, and imminence of,
radical changes to the structure of society for its betterment through human action.
His colleagues, however, did not always share his optimism. During 1843, a
despairing Arnold Ruge told Marx that there was no chance of a political revolution,
arguing that the Germans were a docile people by nature. He wrote to Marx: “Our
nation has no future, so what is the point in our appealing to it?”\textsuperscript{107} Marx rejected
this pessimism, writing to him:

You will hardly suggest that my opinion of the present is too exalted and if I
do not despair about it this is only because its desperate position fills me with
hope.... For our part it is our task to drag the old world into the full light of
day and to give positive shape to the new one. The more time history allows
thinking mankind to reflect and suffering mankind to collect its strength the
more perfect will be the fruit which the present now bears within its womb.\textsuperscript{108}

Indeed, Marx instilled his writings at this time with a sense of immediacy, and a
feeling that history was in the process of being created around him. He saw that the
locus of this change was the working class:

The theoretical conclusions of the Communists are in no way based on ideas
or principles that have been invented, or discovered, by this or that would-be
universal reformer. They merely express, in general terms, actual relations
springing from an existing class struggle, from a historical movement going
on under our very eyes.\textsuperscript{109}

He believed that a just, free society was not simply an illusive dream, that society
could cause change through revolution if intellectuals developed a proper
understanding about how that change could occur. In actively engaging in this task,
he recognized the capacity of his own ideas to contribute to that change. Not merely
ccontent to write about history, he wrote to determine the course of history itself.
“The philosophers have only interpreted the world, in various ways,” he wrote in
1845, “the point is to change it.”\textsuperscript{110}
While Marx critiqued the utopian socialists for their illusory fantasies about a perfect society, he acknowledged that a vision of the future was an important aspect of causing social and historical change. Consequently, throughout his writings, Marx contemplated the nature of an ideal future communist society, and, in so doing, explored further his ideas about time. Among other things, he was concerned with the question of the importance of free time for creative activity, which he examined through his concept of unalienated activity. In the *Economic and Philosophical Manuscripts*, he argued that, through unalienated activity, people preserved a physical and spiritual existence:

> Man makes his life activity itself an object of his will and consciousness.... Only because of that is he a species-being.... Only because of that is his activity free activity.\(^{111}\)

This activity constitutes the "free expression and hence the enjoyment of life", \(^ {112} \) through which man "produces in accordance with the laws of beauty."\(^ {113} \)

Marx was concerned, at this time, about the nature of the relationship between the individual and the social world. "The whole character of a species, its species-character, resides in the nature of its life activity, and free conscious activity constitutes the species-character of man."\(^ {114} \) Marx stressed the creative aspects of human activity, arguing that human production is the "practical creation of an objective world, the fashioning of inorganic nature."\(^ {115} \) Through fashioning the objective world, he wrote:

> nature appears as his work and his reality. The object of labour is therefore the objectification of the species-life of man: for man reproduces himself not only intellectually, in his consciousness, but actively and actually, and he can therefore contemplate himself in a world he himself has created.\(^ {116} \)

Marx's notion that unalienated, creative activity would be normal in an ideal future society meant, of course, that time would be perceived differently. In the *Poverty of Philosophy*, Marx envisioned that such a society would not measure the value of things produced by quantity, and hence by absolute time, but by their quality and their ability to meet needs:

> In a future society, in which class antagonism will have ceased, in which there will no longer be any classes, use will no longer be determined by the
minimum time of production; but the time of production devoted to different articles will be determined by the degree of their social utility.\textsuperscript{117}

Yet again, in \textit{The German Ideology}, Marx wrote:

in a communist society, where nobody has one exclusive sphere of activity but each can become accomplished in any branch he wishes, society regulates the general production and thus makes it possible for me to do one thing today and another tomorrow, to hunt in the morning, fish in the afternoon, rear cattle in the evening, criticise after dinner, just as I have a mind, without ever becoming hunter, fisherman, shepherd or critic.\textsuperscript{118}

Marx’s emphasis on the importance of available free time for all people to develop their creative potential was a theme he explored in greater depth in his later work, particularly the \textit{Grundrisse}.

Marx envisioned a society with ample time for unalienated activity, and, in so doing, used this vision as an heuristic device by which he was able to critique the way in which capitalist society constructed time. For example, he described capitalist time in the following way: “Time is everything, man is nothing, he is, at the most, time’s carcase. Quality no longer matters, Quantity alone decides everything, hour for hour, day for day.”\textsuperscript{119} Moreover, Marx noted that capitalism alienated the wage labourers, who “must sacrifice their time and freedom and work like slaves in the service of avarice. In doing so they shorten their lives.”\textsuperscript{120}

We can understand Marx’s emphasis on the importance of the quality of an individual’s time in the context of his experience of lived time. His outlook was imbued with the German Romantic Movement, which undoubtedly inspired his concern with creativity. Indeed, he saw his work as an “artistic entity”, expressed through a dialectical, creative process.\textsuperscript{121} Marx saw that the capacity of the individual to be creative was an essential component of human nature and that true freedom was in the realm of time that was free from necessary labour, time in which an individual could develop their creative abilities, in whatever form, to their fullest potential. Consequently, Marx had a keen appreciation of the value of his own time in which he was free to pursue his intellectual work. He reputedly said once: “What
is man’s greatest asset, the most precious thing that is given him? Time. And see how it is wasted."

Marx’s productivity arose out of an intense and erratic creative process, which gave rise to a bohemian, irregular life-style. His home-life often consisted of all-night conversations, and of working for days on end without sleep, followed by days spent convalescing, a pattern that was to characterize his whole life. Ruge conveyed this in his description of Marx in the 1840s:

He reads a lot. He works in an extraordinarily intense way. He has a critical talent that degenerates sometimes into something which is simply a dialectical game, but he never finishes anything - he interrupts every bit of research to plunge into a fresh ocean of books.... He is more excited and violent than ever, especially when his work has made him ill and he has not been to bed for three or even four nights on end."

The psychological aspects underlying Marx’s intellectual work are an important, if not central, consideration in understanding Marx’s ideas. As Bruce Mazlish suggests, it “does matter, and powerfully so, who Marx actually was.” Marx’s psychological and intellectual need to think creatively about the particular problems of human existence that the world had thrown at him was as fundamental as his physical needs of eating and breathing. This need was Marx’s source of self-fulfilment and personal freedom, and striving to fulfil this need frequently overrode the meeting of the most basic of his and his family’s material needs. In fact, he achieved it at the expense of a potentially more comfortable and happy existence, particularly when he immigrated to England in 1849 with his young, growing family."

Indeed, Marx’s life in London was characterized by great financial hardship, ill health and family tragedy. As Marx’s correspondence reveals, it was at this time that he felt most acutely the importance, and shortage, of time for his intellectual work. Compared to the earlier phase of his life, Marx was more settled in London, working during the day in the British Museum, and studying long hours at night. Marx writes about resuming his economic studies in London:

The enormous amount of material relating to the history of political economy assembled in the British Museum, the fact that London is a convenient
vantage-point for the observation of bourgeois society, and finally the new
stage of development which this society seemed to have entered with the
discovery of gold in California and Australia, induced me to start again from
the very beginning and to work carefully through the new material. These
studies led partly of their own accord to apparently quite remote subjects on
which I had to spend a certain amount of time. But it was in particular the
imperative of earning my living which reduced the time at my disposal. My
collaboration, continued now for eight years, with the *New York Tribune*, the
leading Anglo-American newspaper, necessitated an excessive fragmentation
of my studies, for I wrote only exceptionally newspaper correspondence in the
strict sense.\textsuperscript{127}

However, ill health, family problems, and political and journalistic commitments
continually interrupted this routine. In his letters Marx frequently complained about
the shortage of time he had in which to do his "scientific work". For example, he
wrote to Lassalle in 1858: "I am not the master of my time but its servant. I have
only the night left for myself and very often a liver complaint with its frequent
attacks and relapses interferes with this night work."\textsuperscript{128} Again, some years later, he
wrote to Engels:

> The doctors are quite right, excessive night work is the main cause of this
> relapse.... The most repugnant part for me was the interruption of my work,
> which, since 1 January, when my liver trouble disappeared, had been making
> splendid progress.... I have not been able to make any progress with the really
> theoretical part. For that my brain has been too weak.\textsuperscript{129}

Again, in referring to the problems of the household, he wrote that "the interruptions
and disturbances are too great, and at home, where everything is always in a state of
siege and floods of tears annoy and infuriate me often right through the night, I
cannot of course do much."\textsuperscript{130} On another occasion, again to Engels, he noted:

> "Unfortunately I am continuously interrupted by social troubles and lose a lot of time.
> Thus, e.g. the butcher has suspended meat supplies today, and even my stock of paper
> will have run out by Saturday."\textsuperscript{131} Political commitments were also a source of
frustration:

> But at this moment any loss of time is irreplaceable to me since I cannot very
> well interrupt my work. Last Saturday Iexplained my departure to the sub-
> committee of the 'International' in order to have at least a fortnight entirely
> free and undisturbed to get on with my work.\textsuperscript{132}
At other times, however, Marx was extremely productive. For example, in writing to Engels, who was constantly urging him to complete *Capital*, he noted: "I am now hard at work and, peculiarly enough, with all the misery round about, my brainpan keeps going better than it has for years." On another occasion, Marx wrote to Kugelmann that he was working on *Capital* "twelve hours a day in order to produce a fair copy." Thus, Marx’s critique of political economy progressed in bursts and starts - a typical pattern of the creative process.

Undoubtedly, Marx’s own experience of time, which was shaped by his desperate living conditions induced by chronic poverty and the related effects of ill health, influenced his understanding of the worker’s experience and strengthened his empathy for their plight. Indeed, his vivid, and often horrifying, portrayal of the detrimental effects of overwork on the health and general well-being of the working class in the late eighteenth and nineteenth centuries affects anyone reading the remarkable first volume of *Capital*. Marx showed the terrible extent to which English factory workers suffered greatly, due to, among other things, the excessively long and intense hours of labour that their employers forced them to work. He took a keen interest in debates about worker’s conditions, including the contentious public issue about the need to shorten working hours, and was involved with the Chartists, whose platform included the belief that work-time legislation was the key to fulfilling the political right of manhood suffrage. In this respect, Marx was closely interested in the work of Robert Horner, the chief factory inspector during the debates and aftermath of the 1847 Ten Hour Act in Britain, whose detailed reports helped Marx to understand the need for workers to control their time in order to gain political power.

Marx’s belief in the capacity of the working class to affect the historical process, while ever-present, nonetheless underwent changes throughout his life. In the 1840s, Marx’s life was characterized by unpredictability, a sense of living for the moment, and optimism about the capacity of people to create change. However, after moving to London, far from the heart of revolutionary action, Marx became increasingly pessimistic about the possibility of an immediate revolution. The difference in Marx’s outlook toward the role of agency in creating change, as expressed in two
contemporary histories written between 1850 and 1852, reflects this shift. The earlier book, *The Class Struggles in France: 1848-1850*, concluded that another commercial and financial crisis was approaching, and that, consequently, revolution was imminent. In contrast, the later *Eighteenth Brumaire of Louis Bonaparte*, written in the context of the consolidation of the reaction against the 1848 revolution, which had seen Louis Napoleon seize power in France in 1851, expressed more pessimism about the possibility of revolution.

Marx and Engels withdrew from active politics for a thirteen-year period after the Communist League dissolved itself in 1851. The contrast in Marx's attitude to the present with that of his earlier years is apparent in a letter that he wrote to Engels in 1863. After having re-read his 1844 book *Condition of the Working Class in England*, he wrote:

> Re-reading your book has made me regretfully aware of our increasing age. How freshly and passionately, with what bold anticipations and no learned and scientific doubts, matters are treated here! And the very illusion that the result too will leap into the daylight of history tomorrow or the day after gives the whole thing a warmth and high-spirited humour - compared with which the later 'gray in gray' makes a damned unpleasant contrast.  

As Martin Nicolaus notes, as a consequence of this reactionary period, Marx and Engels:

> advanced the thesis that revolution had become impossible in the immediately foreseeable future, that a rapid return could not be counted on, and that the tasks of the League of Communists must be reset accordingly to give first priority to the work of education, study and development of revolutionary theory.  

Leonard Krieger suggests that Marx's shift from optimism to pessimism signalled a change from an emphasis on day-to-day history, and hence the "plasticity" of contemporary history, to an emphasis on long-range history. Thus, Marx may have shifted to a more deterministic approach, where he saw historical events as subordinated to the overriding general process of history. However, Terry Eagleton's assessment of the significance of the *Eighteenth Brumaire* seems more indicative of Marx's true intent. As Eagleton notes:

> The socialist revolution, by contrast, does not for Marx derive its poetry from the past. It rejects the seductive tyrannies of parental authority, displacing the
myth of origins for the practice of ‘beginning’. The socialist revolution takes its poetry from the future, but since that future, much more palpably than the past, does not exist, this amounts to saying that it derives its poetry from absence. For it seems that the future of which Marx speaks here is not to be grasped as a utopian model to which the present must be conformed, but is rather the space into which socialist transformation projects itself, the space produced by that projection. Like Benjamin’s Messianic coming, it cannot be written now as telos.... For Marxism ... the ‘text’ of revolutionary history is not foreclosed in this way: it lacks the symmetrical shape of narrative, dispersed as it is into a textual heterogeneity (‘the content goes beyond the phrase’) by the absence around which it turns - the absence of an eschaton present in each of its moments. The authority of the socialist revolution, then, is not to be located in the past, least of all in the texts of Marx himself, but in the intentionality of its transformative practice, its ceaseless ‘beginning’.

Marx, then, understood that time was not just a theoretical idea. He was aware of being involved in the process of time itself, realizing that the way in which we think about time can affect our view of the past and present, and hence determine the future. His political and intellectual activities, as well as his personal and social circumstances, contributed significantly to the way in which he experienced, and understood time. In this way, Marx’s life itself demonstrated an important link between time as an abstract idea, and time as an essential aspect of human experience. Marx saw that the way society constructed time became a fundamental influence on the way people lived their lives and expressed themselves through their activity, including the way individuals investigated the world around them. Thus, Marx’s insight into the lived experience of time offers the historian a way of understanding the role of human activity in the construction of time, including the capacity of people to intervene in, and shape, historical time.

Nonetheless, it is also important to note that, while Marx believed in the capacity of human agency to effect change, he also allowed for the existence of deterministic forces. The notion that the historical process was governed by necessity was also present in his writings, creating a further ambiguity or tension. In The Holy Family, for example, Marx and Engels wrote:

In its economic movement, it is true, private property presses towards its own dissolution, but it does this only by means of a developmental course that is unconscious and takes place independently of it and against its will, a course determined by the nature of the thing itself.
They referred to the condition of the proletariat as due to "an inexorable, utterly unembellishable, absolutely imperious need, that practical expression of necessity."\textsuperscript{141} Moreover, the proletariat was "compelled" to develop in certain ways, where its "goal and its historical action are "prefigured in the most clear and ineluctable way."\textsuperscript{142}

Marx's writings, then, revealed some ambiguity between whether the historical process was governed primarily by the action of human agency, or by necessity. Arguably, the existence of this apparent tension suggests that Marx recognized that both factors governed history. Indeed, in Capital, Marx's major work, both elements were clearly present; raising the question as to what was the primary determinant of the construction of historical time in capitalism. Marx showed that both the logic of capital (abstract activity), and the material basis of labour and technology (human or concrete activity) were determining forces in the shaping of historical time. In this work, he also demonstrated that the forces underlying this process gave rise to both absolute time and relative time as constituents of capitalist historical time, a notion that is the focus of the following section.

**The culmination of Marx's idea of time**

It was in the writing of Capital: A Critique of Political Economy that Marx brought together all of the elements concerning time he had examined in his earlier writings. Indeed, his critique of political economy embodies a lifetime of research and thought, which, in turn, provided a refined, though incomplete idea of that concept. Through this activity, Marx, among other things, came to an understanding of the nature of the relationship between absolute and relative time.

The creation of Capital was a long process, a process that Marx never - and perhaps could never have - finished, although it reached a kind of culmination with the publication of the first volume in 1867. The work toward it began in 1850, when Marx obtained access to the reading room at the British Museum, where he laid the foundation of his economic work by systematically studying the economic history of
the previous ten years, reading back numbers of the London Economics. During the following year, Marx read voraciously. According to McLellan:

In January he was studying books on precious metals, money and credit; in February, the economic writings of Hume and Locke, and more books on money; in March, Ricardo, Adam Smith and books on currencies; in April, Ricardo again and books on money; in May, Carey, Malthus, and principles of economics; in June, value, wealth and economics; in July, literature on the factory system and agricultural incomes; in August, population, colonisation and the economics of the Roman world; in the autumn, books on banking, agronomy and technology. In all, Marx filled his notebooks with long passages from about eighty authors and read many more.

From this intensive beginning, Marx then abandoned his study for several years as he suffered under the pressures of poverty, political work (for the Cologne Communist Trial) and increasing journalistic commitments. In 1857, however, spurred by the occurrence of the economic crisis that he had been predicting, he attempted to conclude his economic studies by writing a series of manuscripts that became known as the Grundrisse. In this text, which amounts to a rough draft of Marx's critique of political economy, he discussed all the themes that were to appear in the three volumes of Capital, including his theory of surplus value. Between 1861 and 1863 Marx wrote a further series of manuscripts as part of the plan of the critique he had outlined in the Grundrisse, which were later published by Kautsky as the fourth volume of Capital under the title Theories of Surplus Value. This work, which in itself consisted of three large volumes, contained extracts from, and critiques of, previous theorists, including the mercantilists, Physiocrats, classical economists and English socialists. Between 1863 and 1865, Marx rewrote much of this work, adding new material, the revamped product eventually providing the basis of the second and third volumes of Capital. In the meantime, between 1865 and 1867, he completed Volume One of Capital, which was published in 1867. The remaining two volumes were published posthumously, after being edited and prepared for publication by Engels.

In the three volumes of Capital, Marx built on the philosophical ideas of time he explored in the 1840s. By drawing on concrete, historical and economic evidence to support his claims, Marx showed how time was manifested in material form through the methods and relations of production. In particular, he illustrated how time
emanated in a specific way in capitalist society, through the production of surplus value, a process that involved capitalists appropriating, without remuneration, a portion of worker’s labour time. Marx demonstrated that the features of time changed in response to changes in material conditions of production, as seen in both the shift from feudalism to capitalism, and the significant changes within capitalism itself. He showed capitalist time to be characterized by certain unique features, such as the way in which it embodied the contradictory co-existence of two opposed concepts of time - relative time and absolute time. Thus, historical time was both unitary and multiple, linear and cyclical, continuous and discontinuous.

While Capital represented the zenith of his philosophical ideas about historical time insofar as he was able to develop them in his life-time, it also was an expression of his view that historical time was not merely an aspect of theorizing about the past, but was central to how people act in the present, and, consequently, how they determine the future. In this sense, Capital fulfilled its purpose in contributing to historical change. Whereas most countries, including German-speaking ones, virtually ignored his previous books, readers widely reviewed and discussed Capital as far afield as Russia and Spain. Throughout the next ten years, when it was translated into French, English, Russian, and Italian, Capital provided a theoretical foundation for the First International, which communist organizations established as a result of the combination of a revival of working class activity in Europe during the 1860s and a growing spirit of internationalism. However, with the defeat of the Paris Commune, the development of internal tensions within the organization, and the rise of nationalism, the First International declined during the 1870s, holding its last congress in 1877. Nevertheless, the impact and influence of Capital continued to be felt across many different countries, and in diverse ways, over the century that followed.

Clearly, Capital is Marx’s most significant work in that it contains a synthesis of all the key ideas that he had developed before writing it. Moreover, his ideas did not substantially change after the book’s publication. According to Berlin, Marx’s “views during the remaining sixteen years of his life altered little; he added, revised, corrected, wrote pamphlets and letters, but published nothing that was new.”
Nevertheless, he continued to study in his usual intense manner, attempting to finish the remaining volumes of *Capital*, plunging afresh into new areas of study, and even acquiring new languages.

The diversity of Marx’s interests at this time extended, in particular, to the natural sciences, including physiology, geology mathematics, anthropology and evolutionary theory. However, the extent to which Marx endorsed the applicability of the methods of the natural sciences to the study of human society is open to debate. Marx carefully studied the evolutionary theories of the anthropologist Lewis Morgan in 1880-81, and had been interested in Darwin’s theory of natural selection since 1860, when he read *The Origin of Species* a year after its publication. He was initially quite enthusiastic about Darwin, suggesting to Lassalle in 1861 that:

Darwin’s book is very important and it suits me well that it supports the class struggle in history from the point of view of natural science. One has, of course, to put up with the crude English method of discourse. Despite all deficiencies, it not only deals the death-blow to ‘teleology’ in the natural sciences for the first time but also sets forth the rational meaning in an empirical way.\(^\text{151}\)

However, a year later, he poked fun at Darwin, writing to Engels that:

Darwin, whom I have looked up again, amuses me when he says he is applying the ‘Malthusian’ theory also to plants and animals.... It is remarkable how Darwin recognises among beasts and plants his English society with its division of labour, competition, opening up of new markets, ‘inventions’, and the Malthusian ‘struggle for existence’.... [I]n Darwin the animal kingdom figures as civil society.\(^\text{152}\)

By 1866, Marx wrote - again to Engels - that the book did not yield much “in connection with history and politics.”\(^\text{153}\)

Similarly, at this time, Marx displayed an open contempt for positivism, and, in particular, the ideas of Auguste Comte. He had written to Engels in 1866:

I am studying Comte on the side because the British and French make so much fuss over that fellow. What captivates them is the encyclopaedic form, the synthesis. But compared with Hegel it is wretched.... And this trashy positivism appeared in 1832!\(^\text{154}\)
Later, in 1871, he wrote: "as a Party man I take an entirely hostile attitude toward Comtism, while as a scholar I have a very poor opinion of it."\textsuperscript{155} Such examples cast doubt on McLellan's suggestion that, at this time, Marx moved "nearer to the positivism then so fashionable in intellectual circles."\textsuperscript{156}

Nevertheless, the widespread view that positivist thought significantly influenced Marx has important implications for understanding his concept of time, in that it suggests that Marx saw historical time as absolute and unilinear, in which a series of stages of development encompassing the whole of human history succeed one another in a progressive manner. This view overlooks the idea that modes of production co-exist and that historical time is relative and multilinear, an idea that can be supported by emphasizing the Hegelian influence on Marx's thought.

Perhaps the clearest example to support the latter view is evident in a letter Marx wrote in response to a query concerning the possibility of a communist revolution occurring in Russia. Marx refused to be drawn on the question, insisting that his "so-called theory" was applicable only to the period and place that was the object of his study. He wrote for example: "the 'historical inevitability' of this process is expressly limited to the countries of Western Europe."\textsuperscript{157} Marx's insistence on the non-universality of his ideas is apparent in Marx's answer to a Russian critic of \textit{Capital}:

The chapter on primitive accumulation does not claim to do more than trace the path by which, in Western Europe, the capitalist economic system emerged from the womb of the feudal economic system. It therefore describes the historical process which by divorcing the producers from their means of production converts them into wage workers (proletarians in the modern sense of the word) while it converts the owners of the means of production into capitalists.... [My critic] insists on transforming my historical sketch of the genesis of capitalism in Western Europe into an historico-philosophic theory of the general path of development prescribed by fate to all nations, whatever the historical circumstances in which they find themselves, in order that they may ultimately arrive at the economic system which ensures, together with the greatest expansion of the productive powers of social labour, the most complete development of man. But I beg his pardon.... In several parts of \textit{Kapital} I allude to the fate which overtook the plebians of ancient Rome. They were originally free peasants, each cultivating his own piece of land on his own account. In the course of Roman history they were expropriated...and alongside them there developed a mode
of production which was not capitalist but based on slavery. Thus events strikingly analogous but taking place in different historical surroundings led to totally different results. By studying each of these forms of evolution separately and then comparing them one can easily find the clue to this phenomenon, but one will never arrive there by using as one's master key a general historico-philosophical theory, the supreme virtue of which consists in being supra-historical.\textsuperscript{159}

This passage suggests that Marx continued to hold to a view of historical time, evident in \textit{Capital}, which was not unilinear or universal. Rather, universal historical time was an historically specific phenomenon, unique to capitalism.

The confusion surrounding Marx's notion of time needs to be understood in the context of his relationship to Engels, who played a very central and important role in both Marx's personal life and in the development of his intellectual ideas. Meeting in 1844, Marx and Engels had a remarkable life-long friendship. Engels, a well-to-do German, the son of a cotton manufacturer in Barmen, was a radical poet and journalist when he met Marx, and became, for Marx, a devoted friend and an intellectual ally, as their immense written correspondence over forty years underlines. Engels supported Marx consistently and wholeheartedly, and in many different ways, including intellectually, emotionally, and perhaps most significantly, financially. As Berlin writes:

both were entirely occupied with the movement which they were engaged in creating and which became for them the most solid reality of their lives. Upon this firm and reliable foundation was built a unique friendship, free from all trace of possessiveness, patronage, or jealousy.\textsuperscript{159}

Indeed, one of the outstanding features of their relationship - and the most likely reason for its success - was Engels' willingness to exist in Marx's shadow. While Engels justly claimed to have been a significant contributor to the development of Marxism, he acknowledged and acceded to, Marx's superior intellect:

Both before and during my forty years' collaboration with Marx I had a certain independent share in laying the foundations of the theory, and more particularly in its elaboration. But the greater part of its leading principles... belong to Marx. For all that I contributed - at any rate with the exception of my work in a few special fields - Marx could very well have done without me ... Marx stood higher, saw farther, and took a wider and quicker view than all the rest of us. Marx was a genius; we others were at best talented. Without
him the theory would not, by a long way, be what it is today. It therefore
rightly bears his name.\textsuperscript{160}

Engels, nonetheless, was a significant intellectual in his own right, and developed an
understanding of time that was based on his deep interest in the natural sciences. He
argued that the materialist dialectic occurred primarily in nature, at the level of matter
itself. He wrote, for example:

Motion is itself a contradiction; even simple mechanical change of place can
only come about through a body at one and the same moment of time being
both in one place and in another place, being in one and the same place and
also not in it.\textsuperscript{161}

This meant that people could understand society in the same way as they did the
natural world. For example, Engels wrote, “history has proceeded hitherto in the
manner of a natural process and is essentially subject to the same laws of motion.”\textsuperscript{162}
Although Engels evaluated the evolutionary-positivists of his day as “lacking
dialectics,”\textsuperscript{163} he nonetheless understood time within that framework. He saw time
as absolute, unilinear and continuous, inherent in nature, and thus part of the
universal laws that governed the development of society.\textsuperscript{164}

Engels own interest in the natural sciences led him to develop the idea of a
“dialectical materialism” as evident in his books Anti-Dühring, and Dialectics of
Nature. Engels was also enthusiastic about Morgan, using Marx’s extensive extracts
in his Origin of the Family. He wrote, for example that “Morgan has quite
independently discovered the Marxian materialist conception of history within the
limits prescribed by his subject and he concludes with directly communist
propositions in relation to present-day society.”\textsuperscript{165} The extent of Engels’ intellectual
influence on Marx’s ideas during their long friendship was undoubtedly great, but
perhaps impossible to gauge accurately. However, what is clear is the significance of
Engels’ shaping of the interpretation of Marx’s ideas, and the subsequent
development of Marxist thought. Indeed, Engels was largely responsible, not only
for editing Marx’s unfinished work, but for disseminating Marx’s ideas to an
increasingly large audience. In so doing, he espoused an evolutionist, positivistic and
ultimately deterministic interpretation of Marx that many followers accepted as
definitive.\textsuperscript{166}
This interpretation of Marx was reinforced by the lingering resonance of Engels' famous speech at Marx's graveside, when he equated the views of Marx and Darwin. Moreover, the long-held belief among Marxist scholars that Marx had wanted to dedicate Capital to Darwin - a request that Darwin had politely refused - ensured the longevity of this view. In fact, it was Edward Aveling, and not Marx, who wrote the letter to Darwin concerning Aveling's own book. Perhaps the most compelling reason to support a positivist, evolutionist interpretation of Marx was the perceived requirement, prevalent in the late nineteenth century, that a body of theory be shown to be "scientific" in order to gain respect and to be taken seriously. The common perception, then, particularly in the years following his death, was that Marx saw time as absolute. However, as the following chapters of this thesis will argue, Marx understood historical time to be constituted by a complex relationship between absolute and relative time.

Conclusion

Marx's life was a paradox: he was born as a Jew, but baptized as a Protestant; he made capital his life-long study, but was constantly in debt and frequently did not have enough money to feed his family; he was a champion for the rights of the working class, but married the daughter of a Baron; he railed against the bourgeoisie, yet aspired to, and eventually achieved, a bourgeois respectability; he hated the effects of the industrial revolution, yet embraced technological progress as holding the potential for humankind's eventual liberation. His daughter Eleanor best expressed Marx's contradictory nature, when she wrote:

To those who are students of human nature, it will not seem strange that this man, who was such a fighter, should at the same time be the kindliest and gentlest of men. They would understand that he could hate so fiercely only because he could love so profoundly; that if his trenchant pen could as surely imprison a soul in hell as Dante himself it was because he was so true and tender; that if his sarcastic humour could bite like a corrosive acid, that same humour could be as balm to those in trouble and afflicted.

It is not surprising, then, that contradiction lies at the heart of his concept of time, and that ambiguity is evident in its interpretation. To the extent that Marx's
understanding of the existence of the contradictions underlying time were shaped by
his rich intellectual heritage, on the one hand, and the very powerful critical mind
which he used to examine the society in which he lived, on the other, his notion of
time reflects the tension between the transhistorical and historically specific aspects
of time, the role of human agency and determinism underlying the construction of
time, and the nature of the relationship between absolute and relative time.

In referring to the transhistorical aspect of time, Marx was strongly influenced by
both Hegel and the classical Greek thinkers, particularly in developing his idea that
time was manifested in human productive labour through the process of
objectification, a form of creative expression which involved both the mental and
physical activity of the individual in interaction with the material world. In
constructing time in this way, he was able to identify how human activity, as the
essence of time, was fundamental to all human societies, past, present or future and
how this understanding of time was central to a vision of a future non-capitalist
society, which was characterized by free, unalienated time for every individual to
develop their potential through creative productive activity. Indeed, it is clear that
Marx’s own need to express himself through creative thought, his appreciation of the
value of the time he had in which to do this, and his empathy with workers’
experience of time, enhanced his understanding of what he saw as a need, and
capacity, of all people.

Yet, if Marx argued that time, in all societies, emanated from people engaging
primarily in productive activity to meet their basic material needs, a process which
gave rise to inevitable conflict between the forces and relations of production, there is
little doubt that these transhistorical aspects have tended to be over-emphasized in
Marxist literature by Engels’ popularization of the view that Marx saw the historical
process as a singular, universal development from one successive “stage” to the next.
Indeed, alongside his notion of transhistorical time, Marx developed an
understanding of the historically specific aspects of time, in part through a critique of
Hegel, who privileged the “eternal” state over “temporal” civil society, and hence
who saw historical time as ultimately transhistorical or absolute. In so doing, he
made civil society - of which the state was a product - the real sphere of historical
time and, in so doing, emphasized the historically specific nature of time. By critiquing Enlightenment thought, especially the notion that society was governed by eternal, immutable laws and that time was therefore transhistorical, he was able to identify fundamental errors in the arguments of the classical economists, who claimed that economic categories of capitalism were applicable to all human societies, and the “utopian socialists”, who believed that a better future could be brought about by constructing a static blueprint for society based on unchanging principles.

Again, in examining the role of human agency and deterministic forces underlying the construction of time, it is fairly evident that Marx’s life expressed the contradiction that these two opposed “explanations” of time presented. Certainly, it is clear that his views on their respective roles were, in part, shaped by the historical circumstances of his time and his participation in them. Whereas early in his life, when Marx was actively involved in the European revolutions and communist movement, he had an optimistic outlook and strong belief in the capacity of human agency to bring about change, in his later life in England, when the prospect of revolution had diminished, he was more pessimistic, and consequently acknowledged the role of deterministic forces to a greater extent. Moreover, while he continued to support working class struggle throughout his life, he also realized that particular historical circumstances needed to be “ripe” for the desired change to occur.

Thus, if Marx was consciously in control of his life, made decisions rationally and with purpose, and believed strongly in his own capacity to bring about change in both his political and intellectual leadership, his life was, nonetheless, dictated by circumstances, events, forces, and even passions that were beyond his control; indeed, as he wrote himself, he was not the master of his time, but its servant. Ultimately, however, Marx saw that human agency underpinned the construction of time to a significant extent, as is evident in his ontology of labour which, in suggesting that time was manifested through human productive activity, implied that humans had the capacity to create their own history, their own historical time. In particular, he noted that labour, which implies human agency, was a key factor underlying the construction of time in Capital. In so doing, he distinguished himself
from Hegel, who saw historical time as ultimately governed by the eternal Idea or Spirit, which was an external force, and from the Enlightenment and positivist thinkers, who claimed that time was governed by eternal, immutable, unchanging laws of development that determined human history as a whole.

Finally, in addressing the nature of the relationship between absolute and relative time, Marx's concept of time is best described as relative in that he sees time as emanating out of the material processes and events, rather than as absolute, external and independent of events and processes. In effect, he had a dynamic view of time where the future was already contained in the past and was activated through the present, a view for which he was indebted to the ancient Greek thinkers and Hegel, who also saw time in this way. Certainly, his view of time differed considerably from that held by the Enlightenment thinkers, who saw time as absolute, and as such, believed that absolute time, as a measure of value, applied to all societies. In rejecting this notion of historical time as a mechanistic succession of past to present to future, and as a linear series of stages of development, Marx argued that absolute time was not an eternal, immutable concept, but one that is socially constructed. He demonstrated that while absolute time as a measure of value characterizes capitalist society, it was not a central, defining feature of time in pre-capitalist, or post-capitalist, societies. Moreover, although he saw the central role of absolute time in capitalist society as a major contributing factor to the unified, singular historical time that capitalism had given rise to, he recognized that relative time was also an important constituent of capitalist historical time.

While Marx's ideas about historical time were, in many ways, a reflection of the prevailing ideas of his own time and society, they also transcended them and, in so doing, anticipated ideas about time that were yet to be explored more fully in the future, through the development of Marxist thought and other intellectual movements such as critical theory, existentialism, structuralism and post-structuralism. How Marx's ideas have transcended their time and place, to become relevant to the thought of the twentieth and twenty-first century, is the subject of the following chapter.
Endnotes

3 Buckley, “The Four Faces of Victorian Time”, p. 60.
4 Ibid., p. 61.
5 Ibid., pp. 61-62.
9 Bakunin, cited by Berlin, Karl Marx, p. 80.
10 Other than his native German, Marx also read Classical Greek and Latin, English, French, Italian, Spanish, Russian and Turkish.
11 Marx and Engels had the process down to a fine art when they wrote The Holy Family (1844), a critique of some of the members of the Young Hegelians, which was originally entitled A Critique of Critical Critique.
13 For example, Marx writes: "I am caught in endless strife, endless ferment, endless dream; I cannot conform to Life, Will not travel with the stream, But heaven I would comprehend. I would draw the world to me, Loving, hating I intend, That my star shine brilliantly. (K. Marx, Stanzas 3 and 4 of "Feelings", in Collected Works, Volume 1: 1835-43, [London: Lawrence & Wishart, 1975], p. 525). McLellan suggests that Marx's poems "reveal a cult of the isolated genius and an introverted concern for the development of his own personality apart from the rest of humanity." (McLellan, Karl Marx, p. 23).
14 Indeed, many of the poems are focused on the self, and express a sense of inner turmoil. In "The Fiddler", Marx’s projects himself as a Faustian figure, controlled by destructive forces. Part of the poem reads: “Fiddler, with scorn you rend your heart. A radiant God lent you your art. / To dazzle with waves of melody, To soar to the star-dance in the sky. / "How so! I plunge without fail, / My blood-black sabre into your soul. / That art God neither wants nor wists. / It leaps to the brain from Hell's dark mists. / "Till heart's bewitched, till senses reel! / With Satan I have struck my deal! / He chalks the signs, beats time for me. / I play the death march fast and free. / 'I must play dark, I must play light. / Till bowstrings break my heart outright." (K. Marx, Stanzas 4-7 of "The Fiddler", in Collected Works, Vol. 1, pp. 22-23.)
15 Bruce Mazlish discusses the frequent Prometheus imagery throughout Marx’s writings. The imagery appears, for example, at the beginning of Marx’s doctoral thesis when he cites the defiant speech of Aeschylus’ Prometheus: “Be sure of this, I would not change my state / Of evil fortune for your servitude/ Better to be the servant of this rock / Than to be faithful boy to Father Zeus.” (Cited by K., Marx, in “Difference Between the Democratic and Epicurean Philosophy of Nature”, trans. by J. Dirk and S. R. Struik, in Collected Works, Volume 1, p. 31.) It appears again when the Rheinsche Zeitung, the radical journal of which Marx became the editor, was suppressed in 1842 by the Prussian government after a censorship crackdown. The last issue printed an illustration showing Marx chained to a printing press with a Prussian eagle tearing at his liver. According to Mazlish, this image of defiance is closely related to Marx’s concept of alienation as well as his emphasis on struggle and conflict, which he frequently expresses using the imagery of fetters and chains: “Like Prometheus, Marx felt himself bound and fettered, tied down by servitude out of which he had to break. There is some basis for believing that he hyperbolized his personal feelings and projected them as a condition of both the working class and of industrial society in its capitalist phase.” B. Mazlish, The Riddle of History: The Great Spectators from Vico to Freud, (New York: Minerva Press, 1968), p. 242.
21. Ibid., pp. 63-64.
22. Ibid., p. 64.
23. Ibid., p. 65.
24. Marx wrote of this period: “In the year 1842-3, as editor of the Rheinische Zeitung, I first found myself in the embarrassing position of having to discuss what is known as material interests. The deliberations of the Rhenish Landtag on forest thefts and the division of landed property; the official polemic started ... against the Rheinische Zeitung about the condition of the Moselle peasantry, and finally the debates on free trade and protective tariffs caused me in the first instance to turn my attention to economic questions. On the other hand, at that time when good intentions ‘to push forward’ often took the place of factual knowledge, an echo of French socialism and communism, slightly tinged by philosophy, was noticeable in the Rheinische Zeitung. ... When the publishers of the Rheinische Zeitung conceived the illusion that by a more compliant policy on the part of the paper it might be possible to secure the abrogation of the death sentence passed upon it, I eagerly grasped the opportunity to withdraw from the public stage to my study.” K. Marx, “Preface to A Contribution to the Critique of Political Economy”, in Early Writings, trans. by R. Livingstone and G. Benton, (London: Penguin Classics, 1992), pp. 424-425.
25. This reading included the political theories of Machiavelli, Montesquieu and Rousseau. He also took extensive notes on recent French, English, American and Swedish history, studying the history of the French Revolution in particular, which showed him the role of class struggle in social development. Among others, Marx read from the works of Wachsmith, Concordeet, Madame Roland, Madame de Staël, Mignet, Theirs, Buchez and Roux, Bailleul and Levasseur. (McLellan, Karl Marx, pp. 73, 95, 97). He also read widely on socialist and economic writings. Marx was already familiar with the German socialist writers Gal, Heine, Gans, Wettling, Hess and Von Stein, and also read the French socialists Fourier, Proudhon, Dezamy, Cabet and Leroux thoroughly. See D. Gregory, “The Influence of French Socialism on the Thought of Karl Marx”, in Jessop (ed.), Karl Marx’s Social and Political Thought: Critical Assessments, Volume 1, pp. 242-252.
26. Marx’s critique of Hegel resulted in “Critique of Hegel’s Doctrine of the State”, a commentary on Hegel’s Philosophy of Right and was continued in “On the Jewish Question”, “Contribution to the Critique of Hegel’s Philosophy of Right: Introduction”, the “Economic and Philosophical Manuscripts”, and The Poverty of Philosophy.
28. “The chief defect of all hitherto existing materialism (that of Feuerbach included) is that the thing, reality, sensuousness, is conceived only in the form of the object or of contemplation, but not as sensuous human activity, practice, not subjectively. Hence, in contradistinction to materialism, the active side was developed abstractly by idealism - which, of course, does not know real, sensuous activity as such.” K. Marx, “Concerning Feuerbach”, in Early Writings, p. 421.
30. Ibid., p. 395.
34. Gould, Marx’s Social Ontology, p. 42.
35. Ibid., pp. 44-45.
37. Ibid., p. 384. “The humanity of nature and of nature as produced by history, of man’s products, is apparent from the fact that they are products of abstract mind and therefore factors of the mind, entities of thought.” (Ibid., p. 383.) The "various forms of estrangement which occur are therefore
merely different forms of consciousness and self-consciousness.... The result is the dialectic of pure thought.” (Ibid., p. 385.)

38 Ibid., p. 386.
39 Ibid., p. 324.
40 Gould, Marx’s Social Ontology, pp. 47-49. Martin Nicolaus argues that, while the 1844 Manuscripts were “less than altogether unambiguous on the question whether ‘alienation’ was to be conceived as a universal, eternal human condition, or whether it was rooted in the particular historical mode of capitalist production and hence transitory”, in the Grundrisse the latter reading, making alienation distinct from “objectification” which is “inseparable from any human society” is confirmed. M Nicolaus, “Foreword”, in K. Marx, Grundrisse: Foundations of the Critique of Political Economy (Rough Draft), trans. by M. Nicolaus, (London: Penguin Classics, 1993), p.50. Nicolaus also notes that “Marx’s investigation of the problem of time (production time, circulation time etc) is profoundly contrary to Hegel’s method, and marks the most directly tangible contrast between the two methods”. Time is absent from Hegel’s concept of change and movement, who uses the term ‘moment’ in a mechanical way. (Ibid., p. 29.)

44 Ibid., p. 95.
45 Although Marx and Engels argued for Proudhon’s achievements in The Holy Family, the extent to which Proudhon influenced Marx’s ideas is debatable. Eric Hobsbawm suggests that while Marx admired Proudhon for his advance over the utopian socialists, Proudhon was not a significant influence. See E.J. Hobsbawm, “Marx, Engels and Pre-Marxian Socialism”, in E.J. Hobsbawm (ed.), The History of Marxism, Volume 1: Marxism in Marx’s Day, (Brighton: The Harvester Press, 1982), p. 15. As with his critique of other authors, Marx’s critique of Proudhon served the purpose of clarifying his ideas. Marx described his encounters with Proudhon, and his inevitable critique as follows: “During my stay in Paris in 1844 I came into personal contact with Proudhon.... In the course of lengthy debates often lasting all night, I infected him very much to his detriment with Hegelianism, which, owing to his lack of German, he could not study properly.... Shortly before the appearance of Proudhon’s second important work, the Philosophie de la misère, etc., he himself announced this to me in a very detailed letter in which he said, among other things: ‘I await your severe criticism’. This criticism, however, when it was made (in my Poverty of Philosophy, Paris, 1847), was of a kind which ended our friendship forever.” K. Marx to Johann Baptist Schweitzer, (1865), in S.W. Ryazanskaya (ed.), Marx, Engels: Selected Correspondence, trans. by I Lasker (Moscow: Progress Publishers, 1975), p. 144.
46 Proudhon, cited by Marx in Poverty of Philosophy, p. 91.
47 Marx, Poverty of Philosophy, p. 96.
48 Marx to P.V. Annekov, (Brussels, 1846), in Poverty of Philosophy, p. 157. “With the acquisition of new productive faculties, men change their mode of production and with the mode of production all the economic relations which are merely the necessary relations of this particular mode of production. This is what M. Proudhon has not understood and still less demonstrated.” (Ibid., pp. 157-158).
49 Ibid., p. 158.
50 Ibid., p. 161.
51 McLellan, Karl Marx, pp. 105-106.
52 Evans’ detailed study of Marx’s economic readings and writings during this period show that, among his own countrymen, Hess, Wetting and Schulz influenced Marx. See Evans, “Karl Marx’s First Confrontation with Political Economy: the 1844 Manuscripts”, pp. 635-636.
55 Ibid., pp. 150-151.
56 Evans, “Karl Marx’s First Confrontation with Political Economy: the 1844 Manuscripts”, p. 652. In relation to Ricardo’s influence, Engels wrote, in the Preface to the first German edition of the Poverty of Philosophy: “In so far as modern socialism, no matter of what tendency, starts out from bourgeois political economy, it almost exclusively links itself to the Ricardian theory of value.... [T]his
literature, which has now almost disappeared, and which to a large extent was first rediscovered by Marx, remained unsurpassed until the appearance of Capital." (Poverty of Philosophy, p. 6.)

57. Marx, Poverty of Philosophy, p. 105.


60. Ibid., p. 156.

61. Ibid., p. 163.

62. Ibid., pp. 154-155.

63. Ibid., p. 160.

64. Ibid., p. 164.

65. Ibid., p. 154.

66. Ibid., pp. 154-155.


69. Ibid., p. 196.

70. Ibid., pp. 151-153.

71. Ibid., pp. 161-162.

72. Ibid., p. 172.

73. Marx, "Economic and Philosophical Manuscripts", p. 399.


75. Marx, Grundrisse, p. 173.

76. McLellan, Karl Marx, p. 9.


78. McLellan, Karl Marx, pp. 1-4.


81. McLellan, Karl Marx, p. 46.

82. Ibid., pp. 50-53.

83. As Berlin notes: "The intellectual atmosphere in which these men talked and wrote was exciting and idealistic. A common mood of passionate protest against the old order, against kings and tyrants, against the Church and the army..." See Berlin, Karl Marx, p. 62.

84. Marx's contact with the working class began when he went to Paris and became involved with the League of the Just, a radical German working class movement. Later, in Brussels, he established the Communist Correspondence Committee, the embryo of all the subsequent Communist Internationalists, which co-ordinated communist theory and practice throughout Europe. Marx wrote numerous polemical articles for the Deutsche Brusseler Zeitung, before writing the Communist Manifesto. After his expulsion from Brussels, Marx then went to Paris, and then Cologne where he founded the Neue Rheinische Zeitung, and again, became actively involved in local politics. McLellan, Karl Marx, pp. 86, 152-154, 173, 177, 203.

85. In Paris Marx and Jenny made many friends of different nationalities from both the intellectual elite and the working class. From the former group he met socialists like Blanc, Ruge, Bakunin, and Annenkov. He even briefly entered the Paris salon society, attracting the attention of Bettina von Arnim, the celebrated friend of Goethe and Beethoven. Although Marx learned much from them, he was more attracted to the "communists", a group of loosely associated individuals of mostly factory workers and artisans - like Proudhon and Weitling - who were committed to the abolition of privilege and private property, a doctrine inherited from the Jacobin-communist Blanqui. (Berlin, Karl Marx, p. 74.) However, while Marx was always able to appreciate the talents and energies of the people he met, and was often initially impressed with, and enthusiastic about, their ideas, his critical attitude meant that he frequently found himself in disagreement with them, and the manner in which he expressed his
differences - often fiercely acrimonious - meant, more often than not, the severing of relationships. During this period his most notable disagreements were with Bakunin, Weitling and Proudhon.

66 Jenny Marx vividly conveys the experience of the Marx family during these turbulent years, when they were forced into exile, often with only twenty four hours notice. For example, in 1848, when they were expelled from Brussels, and when "the revolutionary stormclouds were growing heavier and heavier," she tells of how Marx was arrested and led away under military escort, and later she herself arrested and "thrown into a dark prison... the place where they brought beggars who could find no shelter, homeless wanderers and wretched fallen women." Again, she describes the move to London, where she arrived "sick and exhausted with my three small and persecuted children." J. Marx, "A Short Sketch of an Eventful Life", trans. unknown, in R. Payne (ed.), The Unknown Karl Marx: Documents Concerning Karl Marx, (London: University of London Press, 1972), pp. 121-123.

67 According to Eric Hobsbawm, the reflections on the nature of the ideal society "influenced Marx and Engels very substantially, though their hostility to the drafting of such prospectuses for the communist future has led many subsequent commentators to underestimate their influence." (E.J. Hobsbawm, "Marx, Engels and Pre-Marxian Socialism", in Hobsbawm (ed.), The History of Marxism, Volume 1, p. 9.

68 V. Geoghegan, Utopianism and Marxism, (London: Methuen, 1987), pp. 22-23. Up to 1845 Marx was enthusiastic about the ideas of the socialist thinkers who envisaged an ideal future society. Engels, rather than Marx, concerned himself more explicitly with utopianism, in particular the ideas of Owen, Fourier and Saint-Simon, along with that of Cabet and Proudhon, and planned to publish a library of the "best foreign socialist writers". Engels not only took these thinkers' critiques seriously, but also their project of establishing alternative societies, planning to erect a communist community in Germany. See L.S. Feuer, "The Influence of the American Communist Colonies on Engels and Marx", in Jessop (ed.), Karl Marx's Social and Political Thought: Critical Assessments, Volume 1, pp. 294-298.

69 Marx, "Economic and Philosophical Manuscripts", p. 348.


71 Ibid., p. 115.

72 Ibid.

73 Geoghegan, Utopianism and Marxism, p. 33.


76 Ibid., p. 117.

77 For discussion of this, see Geoghegan, Utopianism and Marxism, pp. 28-31, who points out that Marx and Engels were highly sensitive to the unpredictability of the future.


79 K. Marx to Ferdinand Domela Nieuwenhuis in the Hague, 1881, Selected Correspondence, pp. 317-318.

80 K. Marx to Friedrich Adolph Sorge in Hoboken, Selected Correspondence, pp. 290-291.

81 Marx, "Economic and Philosophical Manuscripts", p. 358.

82 Marx and Engels, The German Ideology, p. 162.


84 K. Marx, "Letters from the Franco German Yearbooks", in Early Writings, p. 207.

85 K. Marx, "A Contribution to the Critique of Hegel's Philosophy of Right. Introduction", in Early Writings, p. 244.

86 Marx, "Letters from the Franco German Yearbooks", p. 209.

87 Cited in a note by the editor, in Marx, "Letters from the Franco German Yearbooks", p. 200.

88 Marx, "Letters from the Franco German Yearbooks", pp. 205-206.


90 Marx, "Concerning Feuerbach", p. 423.

91 Marx, "The Economic and Philosophical Manuscripts", p. 328.

92 K. Marx, "Excerpts from James Mill's Elements of Political Economy", in Early Writings, p. 278.

93 Marx, "The Economic and Philosophical Manuscripts", p. 329.

94 Ibid., p 328.

95 Ibid., pp. 328-329.

96 Ibid., p. 329.
 Marx, "Economic and Philosophical Manuscripts", p. 284. Marx recognizes the importance of time, citing Wilhelm Schulte (1843) who noted the increase in the length of the working day and the subsequent detrimental effect on workers. Schulte argued that: "If a people is to increase its spiritual freedom, it can no longer remain in thrall to its bodily needs, it can no longer be the servant of the flesh. Above all it needs time for intellectual exercise and recreation. This time is won through new developments in the organization of labour.... [T]he margin for intellectual creation and recreation will have increased.... But even the sharing of the spoils which we win from old Chronos on his very own territory still depends on blind and unjust chance.... In spite of the time saved through improvements in machinery, the time spent in slave labour in the factories has increased for many people." (Cited by Marx, "Economic and Philosophical Manuscripts", pp. 290-291.)


M. Comyn, "My Recollections of Marx", in Jessop (ed.), Karl Marx's Social and Political Thought: Critical Assessments, Volume 1, pp. 11-12. Marian Comyn was a friend of Marx's daughter Eleanor, and a frequent visitor to the Marx household in the last years of Marx's life. She recalls, albeit rather sentimentally, a particular encounter with Marx: "I remember arriving late for this function one Sunday, and being pretty severely hailed over the coals by my host in consequence. He wagged his head gravely at my apologies. 'It is a waste of breath to tell people of their faults, in the hope that the telling will cure them', he muttered, in his guttural tones. 'If they would only _think_ - but that is just what they won't do. What is man's greatest asset, the most precious thing that is given him? _Time_. And see how it is wasted. Your own time - well, that does not matter. But other people's - mine - Himmel! What a responsibility.' I looked as I felt - abject. His ferocity disappeared in a charming smile. 'Come, come, you shall be forgiven. Sit down, and I will tell you stories of the days when I was in Paris, and did not know French as well as I do now'."

A. Ruge, describing Marx as he knew him in the 1840s, cited by McLellan, Karl Marx, pp. 104-105.

B. Mazlish, The Leader, the Led, and the Psyche: Essays in Psychohistory, (London: University Press of New England, 1990), p. 94. Mazlish argues for a psycho-analytical interpretation of Marx, although notes that the nature of Marx's personality makes the task of studying his psychological make-up difficult. Apart from brief introspective period in his late teenage years, Marx's interest in man's self-consciousness was a social or historical concern rather than a personal, introspective or self-critical one. Marx's life, however, provides a rich source of material for the would-be psycho-biographer. See also Mazlish, The Riddle of History, pp. 235-238.

In this sense, Marx shares similarities with Martin Luther, at least as described by Luther's celebrated psycho-biographer, Erik Erikson, in Young Man Luther: A Study in Psychoanalysis and History, (London: Faber and Faber, 1972). However, while Luther came to a spiritual solution, manifested in the creation of a new theology, Marx sought a philosophical solution, which culminated in the formulation of a new perspective on the nature of social reality.

Berlin, Karl Marx, p. 143.


Marx, Selected Correspondence, p. 96.

Marx, Marx Engels Correspondence, pp. 113-114.

Ibid., p. 34; "My house is a hospital, and the crisis is getting so disruptive that it compels me to give it my all-highest attention. What's to be done?" (Ibid., p. 51.)

Ibid., p. 119.

Ibid., p. 112.

Marx, Selected Correspondence, p. 119.

Ibid., p. 165.


Marx, Selected Correspondence, p. 131.

Nicolaus, "Foreword" to the Grundrisse, p. 8.
141 ibid., p. 134.
142 ibid., p. 135.
143 McLellan, _Karl Marx_, p. 242.
144 ibid., pp. 282-283.
145 ibid., pp. 284, 285, 290. The title _Grundrisse_ comes from the first word of their German title _Grundrisse der Kritik der politischen Ökonomie_ ("Outlines of a Critique of Political Economy").
146 Nicolaus, "Foreword" to the _Grundrisse_, p. 58. Engels edited volumes 2 and 3 for publication after Marx's death.
147 Berlin, _Karl Marx_, p. 184.
148 McLellan, _Karl Marx_, p. 360.
149 One notable example of internal tensions was the uniting of two proletarian parties under one programme adopted at Gotha in 1875. Marx and Engels were enraged both with the content of the programme and with the fact that they had not been consulted. Marx wrote in response, the _Critique of the Gotha Programme_, which criticized the programme's proposals as well as its views on the state. A second incident - the public and bitter dispute between Marx and Bakunin - led to the demise of the First International, which held its last congress in 1877. (Ibid., p. 431.)
150 Berlin, _Karl Marx_, p. 183.
151 Marx, _Selected Correspondence_, p. 115.
152 Ibid., p. 120.
154 Marx, _Selected Correspondence_, p. 169.
155 Ibid., p. 250.
156 McLennon, _Karl Marx_, p. 423.
157 Marx, _Selected Correspondence_, p. 319.
158 Ibid., pp. 293-294.
159 Berlin, _Karl Marx_, p. 77.
164 McLellan notes that Engels "had a noticeably more unilinear account of social development than Marx." (_Marxism After Marx_, p. 14.)
165 Engels, _Selected Correspondence_, p. 347. The full quote reads: "There exists an important book on the conditions of primitive society, as important as Darwin is in biology, and of course it is again Marx who discovered it. Morgan, _Ancient Society_, 1877. Marx spoke about it but my head was full of other things at that time and he never returned to it. This must have suited him for he himself wanted to publicise the book among the Germans, as I see from the quite extensive extracts he made. Morgan has quite independently discovered the Marxian materialist conception of history within the limits prescribed by his subject and he concludes with directly communist propositions in relation to present-day society."
167 McLellan suggests that Engels' comments in this respect were "highly misleading". (_Karl Marx_, p. 424).
168 For an example of how this belief has been used to strengthen the argument of the links between Marx and Darwin, see R. Colp, Jr., "The Contacts Between Karl Marx and Charles Darwin", _Journal of the History of Ideas_, vol. 35, (1974), pp. 329-338. However, L.S. Feuer discovered the real author,
Chapter Three

Historical Time in Marxist Thought

History is the subject of a structure whose site is not homogeneous, empty time, but time filled by the presence of the now.

Walter Benjamin, Theses on the Philosophy of History

Introduction

Marx has had a profound impact on both the historical events and the intellectual life of the twentieth century. He has been one of the most heavily discussed, debated and written-about thinkers in the past century, still commanding considerable attention today. However, despite the huge numbers of articles and books dedicated to the subject of Marxism, there is relatively little written specifically concerning Marx’s ideas about historical time, even though this question is central to Marx’s ideas. Indeed, Marx is seen more as a political economist or communist revolutionary than as a philosopher of history. Moreover, given that he did not explicitly formulate a concept of historical time, as say, Braudel or Hegel did, scholars tend to see him as holding a unilinear view of time, an interpretation that has tended to dominate, and remain largely unquestioned, both in the historiographical and Marxist literature.

This situation is due, in part, to the widespread hegemony of the positivist orthodox view, which stresses linear, homogeneous time, as well as to the common misperception that Hegelian-based interpretations of Marx also stress the linearity of time. Some writers even indict Marx for being both a positivist and an Hegelian simultaneously. For example, Sigfried Kracauer writes that:

Since Comte and Marx think of human history in terms of natural history, they take it all the more for granted that, like any physical process, history unfolds in measurable chronological time. With them, the historical process is tantamount to a linear movement - a necessary and meaningful succession of periods along a time continuum indefinitely extending into the temporal future. In other words, they unquestioningly confide in the magic of chronology.1
Yet he also notes that Marx “clings to Hegel’s idea of a dialectical historical process which involves the conventional identification of homogeneous linear time as the time of history.” Kracauer fits Gregor McLennan’s description of Marx’s critics who often run the “accusations of teleology and unilinearism ... together in a somewhat catch-all way.” Obviously, however, as this chapter will argue, the two interpretations of Marx’s concept of time are very different.

Clearly, there are many ways of understanding Marx’s concept of time, that have been explored by scholars from a range of Marxist schools of thought, who together constitute a substantial body of diverse ideas concerning the subject. Central among these is the Marxist orthodox view of time, a view that defines time as absolute, objective, linear and homogeneous, and which was predominant in the positivist climate of the late nineteenth century, largely through the influence of Engels.

Inevitably, as the limitations of the orthodox view of time became apparent in the twentieth century, challenges to this prevailing, influential understanding of linear time began to emerge. Among the more significant of these was the establishment of the British Communist Party Historians’ Group which, while situated politically within Marxist orthodoxy, began to explore alternative interpretations of historical time through the actual historical research that they undertook. Significantly, however, when a debate began in the late 1940s as a result of the United States Marxist economist Paul Sweezy’s critique of English Marxist economist Maurice Dobb’s orthodox explanation of the rise of capitalism, members of this historians’ group, along with Marxist historians from elsewhere, tended to support the orthodox view of Dobb.

Commonly referred to as the “Transition from Feudalism to Capitalism Debate”, it ultimately gave rise to a detailed critique of the orthodox Marxist notion of time. In so doing, it articulated the idea of multilinear time, with different modes of production, or methods of surplus extraction - each underpinned by different “temporal logics” - coexisting either within or between social formations. It was a position that was supported, in part, by a group of Marxist philosophers and
historians who emphasized the Hegelian and Aristotelian dimensions of Marx’s thought, and who argued that time can be seen as emanating out of productive activity.

Broadly, this latter group can be linked to the so-called “western Marxists”, a varied group of intellectuals united by their interest in the “modern” experience of time. Indeed, it was the insights in the 1920s of early “western Marxists”, like Lukács, Korsch and Gramsci, who shifted the focus of thinking about historical time away from a deterministic, mechanistic outlook by emphasizing the Hegelian dimensions of Marx’s ideas, including the role of human agency in determining the nature of historical time. Certainly, it was their ideas that provided inspiration in the 1930s for the Frankfurt school, who challenged the “instrumental reason” that they saw as characterizing capitalist society by exploring different ways of conceptualizing time that drew on human’s creative capacities. From this position there emerged, in post-World War II, a still more diverse group of western Marxists - such as the existentialists, like Sartre, neo-romantics, like E.P. Thompson, and structuralists, like Louis Althusser, all of whom challenged the orthodox Marxist notion of a unitary time.

In examining these developments in more detail then, this chapter will note how theorizing a Marxist concept of time allows for the contradictory co-existence of both multiple times and a singular, unitary time. In so doing, it will demonstrate how such a theoretical position can be best understood in terms of the tension that exists between those interpretations that emphasize transhistoricity, determinism and absolute time, on the one hand, and historical specificity, human agency and relative time, on the other. More generally, this chapter will argue that the way in which we conceptualize, and employ, Marxist notions of historical time have important implications for our understanding, and writing, of history.
Orthodox Marxist time

In the late nineteenth and early twentieth centuries, scholars mainly saw Marx's concept of time as unilinear, homogeneous, and progressing in a straight-line direction toward a "timeless" utopia. They often based this view on Marx's statement that "the Asiatic, ancient, feudal and modern bourgeois modes of production can be designated as progressive epochs in the economic development of society."\(^4\) According to George McCarthy, this positivist view "uses a mechanistic and deterministic sense of time",\(^5\) in which "the elements of time are viewed as quantitative and discrete, separable moments capable of being adequately predicted by theoretical projections and manipulated by social intervention."\(^6\)

While orthodox Marxism shares similarities to the static, linear sense of time that characterized the Enlightenment, with its belief in eternal and immutable laws, it also reflects shifts in nineteenth century science. As Paul Thomas points out:

> Positivism, defined broadly as the importation of the concepts, methods and models from the natural sciences into social and historical investigation, has, as its closest approximation to a model of historical change, a theory of social evolution modelled on biology (perhaps Darwin) or even geology (perhaps Lyell); it certainly drew encouragement after 1859, when The Origin of Species was first published, from Darwinism.\(^7\)

While positivism interested Marx, it influenced Engels to a greater extent, and it was this interest that saw Engels strongly reinforce a positivist interpretation of Marx, especially in the years following Marx's death. Indeed, Engels shaped the early development of Marxism in that the most influential leaders of the Second International adopted his views. For example, Karl Kautsky took up his ideas and became one of the most prominent and staunchest defenders of "orthodox Marxism", as it became known. There was, however, some resistance to this position. In the famous "revisionist" debate of the 1880s, Edward Bernstein challenged Kautsky's determinism by criticizing his "habit of presenting as absolute something that has only a relative force."\(^8\) He advocated instead the role of intellectual understanding and ethical ideals as important impulses to action,
and rejected abstract orthodoxy as anti-empirical and as believing in object forces impersonally governing history and society. His belief, however, in a scientific, positivist outlook meant that he did not represent a significant challenge to the prevailing concept of time.⁹

In spite of early challenges to Kautsky’s determinism, the prevailing orthodox concept of time continued to gain hegemony, becoming the basis of Russian Marxism. The publication of Plekhanov’s *The Monist View of History* in 1884, which offered a detailed criticism of Bernstein’s revisionist views, contributed to this development by providing the first systematic exposition in Russia of historical materialism along doctrinal orthodox lines. After the Russian revolution of 1917, Nikolai Bukharin continued to espouse the orthodox line. His strictly mechanistic, deterministic view, which saw history as governed by immutable laws, allowing no room for individual free will, gave him a reputation as an exponent of “vulgar Marxism”.¹⁰

However, this mechanistic view of time did not remain unchallenged within Russian Marxism. During the 1920s Marxist scholars debated different views of time in response to developments in the natural and physical sciences, particularly Mach’s atomist physics, which had called into question the notion of absolute time.¹¹ Debates revolved around whether the dialectic was located in matter itself, at the level of the atom, or whether it was integral to the mind, through the act of perception.¹²

The different positions on time are evident, for example, in Plekhanov’s critique of Bogdanov’s system of “Empiriomonism”, which attempted to “show that physical and mental phenomena were the same experience, although differently organised.”¹³ In allowing for a greater role for human agency in the historical process, Bogdanov argued that time was a social construction, and that “Coordinating his experiences with the experiences of other people, man created the abstract form of time... They express socially organised experience.”¹⁴ In criticizing Bogdanov for the implicit conclusion that “there was a time where there was no time”, Plekhanov cited Engels for support:
The subject at issue is not the idea of time, but real time... However much the idea of time may convert itself into the more general idea of being, this does not take us one step further. For the basic forms of all being are space and time, and being outside time is just as gross an absurdity as being outside space.  

Before his death in 1923, Lenin both encouraged, and participated in the debate, although his position was ambiguous and changed over time. Thus, whereas at one stage his philosophical inclination was to support the view that the relationship between the perceiver and the phenomena itself was the location of the dialectic, at another stage his political inclination led him to advocate a strictly deterministic line. In 1908, for example, Lenin vigorously critiqued Bogdanov in favour of Plekhanov in Materialism and Empiriocriticism. However, when he later became much more interested in Hegel and the idea of the dialectic, he emphasized the contradictions involved in the perception of motion. In so doing, he wrote that:

> We cannot imagine, express, measure, depict movement, without interrupting continuity, without simplifying, coarsening, dismembering, strangling that which is living. The representation of movement by means of thought always makes coarse, kills - and not only by means of thought, but also by sense-perception, and not only of movement, but every concept.

However, Stalin stifled further debate, particularly after the publication of Dialectical and Historical Materialism in 1938, in which he outlined his own simplistic and politically useful view of “dialectical materialism” that was based on a mechanistic, deterministic view of linear time. He tolerated no deviation from this view, which became the official party line.

In more recent years, however, ideas concerning a dialectics of nature and its implications for time have continued to evolve within a Marxist orthodox framework. For example, Hyman Frankel has revisited the work of the English Marxist Christopher Caudwell, who investigated the implications of Einsteinian physics, quantum theory and entropy for Marxist ideas about time in the 1930s. Frankel suggests that Caudwell’s analysis has merit in showing that physics demonstrates that “dialectical change is of the essence of nature.” Similarly,
pitting himself against Lenin's position on the "dialectics of motion", Erwin Marquit locates time at the level of the motion of matter, a view that has been recently affirmed by John Stanley in his critique of Alfred Schmidt's influential book, *The Concept of Nature in Marx*. In rejecting Schmidt's argument against the notion of a Marxist ontology of nature, or of an "objective" world existing independently of humans, Stanley claims that nature, and hence time, is prior to consciousness. He notes that Marx's doctoral dissertation supports this view, in that Marx critiques both Epicurus and Hegel for setting time apart from nature. Such views, which are not uncommon, have underlined much Marxist historiography.

One of the better known contemporary exponents of an orthodox notion of historical time is G.A. Cohen, whose book, *Marx's Theory of History: A Defence*, dominated debate in Marxist historiography in the decade following its publication in the 1980s. Cohen argues that history is the growth of human productive power, and that it is the forces of production, over the relations of production, which are the prime movers of history. William Shaw, who also argues for a technological-determinist interpretation, shares this view, claiming that Marx, in his later years, adopted a unilinear view of history whereby history progresses along a single evolutionary impulse. Howard Bernstein presents a similar interpretation, by advocating the idea of an epochal succession of social formations and a law-like-ness to the course of historical events. Again, Roy Enfield reiterates the orthodox notion of time, when he suggests that "Marx is stating a general law to which all social revolution (epochal transition, in his terms) conforms; a general law of the same sort as a natural scientist might propose to cover some uniformity in nature." According to this model of historical time, the question of the transition of feudalism to capitalism, for example, is not historically specific, but the particular case of a more general law.

More generally then, the orthodox Marxist concept of time has been sustained throughout the twentieth century. Developing within the positivist tradition, it originated with Engels before being adopted by the Second International and later, Russian Marxism. It has continued to be espoused in philosophy through the
notion of a “dialectics of nature” and in historiography through unilineal and technological determinist views of history. In this way, it has sustained the idea that time is transhistorical rather than historically specific; the product of deterministic forces rather than human agency; and concerned with the concept of absolute time and a unilinear view of history, rather than relative time and hence multilinear history. It is, however, not without its critics. Indeed, a critique of this view emerged within Marxist orthodoxy itself, through the work of the famous “Historians’ Group” of the British Communist Party, as well as in Hegelian-based philosophical interpretations of Marx’s ideas.

Critics of Marxist orthodox time

Looking at the historical writings and historiography of the British Marxist tradition is instructive in that they deal with some of the key issues concerning historical time. Within the tradition, a tension exists between the orthodox interpretation of Marx’s concept of time, and a critique of this view, both on a theoretical and empirical level. These tensions are evident in the long-standing debates within British Marxism on the question of the transition from feudalism to capitalism, a discussion that began with the “Dobb-Sweezy” post-World War II debate, and the “Brenner” debate which followed. In these debates, the notion of time as unilinear and underpinned by deterministic forces is contrasted with an alternative view of time as multilinear, with class activity as the primary underlying historical force. Whereas the former view is supported by a positivist interpretation of Marx’s ideas on time, the latter view is supported by an Hegelian-Aristotelian interpretation, which sees time as created through human productive activity. The implication of this latter view is that different social forms, which can be understood in terms of surplus extraction and appropriation and distribution of time of the immediate producers, have their own temporality that reflect their different methods of surplus extraction. Thus, pre-capitalist, capitalist and post-capitalist societies have their own construction of time, such that a distinction can be made between capitalist and non-capitalist societies in the way time is valued, distributed, and appropriated for production purposes.
The strong tradition of British Marxist history originated in the 1940s when the Communist Party Historians' Group was formed with the aim to "fashion a distinctive body of Marxist historiography that was intended both to connect with a popular politics and to engage with the academic establishment itself." The group's sense of political relevance meant that, through their history writing, they focussed on the relationship of the past to the present, seeing "an understanding of the past as actively shaping responses to present problems." E.P. Thompson, one of the members of the group, wrote, for example, "as we argue about the past so also are we arguing about - and seeking to clarify - the mind of the present which is recovering that past." In this sense, the British Marxist's historical consciousness owed much to Gramsci, who envisaged a critical education, which, as he wrote:

understands movement and change, which appreciates the sum of effort and sacrifice which the present has cost the past and which the future is costing the present, and which conceives the contemporary world as a synthesis of the past, of all past generations, which projects itself into the future.

The British Marxist historians produced an impressive array of historical works that "transformed so many accepted interpretations of the English and European past in the following years." This tradition began with Maurice Dobb's economic history of the development of capitalism, and was followed by, among other works, Rodney Hilton's study of the medieval period, Christopher Hill's work on the English revolution of the seventeenth century, Eric Hobsbawm's studies of labour, peasants and world history, and E.P. Thompson's social history of the eighteenth and early nineteenth century. As Harvey Kaye points out, their achievements have been the development of class struggle analysis, the pursuit and development of "history from the bottom up" and the recovery of a "radical democratic tradition," achievements that have "helped to undermine the great 'Grand Narratives' of the right and left." Indeed:

Their labours directly challenged the Whig version of history in which the development of English life and freedoms is comprehended as a continuous evolutionary and progressive process. And they also helped to clear away the (supposedly) Marxist presentation of history in which historical development is conceived of in unilinear, mechanical and techno-economist terms.
Certainly since the 1950s, there has been a strong tendency among British Marxist historians to move beyond the confines of a Marxist orthodox position. This was initially possible while remaining within an essentially prescriptive party structure, as they maintained a certain independence of viewpoint and freedom of debate that allowed for vigorous discussion concerning issues of Marxist interpretation. For example, they examined "superstructural" mediations and the 'subjective' element in historical change," which led to "unresolved but fruitful tensions" between a deterministic understanding of Marxism and a recognition of the need to explore the role of human agency. One such debate in which these issues were extensively canvassed was the question of the causes of the transition from feudalism to capitalism, a question which, according to Victor Kieman, remains "among the most eagerly debated of all problems of Marxism."

The transition discussion was initiated in the 1940s, after the Marxist economist Maurice Dobb argued the orthodox position in his book, Studies in the Development of Capitalism, which explained the decline of feudalism in terms of its inefficiency as a mode of production and saw the cause of its disintegration as internal to the feudal mode of production itself. The ensuing debate began with a critique by the United States economist Paul Sweezy, who claimed that Dobb was wrong and that the transition was due to external factors, especially long distance trade. Sweezy was, in turn, reviewed by, among others, English historians Christopher Hill and Rodney Hilton, the French historian George Lefebvre and the Japanese historian Kohachiro Takahashi. In each instance, they supported Dobb's position that the transition was the product of internal contradictions which intensified exploitation, a view which consequently supported the orthodox, unilinear notion of time.

In his discussion of the transition debate, Harvey Kaye argues that Dobb made an original and significant contribution to Marxist historiography by concentrating on the internal forces, rather than the external forces, of production, the latter of which stressed economic forces above class. He suggests that, in focusing on relations of exploitation between lord and peasant, Dobb represented an important
step toward the study of class relations, initiating a tradition that was followed by Hilton, Hill, Hobsbawm and later Brenner. However, Kaye does acknowledge that, at times, Dobb’s class analysis was examined in a narrowly economic way and that he did not always adhere, in practice, to his own methodology.\(^{38}\)

Scott Meikle is more telling in his criticism of Dobb’s determinism in particular, and the whole transition debate and the issues raised by it in general. He suggests, for example, that the debate is a “confused and contradictory exercise based solidly on two feet of Stalinist clay.”\(^{39}\) In highlighting the political nature of this theoretical stance, Meikle points out how Hilton, Hill and Hobsbawm adopted a position that contradicted the findings of their own historical research. For example, in his historical studies, Hilton had showed that the transition was not an even, progressive, linear development underpinned by deterministic forces. Indeed, as he argues:

Hilton’s work is particularly instructive, because his history is at odds with his historiography. The ripening of the internal contradictions of a mode of production, to whatever malodorous degree of putrescence, does not automatically provide the source “which drives it ever forward to the victory of” whatever comes after it. Indeed, whatever comes after it might fail to attain the dimensions of a victory, in Marx’s sense of historical progress; it might be mutual ruination of the contending classes, or a movement into a historical blind-alley.\(^{40}\)

Furthermore, Meikle argues, Hilton’s work shows class activity, in the form of the resistance of peasants and proto-kulaks to the lord’s demands for the extraction of a greater proportion of the surplus, to be a major factor in the transformation of class in the period of the transition.\(^{41}\)

Significantly, in the wake of the publication of the essays that constituted the transition debate in an edited collection by Hilton in 1976, the orthodox position that was supported by the majority of contributors to this debate was attacked by Robert Brenner in an essay entitled “Agrarian Class Structure and Economic Development in Pre-Industrial Europe.”\(^{42}\) Brenner argued against neo-Malthusian, demographic, explanations of the long-term economic change in late medieval and early modern Europe, where class struggle is “simply integrated
within the model itself, as seen as essentially shaped by, or changeable in terms of, the objective economic forces around which the model has been constructed in the first place. \textsuperscript{43} Brenner suggested, instead, that “it is the structure of class relations, of class power, which will determine the manner and degree” to which historical change occurs. \textsuperscript{44} Furthermore, it is “around the property or surplus-extraction relationship that one defines the fundamental classes in a society – the class(es) of direct producers on the one hand and the surplus-extracting, or ruling, class(es) on the other”. \textsuperscript{45}

In sum, fully to comprehend long-term economic developments, growth and/or retrogression in the late medieval and early modern period, it is critical to analyse the relatively autonomous processes by which particular class structures, especially property or surplus-extraction relations, are established, and in particular the class conflicts to which they do (or do not) give rise. \textsuperscript{46}

In a further collection of essays around the debate which Brenner’s essay generated, Hilton responded to Brenner’s argument by reinforcing the orthodox position, in that, while he acknowledged that class conflict plays a role in the historical process, he asserted the primacy of developments in the forces of production over productive relations. Moreover, in arguing against Brenner’s advocacy of the concept of surplus extraction as a means of historical analysis, Hilton noted that the concept of the “mode of production” was “the bare bones of a Marxist analysis of the historical process.” \textsuperscript{47}

However, in bringing the concept of the “mode of production” under scrutiny, Brenner’s work signalled a turning point in the debate. Indeed, since the 1970s, Marxist historians have challenged the indispensability of the category of “mode of production”, and the related “base-superstructure” model, concepts which are integral to the view that one mode of production arises logically from another in a unilinear fashion. Victor Kiernan, for example, argues that these concepts are “being felt now to be too static and rigid,” and suggests that a “biological image, or some kind of symbiotic relationship may be more appropriate.” \textsuperscript{48}

Meikle makes a similar point in suggesting that “mode of production” should refer to, not simply the conflict between relations and forces of production, but “the
entire social organism as it exists” which includes both methods of labour and the form or forms of surplus extraction. In advocating the category of “mode of surplus extraction” as the crux of Marx’s understanding of the nature of historical change, he argues that Marx sees “all class societies as social organisms in which surplus labour is pumped out of one class by another.” In so doing, Meikle draws on Geoffrey De Ste. Croix’s *Class Struggle in the Ancient Greek World*, in which Ste. Croix analyzes ancient Greek society in precisely this way, revealing different forms of surplus extraction existing alongside each other.

Such an analysis has important implications for the question of historical time in that it directly challenges the notion of unilinear, progressive historical development supported by the orthodox interpretation. Hobsbawm recognizes this when, in an attempt to straddle both sides of the debate, he suggests that, although there is clearly an evolutionary trend - in terms of unidirectional progress - for the material forces to develop, this is not a universal trend. He sees that the problem revolves around whether a “general tendency” exists within history or not. If there is not a general tendency, then at best historical materialism can be used only to describe a special case, capitalist development. If there is a general trend, historians must explain why it has not happened everywhere, or has been counteracted.

The notion of multilinear historical development is supported by a chapter in the *Grundrisse*, in which Marx suggests that the historical process consists of three successive epochs - pre-capitalist, capitalist and communist - and that pre-capitalist society results from different, but contemporaneous sets of productive forces. However, well before the *Grundrisse* was published, Lenin explored the notion of multiple, coexisting modes of production in *Imperialism: The Highest Stage of Capitalism*, in which he saw world capitalism as a hegemonic mode of production made up of regional “submodes”, whereby more than one law of development governed each region. L. Birken suggests that:

In Lenin’s complex new world economy, the most developed submodes from the perspective of local technology may be underdeveloped from the standpoint of the international political economy of world capitalism, and vice versa. This startling multiplicity of perspectives shatters the
developmental hierarchy of classical Marxism, thus undercutting the basis of specific material (= ethical) preconditions for revolutionary action.\textsuperscript{54}

Birken goes on to suggest that Lenin’s work contains “neo-Marxist” or “structuralist” features that were already present in the writing of Marx and Engels, but which were not given central importance in classical Marxism.\textsuperscript{55}

Marxist scholars have increasingly given credence to the notion that different, co-existing and interacting modes of production characterize pre-capitalist societies, a position which is supported by their empirical research. As Kiernan has described it, in “most or all other regions no such progression as Europe’s, no onward-leading road seems visible, only a maze of tracks losing themselves here and there.” These tracks “form a medley, not following one after the other but scattered higgledy-piggledy.”\textsuperscript{56} McLennan also supports this view:

If there is a general marxist theory at all, it seems, it cannot be unilinear. Marxist historians are extensively reworking the concepts which demarcate pre-capitalist society. There are not now envisaged as wholesale embodiments of unitary modes of production. Nor is there any apparent difficulty in accepting ‘dead-ends’ of development. Moreover, a variety of communal forms (classical, oriental, Germanic etc.) can be perceived as unevenly and overlappingly emerging from the ‘primitive’ commune…. Finally, multilinear marxists put less doctrinal weight on the tenet that social change is necessarily internal. It is on the basis of a severely internalist model, for example, that those marxists who have put forward ideas about the significance of trade, conquest, or cultural influence as causal components of modal transitions have been cast out of the temple as ‘bourgeois’ and unscientific. But once the idea of the mode of production as the growth of the pfs [forces of production] within a limited ‘national’ context is put on one side as itself the ‘unscientific’ part of marxist historiography, the door is open for a more considered empirical assessment of ‘external’ causality.\textsuperscript{57}

Meikle has articulated the philosophical underpinnings of this multilinear view of historical development where class activity is emphasized over forces of production. He bases his argument on the interpretation of Marx that investigates both the Hegelian and Aristotelian underpinnings of Marx’s ideas. Meikle argues that Hegel explicitly developed Aristotle’s theory of essence and change to arrive at his theory of history. According to Meikle, Marx then developed Hegel’s ideas by incorporating “those aspects in which Hegel had developed beyond Aristotle,
and at the same time made a return to the material essences of Aristotle in place of Hegel’s ideal ones.” Thus, he argues, Marx retains from Hegel the view that there is a fundamental essence in human history that passes through a series of specific forms or organic social wholes. Each form has specific laws or realizable potentials of development. He notes, however, that Marx rejects the Hegelian notion that the dialectical nature of thought is the basis of reality. Rather, history becomes a process of man’s self-creation through labour:

Marx’s overall view of the historical process is that it is the process of development, or *genesis*, of human society through particular forms towards its fullest and highest form, in which its inherent potentials are fully realised. That is to say, the historical process is a teleological process whose subject is human society, and the *telos* to which the process tends is communism.... History is the process of coming-to-be of human society. Its essence is human labour, and its different ‘principles’ are the social forms in which that labour is historically supplied.

The “laws” that operate are not mechanistic - a “mere epistemological constant-conjunction of events” - as the positivist view subscribes, but, rather, are a “statement of the real ontological lines of development of an essence.”

Writing around the same time, Carol Gould notes specifically what an essentialist reading of Marx means for time. Basing her argument on a reading of the *Grundrisse*, she asserts that Marx becomes an Aristotelian by construing Hegel’s logic of concepts as also a logic of social reality, and by “holding that it is real, concretely existing individuals who constitute this social reality by their activity.” Thus, Gould sees that labour creates time, or, introduces time into the world:

human laboring activity is the origin of human time-consciousness; of time as an objective measure;... [T]his activity is the condition for the understanding of sequences and changes in nature and social life as temporal.

For Marx, Gould argues, “the reality of time is introduced by activity of living labor which creates the now. Such a now is not a static instant but a dynamic unity of past, present and future.”

One of the main implications of time being created through human activity is that societies constitute time differently. Gould suggests, for example, that “Marx
interprets different modes of economic organization as different economies of time, and thus Marx regards time as a fundamental category in his theory of social development. Consequently, time is not necessarily a singular unitary time. On the contrary, where different methods of surplus extraction co-exist, so too, do different temporalities. Walter Adamson recognizes this when he writes, for example, that:

For Marx, not only may societies develop according to very different temporal logics, but [people] in different modes of production may themselves conceive of time, and develop practices involving time, which vary markedly from one another. Historical writing must take this into account and cannot simply impose a single scale.

Time, then, is historically specific in that each social form have their own, unique temporality. However, transhistorical features of historical time are also evident. Gould suggests that the co-existence of different “economies of time”, provides a single foundation for an analysis of all social forms. Similarly, in claiming that Marx saw the evolution of social formations “as changing patterns of time valuation and distribution”, William Booth claims that all “major servile classes have been characterised, according to Marx, by the fact that their bound time yielded surplus or free time, whether for their leisureed masters or for the creation of surplus-value.” Thus, he suggests understanding economic formations “as ways in which persons produce and distribute free time (or surplus time ...)” and that the “distinctions between these formations can be expressed as differences in the use and distribution of time.” In this way, Booth sees economic time as embedded “in an overarching normative inquiry.”

Booth provides a basis for understanding the different concepts of time underlining pre-capitalist, capitalist, and post-capitalist societies. In arguing that societies can be understood with reference to the social construction of time or the pattern of time valuation and distribution, Booth suggests that, unlike capitalist society, pre-capitalist societies do not measure labour in terms of quantitative time but in qualitative terms, characterized by production for use. In other words, the “concept of value did not exist in the pre-capitalist world; there, only usefulness could be the measure of the amount and nature of economic activity.”
Booth also describes how, in capitalism, labour becomes homogeneous abstract labour, and is measured by a universal measure, divided into even, standard units. Embodied labour time becomes a measure of exchange value, and time becomes divided into “necessary labour time” and “surplus labour time”, the latter producing surplus-value for capital. Capitalist time, however, contains inherent contradictions as is evident in capital’s attempt to reduce necessary labour time to increase surplus labour time which it achieves by either increasing the length of the working day, or increasing the productive force of labour, accomplished primarily through technological innovation. In the latter case, capital reduces human labour time - the source of surplus-value on which it relies for its existence - to a minimum. The consequences of creating an abundance of surplus time are significant for capitalism, including the ironic manner in which it constrains and binds the time of human beings. Equally, the availability of free time has important implications for a possible future, free society.  

Booth notes that Marx’s deep concern with the question of time and freedom is evident in his interest in the way in which ancient Greek society sought the production of free time for the sake of human development. According to Booth:

Marx believed that the ancients had understood something important about the value of time, something which had been lost under capitalism and that, corresponding to this understanding, they had seen - if only in a dream - the liberating potential of technology.

Booth notes that, for Marx, time is the most important social good that, in capitalism, becomes contained within the economic process governing society. In contrast, he notes that the ancient Greek understanding of time “proceeds from the notion that the real wealth of time is not that devoted to production but free time for the pursuit of activities not bound by extraneous and constraining (economic) purposes.” In Marx’s vision of the future, a post-capitalist order would still be concerned with the economization of time, but on a very different foundation than in capitalism. As Booth suggests, its “economization would be a purposeful one directed not to increasing surplus labor time but to the freeing of time from economic constraint.” Instead, the measure of wealth becomes the amount of
free time available for the development of an individual’s potential through creative activity.  

Many Marxists, then, have challenged the orthodox Marxist concept of time that sees time as absolute and unilinear. Some have done so through an empirical investigation of the “transition question” which has revealed co-existing modes of production or social formations, while others have examined the philosophical basis of this position in the Hegelian and Aristotelian influences on Marx’s thought, which considers the essence and form of time and the notion that time emanates through human productive activity. In a broad sense, these thinkers understand time as multilinear in that unique economic temporal logics characterize various social forms that exist simultaneously, and unilinear insofar as capitalism constructs a temporal logic that, by its very nature, subsumes all others within it, thus imposing universality on the historical process as a whole.

In so doing, these writers have addressed the three themes underlying the thesis by implying that both transhistorical and historically-specific features inhere in historical time; that human agency is equally a force underlying historical time, if not more so, than deterministic forces; and that absolute and relative time are both constituents of historical time. Other Marxist scholars have also addressed these issues with specific reference to the social construction of time in capitalist society. In particular, an assorted group of thinkers who can be classified under the broad term of “western Marxists” have been concerned with the way time defines the modern experience.
Ideas about time in “western Marxism”

The nature and experience of time as capitalist or “modern” society constituted it was a central concern of “western Marxism”, a term used to label a diverse group of intellectual traditions centred in continental Europe that reacted against orthodox Marxism. It was a movement that gained impetus from the publication, in the 1930s, of Marx’s early works, which exposed to a much greater degree than his later works, the philosophical dimension of his ideas. Drawing on other traditions of thought such as psychoanalysis, phenomenology, hermeneutics, structuralism, and existentialism, the western Marxists wanted to understand “modernity” as a phenomenon in relation to capitalist development, and its expression on all levels, especially cultural and aesthetic.76

Georg Lukács, known as the “founder” of western Marxism, was the first Marxist thinker to evaluate seriously the Hegelian aspects of Marx’s thought. In so doing, he rejected Engels’ preoccupation with a uniform dialectic linking human and natural history. He aimed instead to recover the truly revolutionary dialectic in Marx’s ideas, that between subject and object within human history.77 As a way of understanding history dialectically, he advocated the notion of “totality”, seeing past, present and future as moments in a coherent and meaningful process. Lukács wrote, for example, that:

the category of totality does not reduce its various elements to an undifferentiated uniformity, to identity. The apparent independence and autonomy which they possess in the capitalist system of production is an illusion only insofar as they are involved in a dynamic dialectical relationship with one another and can be thought of as the dynamic dialectical aspects of an equally dynamic and dialectical whole.78

Importantly, in contradistinction to the orthodox view, Lukács recognized that the concept of absolute, mathematical time was a product of capitalism, writing, for example, that time, in capitalism, “freezes into an exactly delimited, quantifiable continuum filled with quantifiable ‘things’… in short, it becomes space.”79 In this way, he anticipated later studies that addressed the role of time as a measure of labour. However, Lukács did not pursue this idea; perhaps if he had, he would have considered the ontological nature of labour more closely, and thus have had
greater insights into the nature of time. It was a criticism he levelled at his book, years later.80

The interest in the Hegelian element of Marxism also informed the ideas of two other major interwar Marxists, Karl Korsch and Antonio Gramsci. Like Lukács, both thinkers reacted against orthodox Marxism. Korsch, for example, criticized the “vulgar Marxists” for claiming an impartial, pure, theoretical study above class differences. He also objected to the way in which they regarded “scientific socialism more and more as a set of purely scientific observations, without any immediate connection to the political or other practices of class struggle.”81 Similarly, Gramsci evaluated evolutionist positivism as “an attempt to define ‘experimentally’ the laws of evolution of human society in such a way as to ‘predict’ that the oak tree will develop out of the acorn.”82 In contrast to this view, both thinkers wanted to rehabilitate the Hegelian dimension of Marx’s ideas, allowing a greater role for human agency in the historical process. In the Prison Notebooks, for instance, Gramsci, in emphasizing the subjective, creative side of Marxist thought, highlighted the role assigned to intellectuals and the concept of hegemony. Underlining the importance of “will” in political activity, he argued that the proletariat could achieve hegemony with the active participation of the intellectuals of the working class.83

While Lukács, Korsch and Gramsci did not explicitly address the question of historical time, they nonetheless signalled an important shift in theorizing about time. Their Hegelian emphasis on subjectivity and consciousness suggested that human thought, as much as the material world, constructed time, in particular through the activity of the labouring subject. It provided a foundation upon which scholars could explore the role of thought in the construction of time by developing ideas concerning the existence in, and experience of, the time of modern society.

People saw modernity as creating a particular awareness of time as a contradiction that arose out of being conscious of living in a present that was continually in flux, offering no certainties. Charles Baudelaire encapsulated this sense of temporal
contradiction between change and permanence when he wrote, in the late
nineteenth century, that modernity was "the transient, the fleeting, the contingent:
it is one-half of art, the other being the eternal and immovable." He expressed
an idea that was examined in some depth in the post-World War I years by a group
of Marxist thinkers, the Frankfurt school, which explored, among other things, the
relationship between time and aesthetics.

Through their professed project of the "self-destruction of the Enlightenment", the
Frankfurt School challenged the idea of "instrumental reason" which they saw as
exercizing a technical control over society. Influenced by Schopenhauer, Kant
and the "irrationalism" of Nietzsche, Dilthey and Bergson, they protested "against
the abstract uniformity that increasingly oppressed the individual in advanced
capitalist society." Instead, they examined a different kind of reason, one that
sought to liberate human beings from external constraints. The ground of this
reason, according to Theodore Adorno, was that of aesthetics.

Adorno drew on ideas about the relationship between time and aesthetics first
articulated in the late eighteenth century by Freidrich Schiller, who saw that
aesthetics, through what he called "play", was a quintessentially human activity
through which one could tame and master time. Schiller saw that art aimed "at the
extinction of time in time and the reconciliation of becoming with absolute being,
of variation with identity." In other words, he believed that art could capture the
eternal moment in a world of constant flux and change.

Walter Benjamin, an early associate of the Frankfurt school, extended the
aesthetic experience from the work of art to the historical process itself, a project
that is encapsulated in Fredric Jameson's statement that history "is a product of
human labor just like the work of art itself, and obeys analogous dynamics." Benjamin, who explored the act of writing history as a creative, aesthetic act,
rejected the notion of time as homogeneous and empty, which, as he put it, tells
"the sequence of events like the beads of a rosary," and which culminates in
universal history. Instead he advocated historical materialism, which he based on
a constructive principle:
Thinking involves not only the flow of thoughts, but their arrest as well. Where thinking suddenly stops in a configuration pregnant with tensions, it gives that configuration a shock, by which it crystallizes into a monad. A historical materialist approaches a historical subject only where he encounters it as a monad. In this structure he recognizes the sign of a Messianic cessation of happening, or, put differently, a revolutionary chance in the fight for the oppressed past. He takes cognizance of it in order to blast a specific era out of the homogeneous course of history – blasting a specific life out of the era or a specific work out of the lifework.\textsuperscript{88}

Benjamin, then, advocated a revolutionary concept of historical time, which, when used to write history, had the capacity to create change, to create the future.\textsuperscript{89}

Ernst Bloch, a friend of Benjamin's, shared a similar notion of time. For Bloch, the aesthetic, creative process became a way of understanding not only the work of art or the historical process, but also the individual’s existence in society. In short, Bloch was interested in the way existence itself could be a creative act. Drawing on psychoanalysis, but turning its orientation from the past to the future, he saw creative activity as the expression of the utopian impulse, the source of which is the unconscious. He argued that the idea of utopia, through which we can explore the endless realm of possibilities of the future, is a quest for the experience of the fulfilled moment, the transcendence of alienation.\textsuperscript{90} For Bloch, creative, utopian thinking became a catalyst for the future, by providing a sense of the “novum”, which is, as Jameson puts it, “the utterly and unexpectedly new, which astonishes by its absolute and intrinsic unpredictability.”\textsuperscript{91} Bloch developed an ontology of what he calls the “not-yet-existent”, where being is always incomplete, writing in the \textit{Principle of Hope}:

The life of the now, the most truly intensive kind, has not yet come before itself, has not yet been brought to itself as something seen and revealed; it is least of all a \textit{Da-sein}, a revelation of being. The now of existence, which drives everything else forward and toward which everything else is driven, is that which has been experienced the least.... Hence that strange fact that nobody has ever yet really \textit{been there}, nobody has ever yet really lived. For life means being present, it doesn’t only mean beforehand or afterwards, anticipation or aftertaste. It means seizing the day, in the simplest as well as in the most thoroughgoing sense, it means holding concretely to the Now.\textsuperscript{92}
In many ways, Bloch’s ontology, with its focus on the ever-changing present moment as the location of meaning, shared some similarities with existentialism. For example, Jean-Paul Sartre, an existential Marxist, insisted, like Bloch, on the “empty nature of the present which projects us forward into the future.” Freedom, for Sartre, was embedded in time. He saw that the act of existence in the present moment was where the logic of history and the ontological structure of human existence came together, where people created themselves and their world. However, as Jameson points out, Sartre’s existentialism was more nihilistic than Bloch’s, in that for Sartre, the “emptiness is one of lacking, rather than of wishing”; the union of consciousness with being is forever unrealizable.

The concern with the individual’s existence in time provided a philosophical foundation on which to explore the experience of time in more concrete, material terms, through the examination of “everyday life”. Henri Lefebvre, for example, saw the “everyday” as constituting “the platform upon which the bureaucratic society of controlled consumerism is erected.” He argued that the time that capitalism constructed at the level of the everyday was two-fold and contradictory. On the one hand, it involved cyclical aspects of nights and days, seasons and harvests, activity and rest, life and death. On the other hand, it included the “repetitive gestures of work and consumption.” The contradiction at the heart of everydayness, Lefebvre asserted, “lies in the fact that it is invariable, with the days following one after the other, resembling one another, and yet, at the same time, everything changes.”

In the 1950s the Situationists, a group of “cultural interventionists” rather than academics who proclaimed their era to be “The Society of the Spectacle”, developed Lefebvre’s concept of everyday life. They argued that the logic of commodities governed society, by seizing and colonizing all social and cultural relations, including time. Guy Debord, for example, showed how societies construct time in different ways through history, in particular through the way classes “socially appropriate” time. The:

power, in other words, of the class which organized social labor therein and appropriated the limited surplus-value to be extracted, also
appropriated the temporal surplus-value that resulted from its organization of social time: this class thus had sole possession of the irreversible time of the living.99

Debord identified two types of time that characterized capitalist society - time as production and as consumption. The former was “time-as-commodity, [which] is an infinite accumulation of equivalent intervals.... This is time devalued - the complete inversion of time as ‘the sphere of human development’.” Consumable time, its complement, “presents itself in the everyday life of society as pseudo-cyclical time”100, which is the “time appropriate to the consumption of images ... the image of the consumption of time.”101 It is the time of daily life, including commodified leisure time, sold as “fully equipped” blocks of time, each of which is a complete commodity combining a variety of other commodities.102

The Situationists attempted not only to describe, but also change, lived experience.103 Thus, Debord looked beyond this “false consciousness of time” to a classless society that involved the:

withering away of the social measurement of time in favor of an individual and collective irreversible time which is playful in character and which encompasses, simultaneously present within it, a variety of autonomous yet effectively federated times.104

The idea of seeing time as an “everyday” social construction, as well as its political implications, also underlined the work of E.P. Thompson. Along with others like Raymond Williams, Thompson inaugurated a shift, within English Marxism, to an interest in the ideas of culture and experience, which aligned him closely to the concerns of western Marxists.105 Drawing on a rich source of historical evidence, such as songs, stories and other elements of working class cultural life, Thompson brought to life the experience of time of the English working class. He demonstrated, among other things, that working class action and experience constructed time through cultural forms that revolved around material productive activity.106

More specifically, Thompson attempted to show the historical nature of the social construction of time. He did this by demonstrating how, in England between the
fourteenth and seventeenth centuries, important changes occurred in the idea of time, changes which related to the spread of the mechanical clock, giving time a new immediacy and insistence. Thompson explored how far, and in what ways, this change in time-sense affected labour discipline, and influenced the “inward apprehension” of the time of working people, noting that the shift in time-consciousness accompanied a shift in labour practices. He pointed out that: labour changed from “task orientation”, where people measured time in relation to natural work rhythms, and where there was little demarcation between “work” and “life”; employers began to use timed wage labour, a system that distinguished between “the employer’s time and the employees own time”; and when “time became money”, there was a greater attention to time-keeping, owing to the need for the synchronization of labour, particularly with the coming of large-scale machine-powered industry. Indeed, he claimed that with this shift, the working class formed new labour habits, and developed a new time-discipline through the propaganda of time-thrift directed at working people. In so doing, he described the historical record as one of working class struggle against the unjust appropriation and control of the worker’s time.\textsuperscript{107}

According to Michael Rustin, Thompson has assumed a significant role in the left Romantic tradition that has taken, as its point of departure, “the meaning and value of a particular lived experience of capitalism against the causal and deterministic grain of much of the existing Marxist tradition.”\textsuperscript{108} In this respect, he suggests that Thompson has been significantly influenced by Gramsci’s view of society as a “system of lived meanings rather than as a mere aggregation of material interests”\textsuperscript{109} and argues for a greater acknowledgement and centrality to “the boundedness of human lives in time and space.”\textsuperscript{110}

Thompson’s work has been very influential in spawning a whole field of historical research into the social and cultural construction of time.\textsuperscript{111} For instance, the questions raised by Thompson have been addressed by, among others, Jacques le Goff, the French \textit{Annales} historian.\textsuperscript{112} This common interest is not surprising, given the strong links between the \textit{Annales} and British Marxist historiography.\textsuperscript{113} However, given the \textit{Annales} structuralist roots, it is perhaps surprising that
Thompson engaged in such a "prolonged and passionate polemic" against the structuralist Marxist, Louis Althusser, in the _Poverty of Theory_. In this controversial work, Thompson was generally reacting - somewhat ironically given his affinity with the concerns of the western Marxists - against the influence of European Marxist philosophy on the British scene, an influence that caused a shift away from concrete historical concerns to more abstract, theoretical questions. What is significant about Thompson's stance against Althusser, for this thesis, is his critique of Althusser's concept of time.

Thompson passionately refuted Althusser's dismissal of historical time as an "ideological" construction, and his advocacy of "differential temporalities" or multiple "levels" of time that exist through categories such as economics, politics, law and religion. Relatedly, he also disagreed with Althusser's eviction of process, and hence of human agency and experience, from history in favour of structure. Thompson wrote:

> His notion of 'levels' motoring around in history at different speeds and on different schedules is an academic fiction. For all these 'instances' and 'levels' are in fact human activities, institutions and ideas. We are talking about men and women, in their material life, in their determinate relationships, in their experience of these, and in their self-consciousness of this experience.

Thompson did not entirely refute the idea of structure in history, nor differential histories, arguing that "the effectivity of class experience and conflict will be differently expressed in different activities and institutions, and that we may, by an act of analytic isolation, write distinct 'histories' of these," but he argued that they are part of:

> the same unitary experience or determining pressure, eventuating in the same historical time, and moving to the same rhythm ... so that all these distinct 'histories' must be convened within the same real historical time, the time within which process eventuates. This integral process is the ultimate object of historical knowledge, and it is this which Althusser offers to disintegrate.

While Thompson's criticisms of Althusser's rejection of a unifying historical time were valid, it is nonetheless worthwhile to consider Althusser's ideas on differential structural temporalities further.
Althusser rejected the Hegelian-based interpretation of Marx’s notion of time as homogeneous and continuous, which “is the reflection in existence of the continuity of the dialectical development of the idea.” He also rejected the notion of totality, where the whole always co-exists “in one and the same time, one and the same present.” Emphasizing the synchronic over the diachronic, Althusser proposed:

This means that the structure of the historical existence of the Hegelian social totality allows what I propose to call an ‘essential section’... i.e., and intellectual operation in which a vertical break is made at any moment in historical time, a break in the present such that all the elements of the whole revealed by this section are in an immediate relationship with one another, a relationship that immediately expresses their internal essence.

Althusser saw society as consisting of structures, each of which existed as autonomous levels, each of which had:

a peculiar time, relatively autonomous and hence relatively independent, even in its dependence, of the ‘times’ of the other levels. We can and must say: for each mode of production there is a peculiar time and history, punctuated in a specific way by the development of the productive forces; the relations of production have their peculiar time and history, punctuated in a specific way.

Thus, he saw economic production, politics, philosophy, aesthetic productions, scientific formations, among other histories, as structures with a unique temporality. Importantly, Althusser sees economic time as a specific, complex time, constructed out of many different rhythms of production and turnovers of capital. According to Althusser, Capital shows:

that the time of economic production is a specific time (differing according to the mode of production), but also that, as a specific time, it is a complex and non-linear time - a time of times, a complex time that cannot be read in the continuity of the time of life or clocks, but has to be constructed out of the peculiar structures of production. The time of the capitalist economic production that Marx analyzed must be constructed in its concept. The concept of this time must be constructed out of the reality of the different rhythms which punctuate the different operations of production, circulation and distribution: out of the concepts of these different operations, e.g. the difference between production time and labour time, the difference between the different cycles of production (the turnover of fixed capital, of circulating capital, of variable capital, monetary turnover, turnover of commercial capital and of finance capital, etc.) In the capitalist mode of production, therefore, the time of economic
production has absolutely nothing to do with the obviousness of everyday practice's ideological time: of course, it is rooted in certain determinate sites, in biological time (certain limits in the alternation of labour and rest for human and animal labour power; certain rhythms for agricultural production) but in essence it is not at all identified with this biological time, and in no sense is it a time that can be read immediately in the flow of any given process. It is an invisible time, essentially illegible, as invisible and as opaque as the reality of the total capitalist production process itself. This time, as a complex 'intersection' of the different times, rhythms, turnovers, etc, that we have just discussed, is only accessible in its concept, which, like every concept is never immediately 'given', never legible in visible reality: like every concept this concept must be produced, constructed.\textsuperscript{122}

While his decentring process was useful in deconstructing the structure of time, in so doing, Althusser ultimately committed "heresy". He rejected the idea that economic time produced an over-riding temporal logic that subsumed different times; it was simply one among many others, with no special status. Thus, while he acknowledged his similarity to others, like Braudel, Labrousse and Lefebvre who had explored the idea of multiple times, he rejected their attempts to "relate these varieties ... to ordinary time itself, to the ideological time continuum.\textsuperscript{123}

The implication of this was that, "just as there is no production in general, there is no history in general, but only specific structures of historicity, based in the last resort on the specific structures of the different modes of production.\textsuperscript{124}

Althusser's rejection of a unitary time of history linked him strongly with post-structuralist thought. For example, Michel Foucault, like Althusser, rejected the notion of time as homogeneous and continuous. Instead, Foucault advocated the idea that multiple times, constructed through discourse, co-existed independently of each other on different levels. Clearly, the two philosophers were a mutual influence. In The Archaeology of Knowledge, for instance, Foucault's references to Althusser's ideas supported his own.\textsuperscript{125} Similarly, in Reading Capital, Althusser acclaimed Foucault's studies in the "history of madness" and the "birth of clinical medicine". He wrote that Foucault showed that an "absolutely unexpected temporality" constituted the:

essence of the process of the constitution and the development of those cultural formations: there is nothing in true history which allows it to be
read in the ideological continuum of a linear time that need only be punctuated and divided.  

In a more general sense, Althusser has been influential in the development of post-Marxist thought; that is, those attempts to revise Marxist thought in the light of post-structuralism by eliminating the historical elements of Marx’s thought, and, in so doing, limit Marxism to the analysis of contemporary society. Althusser’s influence, for example, is apparent in the work of Anthony Giddens who, without apology, takes, to use his words, the “scalpel” to Marx, removing any vestige of a unilinear or evolutionary notion of time and, instead, posing the idea of co-existing modes or forms of society analyzed as “time-space edges.” Thus, Althusser has been useful in stimulating writers like Giddens to explore different ways of thinking about time and its construction.

Althusser’s structuralist position, then, has the potential to contribute to historical understanding in that he recognizes that social, cultural, political, religious, intellectual as well as economic activity are determinants of the social construction of time. Indeed, Althusser adds another dimension to Braudel’s already significant advances in thinking about how society constructs different levels of historical time by analyzing the structural elements that constitute temporality. However, Althusser’s contribution is limited by his denial of human agency as a constituent of historical time, and in his rejection of an overriding time which is premised on the idea that the nature of the different “levels” of time are equally as decisive as that of economic time. His work highlights the limitations of a totally pluralist or relativist view of historical time which emphasizes multiple times without acknowledging the universal and singular aspect of time.

Indeed, Perry Anderson suggests that the true weakness of Althusser’s discussion of history is his failure to stress the necessity of reconvening the “different sectoral times” within a “plenary societal time.” Chronological time is not “ideological”:

Such historical temporalities, however differential, are always convertible into chronological time, which remains identical. Althusser’s fustigation
of a ‘single continuous reference time’ is in truth ‘thoroughly misleading’, because it fails to make any clear distinction between the indisputable (indeed indispensable - think of dating) existence of such time, as the medium of all history, and its lack of pertinence as a common organizing principle of the diverse scansion of historical development. The relevant time in which all regional histories should be convened is not an empty grid of dates, but the full movement of the social formation as a whole. At a minimum.  

However, as Anderson notes, recognizing the importance of such a view of time is much easier than explicating it in detail; the “theoretical and technical problems involved in the reconvening of different historical temporalities into a single social time are formidable.”

McLennan tackles this difficult question by suggesting that the view of historical time held by many Marxists reflects a two-fold pattern of thought, which recognizes that life consists of a plurality of phenomena and causal relations, but also that there is “nevertheless an inner structure or hierarchical functional logic to that multiplicity which is ‘captured’ by Marxist theory.” He points out that Marxists of all persuasions are “swayed to and fro by the contrary weightings of these principles, the first being a more pluralistic impulse, the second a monistic (but not necessarily deterministic) one.”

McLennan argues that there are ways to forge links between the pluralist and monist positions. On the one hand, he suggests that a “post-evolutionary analysis” for historiography would involve: first, speaking “not of the transition from feudalism to capitalism, considered as modes of production, but rather of transitions (in the plural) to specific states of affairs”; and second, “reinforcing the distinction between a particular, contingent state of affairs (such as capitalism) and its construal within a preferred theoretical discourse (such as marxism) as a stage-outcome” and, in so doing, treating general concepts as useful tools rather than as real outcomes. On the other hand, he argues that it would still allow for Marxists to view modes of production or social formations “not merely as useful concepts but as real structures”, and recognize that the “notions of internal
contradictions and systemic dynamics as well as external factors remain important. Moreover:

Marxists of all types retain from unilinearism the global ‘necessity’ of capitalism’s development, and the real pressures this creates for the development of a new, higher stage in human history.... Marxists, therefore, are likely to continue to defend the kind of ‘universal’ guidelines which historical materialism lays down.\textsuperscript{135}

Thus, McLennan points to an understanding of historical time in which capitalism produces a unitary time under which different modes of production, exhibiting different temporalities, become subsumed, moulded and shaped by capitalist logic.

The dilemma for Marxist historians, however, remain. How can they understand historical change without imposing a totalizing view of time on the whole of history, an act based on a view that is historically specific, particular to capitalism? McLennan alludes to this dilemma in his suggestion that Marx’s ideas themselves should not be exempt from the notion that he himself espoused; that is, that ideas are always based in historically specific conditions. Thus, he argues, categories such as mode of production, while being deemed central to historical understanding, are themselves an historical product. If this is so, McLennan concludes:

there can be no a priori reason for accepting marxist reference points as timelessly true or even useful. It may be that other social relations - together with their own type of universal propositions - will develop and take root in changing historical conditions.... As material and cultural structures change, so too do epistemic considerations.\textsuperscript{136}

The Marxist historian, then, must recognize that it is impossible to understand any past society without reference to the present in which they write. When Hegel wrote that “the Owl of Minerva spreads its wings only with the falling of the dusk,” he meant that we understand the true meaning of things only in retrospect. Thus, we look to the past self-consciously from the standpoint of the present: we write history “backwards” so that history becomes a “history of the present”. In other words, we impose continuity on the past, but we do so with awareness that it is an imposed construct that is necessary to use in order to understand the past.
Marx articulated this Hegelian-derived position concerning the relationship between present and past in the 1857 “Introduction” to the *Grundrisse*, in which he writes that:

Bourgeois society is the most developed and the most complex historic organization of production. The categories which express its relations, the comprehension of its structure, thereby also allows insights into the structure and the relations of production of all the vanished social formations out of whose ruins and elements it builds itself up, whose partly still unconquered remnants are carried along within it, whose mere nuances have developed explicit significance within it, etc. Human anatomy contains a key to the anatomy of the ape.... The bourgeois economy thus supplies the key to the ancient, etc. But not at all in the manner of those economists who smudge over all historical differences and see bourgeois relations in all forms of society. One can understand tribute, tithe, etc., if one is acquainted with ground rent. But one must not identify them.\(^\text{137}\)

Terry Eagleton suggests that, in this passage, Marx points to a “reversible” reading of the text of history, where it “is only by reading the historical narrative backwards that we can render it fully intelligible.”\(^\text{138}\) However, according to Eagleton, Marx’s use of the “organic-evolutionist” metaphor causes a “symptomatic maladjustment between figure and discourse,” whereby his organicism is at odds with his “structural” analysis.\(^\text{139}\) Eagleton cites Nietzsche, who, in his view, presents the fully blown articulation of Marx’s position:

There is no set of maxims more important for an historian that this: that the actual causes of a thing’s origins and its eventual uses, the manner of its incorporation into a system of purposes, are worlds apart; that everything that exists, no matter what its origin, is periodically reinterpreted by those in power in terms of fresh intentions; that all processes in the organic world are processes of outstripping and overcoming, and that, in turn, all outstripping and overcoming means reinterpretation, rearrangement, in the course of which the earlier meaning and purpose are necessarily either obscured or lost.\(^\text{140}\)

This position, which results in an epistemological reading of Marx and which emphasizes the methodological aspects of Marx’s concept of time, has been explored by McCarthy.

McCarthy suggests that Marx developed Hegel’s methodological approach, but stripped “the method of its metaphysical core” keeping “its epistemology and
temporal dimensions, both of which are crucial for an understanding of his later critique of political economy.”\textsuperscript{141} Thus, what he calls Marx’s “critical science” can “only refer to a particular historical period and not to a general philosophy of history.”\textsuperscript{142} Consequently, he sees that “the capitalist system is capable of presenting its own history as logic because the capitalist system is the only historical social formation which is a dynamic totality.”\textsuperscript{143}

McCarthy bases his interpretation of Marx on an Hegelian methodology, rather than a positivist one. Thus, he argues that, unlike the positivist method, with its series of “unconnected moments”\textsuperscript{144}, the dialectical method is underpinned by an understanding of time that intimately binds past, present and future together. McCarthy contends that understanding time in this way affects the way in which we understand history:

> The approach to the temporal dimension will form the framework within which history can be known; it will also form the methodological conditions and boundaries by which the external reality can be appropriated; it will structure the nature of our knowledge about the future, which can be anticipated; and, finally, it will determine the way in which social practice is ultimately understood.\textsuperscript{145}

McCarthy argues, then, that method constructs time, and is an expression of logic. He sees that, while this logic is fundamentally Hegelian, it differs in that it unfolds in an historically specific time rather than in a universal sense; indeed, the logic, which is the logic of capital, refers only to capitalism. McCarthy argues that Marx traces the “development of the Concept of capital and the formation of consciousness within political economy,”\textsuperscript{146} (rather than the formation of the Absolute Spirit, as Hegel does). He maintains that, while the movement of capital determines the structure of reality or the ground of history, it does not determine the course of history: “the logical determines the ground, but not the specific content, direction or development of history.”\textsuperscript{147} Rather, he asserts, the “real future of history is open to change.”\textsuperscript{148} McCarthy contends that, in this sense, Marx is posing both a dialectical concept of time and an emancipatory one:

> The former is open to the possibilities of human history and human intervention directed by freedom and rationality. The latter is structured not by the possibilities of rationality, but the potentialities as they exist in the irrationality of the capitalist system.\textsuperscript{149}
McCarthy argues that, because logic determines the ground of history, logic and
history are integrally related to each other, although distinct: “The logical
contradictions are the foundation upon which the historical crises manifest
themselves. One, however, is not reducible to the other, as logic is separated and
distinct from history.” In short, he sees that “the dialectic cannot move into real
history”.

The Concept, though grounded in the historical, for Marx, moves
according to its own logic constantly adjusted and informed by history;
history frames and shapes the content of the logic, for the former is always
explaining itself through the latter, but the latter does not determine the
particulars of that content, only its universal form. In the latter, logic
moves according to the internal contradictions of capitalism, but it still
retains a logical structure and logical status. The logic evolves out of
history, but it cannot create it. It can, however, structure the content and
set limits within which capitalism develops, while the content gives
substance and meaning to the form. The two cannot be separated ... the
two cannot be reduced to each other, nor can they be used to explain each
other. Thus the split between the method of research and method of
presentation, the development of capitalism and the logic of capitalism.

McCarthy, then, sees time as primarily structured out of the development of
logical categories, expressed in material form, and as a process that is specific to
capitalism. However, he leaves unasked the question of how non-capitalist
societies construct time where the logic of capital is not present. Moreover, he
does not address the question of how the logic of capital came into being.
McCarthy’s work highlights some of the problems that arise when the
epistemological elements of Marx’s understanding of time are isolated from the
ontological or metaphysical ones.

It seems, then, that there is a tension in Marx’s notion of historical time between
the idea of a unified time constructed and imposed by historians who view the past
through an interpretative lens from their particular present standpoint, and the idea
of a unified time as it emanates out of real, historical material conditions,
conditions which are continually changing. In many ways, this tension has been
expressed through the various understandings of time represented by western
Marxism.
Throughout the twentieth century, western Marxists have investigated the subject of time in a range of ways, and in so doing, have challenged the positivist concept of time as absolute, objective and linear, which has been a feature of Marxist orthodoxy, emphasizing instead, the relative, multiple, and discontinuous nature of time. Early in the century, Lukács, Gramsci and Korsch highlighted the role of consciousness and human agency in the historical process, providing a basis on which the members and associates of the Frankfurt school like Adorno, Benjamin and Bloch investigated how creative activity could potentially produce an alternative, more liberating, construct of time to the prevailing time of capitalist society. Similarly, Marxists like Sartre, Lefebvre, DeBord and E.P. Thompson saw the experience of the everyday as an important factor of historical time, while Althusser emphasised the structural, more deterministic components. Taken as a whole, the ideas of these scholars implicitly support the notion that historical time as constituted in modern, capitalist society contains both transhistorical and historically specific features; that human agency as well as structural forces underlie the construction of historical time; and that both absolute and relative time are features of capitalist historical time. The specific ways in which they, and the other interpretations of Marx’s concept of time discussed throughout this chapter, address these particular issues are summed up in the conclusion.

Conclusion

Clearly, then, there are divergent positions within Marxist thought as to whether time has transhistorical or historically specific features. To begin with, orthodox Marxists have generally regarded time as absolute, existing as an immutable, eternal "law", whereby dialectical motion occurs at the level of the atom, as an expression of the natural world. In so doing, this orthodox view has seen time as transhistorical, as an unchanging concept that is constant throughout nature and the social world, and as applicable to human history as a whole. Yet, the limitations of this position have given rise to alternative views which point to the
co-existence of both transtoricity and historical specificity as features of Marx’s concept of historical time.

Indeed, from within orthodox Marxism itself, some British Marxist historians and philosophers have investigated the idea that, while there is a general tendency in historical development toward a unitary, singular history, this tendency has not occurred everywhere but rather is a feature of the development of capitalist society, and that, consequently, pre-capitalist societies are characterized by different, co-existing modes of production or methods of surplus extraction. Philosophically, it would seem that this position is best understood by reference to the Hegelian/Aristotelian-based Marxist interpretation concerning the relationship between essence and form, in which the essence, or transtistorical, feature of time is labour, while the different temporal forms to which labour gives rise, are governed by historically specific laws of development. Certainly this relationship is evident in how different methods of surplus extraction, which co-exist within and between societies, have different “economies of time”, indicating that pre-capitalist societies understand time very differently to capitalist society, which has its own, historically specific temporality. Yet, at the same time, each social form is underlined by an essential, or transtistorical, element of time, which emanates from human productive activity.

At a more comprehensive level and dating back to the early twentieth century, ideas within western Marxism have emphasized both the transtistorical and historically specific features of historical time. Indeed, while the thinkers who belong to this diverse group were generally concerned with the nature of time in capitalist society, and thus did not see the question of the transtistorical features of time as a central issue, they nonetheless indirectly approached this question through their concern with the relationship between permanence and change, an issue which was central to the notion of “modernity”. More specifically, Marx’s ideas provided a means for Marxists like Adorno to understand art as an attempt to capture an eternal essence in a world of changing form; or again like Benjamin to see writing history as a means of arresting the flux of time to create a rupture or space through which positive change could occur; or yet again like Bloch to
explore the idea that utopian thought was a fundamental aspect of all human creativity that manifested itself in specific ways. In the same way, Sartre sought to understand the experience of change inherent in the act of existence itself as seeking out, although never attaining, the essence of time; writers of the "everyday" - Lefebvre, DeBord, and EP Thompson - saw labour and class relations as the transhistorical aspects of time while noting at the same time its socially constructed, and hence historically specific, nature; and Althusser denied the essentialist element of time and recognized only the historically specific, socially constructed nature of time, paradoxically implying that ideological structures of time are transhistorical in that they characterize all social wholes, albeit differently.

Similarly, Marxists have approached the question of the extent to which human agency and deterministic forces underlie the construction of time in a range of ways. In general, orthodox Marxists have seen mechanistic, deterministic forces as underlying historical time, although challenges to this view were presented by thinkers like Bernstein who argued for the role of human action, and later by Bogdanov, and, at different points, Lenin, whereby the influence of human agency was implicit in their suggestion that time was created through the mind, rather than matter. There is little doubt, however, that a mechanistic view of time prevailed within orthodox Marxism, giving rise to technological deterministic views of history, which emphasized the forces of production, rather than relations of production, as the prime mover of the historical process.

By exploring the way class struggle operates in history from the perspective of labour, or history "from the bottom up" British Marxist historians have underlined the importance of human agency and have largely undermined the deterministic view of time. This view has been reinforced by the Hegelian/Aristotelian-based Marxist view that time is manifested through labouring activity, which provides a philosophical basis for the notion that human agency is central in defining the historical process. At the same time, however, such a view argues that productive, external forces are evident, although these are historically specific, often co-
existing, and exist - as does human action - as a potential force of change, rather than a certain one.

In the same way, western Marxist approaches have acknowledged the importance of human agency as a force underlying the construction of historical time. Thus, Lukács, Korsch and Gramsci did so by challenging deterministic orthodox views in emphasizing the centrality of consciousness, the labouring subject, class struggle and “will” in political activity; associates of the Frankfurt school like Adorno, Benjamin and Bloch did so by focussing on the human creative act as way of existing in time and a means of bringing about positive change, whether through art, writing history, or imaginative utopian thought; and Sartre, LeFebvre, the Situationists and historians like E.P. Thompson did so by recognizing that it is at the level of human existence through the subjective experience of the “everyday” that time is created.

Finally, various Marxist schools of thought have regarded the notions of absolute and relative time, and their relationship with each other. Orthodox Marxist views of historical time, like positivism in general, are premised on the idea that time is absolute, and thus have generally disregarded relative time as a feature of historical time. In fact, the notion of absolute time as the fundamental constituent of historical time has given rise, within this school of thought, to the view that history is characterized by a series of successive stages of modes of production, and hence is unilinear.

While beginning from an orthodox political position, the work of some Marxist historians on the “transition question” has inevitably pointed to the notion that relative time is also a fundamental feature of historical time in that it is implicit in the recognition of multiple, co-existing, pre-capitalist social forms, each of which are characterized by a unique temporality. Further developments have contended that while absolute time, as a measure of exchange-value, is a central feature of capitalist society which gives rise to a unified historical time, relative time, as a measure of use-value, is a major characteristic of the temporality of pre-capitalist and, potentially, of post-capitalist, societies. Broadly, then, underlying this trend
of Marxist thought is the idea that both relative and absolute time are features of historical time, whereby relative, multiple times become increasingly subsumed, but nonetheless co-exist, within an overriding absolute time as capitalism develops.

Such ideas about absolute and relative time are also implicit in the work of the western Marxists. For example, the views of time of Lukács, in his concept of "totality", Benjamin, in his notion of revolutionary ruptures, and Bloch, in his concept of the "not-yet conscious" as linking past to future, are relative in the sense that past, present and future are all contained within each other, rather than successive moments in a linear chain. Certainly the Marxist writers of the "everyday" recognize that both absolute and relative time co-exist in the capitalist structures within which people experience time, despite the views of Althusser and other post-Marxists who reject absolute time and endorse relative time.

Broadly, then, this chapter has illustrated that Marx's understanding of time has inspired many thinkers to explore the meaning and nature of time in a diverse range of ways. Whether based on perception, solid historical evidence, political activism, philosophical study, a concern with modern, consumer society, or, indeed, a combination of these factors, the Marxist thinkers who grappled with the subject of time have yielded a complex array of valuable insights into how we might usefully theorize historical time and deal with the particular dilemmas posed by its contradictory nature. The challenge facing theorists of historical time today - a challenge which has, to a certain extent, been taken up by some contemporary Marxist scholars - is to find ways to accommodate these contradictory elements. In more recent years, the most significant attempt to address this question has been that of the New York intellectual, Moishe Postone, whose ideas on time are the focus of the following chapter.
Endnotes

2 *Ibid.*, p. 149. Given Kracauer’s friendship with many prominent Marxists like Theodore Adorno and Ernst Bloch, one would expect him to have a greater appreciation of the complexities of Marx’s concept of time. Althusser displays a similar dismissive attitude to the “early Marx” for holding to a Hegelian idea of time which is “borrowed from the most vulgar empiricism, the empiricism of the false obviousness of everyday practice which we find in a naive form in most of the historians themselves, at any rate in all the historians known to Hegel, who did not pose any questions as to the specific structure of historical time”. See L. Althusser and E. Balibar, *Reading Capital*, trans. by B. Brewster, (London: New Left Books, 1977), p. 96.
9 McLellan, *Marxism After Marx*, p. 34.
17 V. Lenin, cited by E. Marquit, “Dialectics of Motion in Continuous and Discrete Spaces”, p. 412.
20 H. Frankel, “Marxism and Physics: A New Look”, *Science and Society*, vol. 55, (1991), p. 346. Caudwell’s work was unfinished, as he died in 1937 fighting in the International Brigade against Franco. According to Frankel, Caudwell argued that “there could be no understanding of time, unless the idea of entropy was thoroughly grasped; and, since time appears in the rest of physics as either another physical quantity or mystery, the importance of this remark can be appreciated.” (*Ibid.*, p. 344.)
21 Marquit, “Dialectics of Motion in Continuous and Discrete Spaces”, pp. 410-416.
22 J.L. Stanley, “Marx’s Critique of Hegel’s Philosophy of Nature”, *Science and Society*, vol. 61, no. 4, (1997-98), pp. 449-473. This view of Marx’s position on time in his doctoral thesis is contradicted by P. Funes, who suggests that in the thesis Marx cannot decide whether there is a contradiction in the concept of the atom as a universal explanation for all phenomena or whether the contradiction resides in the atom itself, that is, in matter. However, two years later, in the “Critique of Hegel’s Philosophy of Right”, Marx abandoned the latter notion and along with it the attempt to deduce real history from the development of a logical category. See P. Funes, “Marx’s Doctoral Thesis on Two Greek Atomists and the Post-Kantian Interpretation”, *Journal of the History of Ideas*, vol. 47, (1986), pp. 433-452. See also A. Schmid, *The Concept of Nature in Marx*, (London: New Left Books, 1973).


32 Kaye, "E.P. Thompson, the British Marxist Historical Tradition and the Contemporary Crisis", p. 255.


48 Kiernan, "History", p. 97. For a good discussion of the different views on this issue see Chapter 3 of McLennan, *Marxism, Pluralism and Beyond*, entitled "Marxism and the 'Question of Pluralism': Historical Materialism", pp. 57-85.


51 E. Hobbsbawn, "Marx and History", *New Left Review*, Jan-Feb, (1984), pp. 44-45. Hobbsbawn also suggests that mechanisms of change are both internal and external to the mode of production, and that destabilizing elements exist as potential rather than certainty.


55 Ibid., p. 622.
56 Kicman, "History", pp. 91-92. McLennan echoes this point: "If there is a general marxist theory at all, it seems, cannot be unilinear. Marxist historians are extensively reworking the concepts which demarcate pre-capitalist society. There are not now envisaged as wholesale embodiments of unitary modes of production. Nor is there any apparent difficulty in accepting 'dead-ends' of development. Moreover, a variety of communal forms (classical, oriental, Germanic etc) can be perceived as unevenly and overlappingly emerging from the 'primitive' commune." (Marxism, Pluralism and Beyond, p. 81.)
57 McLennan, Marxism, Pluralism and Beyond, p. 81.
59 Ibid., p. 57.
60 Meikle, "Marxism and the Necessity of Essentialism", p. 163.
62 Ibid., p. 59.
63 Ibid., p. 41.
65 Gould, Marx's Social Ontology, p. xxv.
67 Ibid., p. 23.
68 Ibid., p. 9.
69 Ibid., p. 8.
70 Ibid., p. 10.
71 Ibid., pp. 12-17.
72 Ibid., p. 12.
73 Ibid., p. 19.
74 Ibid.
75 Gould, Marx's Social Ontology, pp. 65-68. The "measure of wealth becomes free time or time for the free development of individualities. In this society, labor becomes the creative activity of self-realization, which according to Marx is 'real freedom'" (Ibid., p. 68.).
77 McLennan, Marxism After Marx, p. 160.
79 Ibid., p. 90.
80 McLennan, Marxism After Marx, p. 163. As McLennan puts it: "Lukács later critiqued it [History and Class Consciousness] himself for disregarding the notion of labour as mediating between man and nature, and denying the ontological objectivity of nature. This had led to an Hegelian equation of alienation with objectification."
81 K. Korsch, cited by McLennan, Marxism After Marx, p. 167.
82 A. Gramsci, cited by McLennan, Marxism After Marx, p. 183.
83 McLennan, Marxism After Marx, p. 180.
85 McLennan, Marxism After Marx, p. 259.
86 F. Schiller, cited by M. Jay, Marxism and Totality, p. 50.

F. Jameson, *Marxism and Form*, pp. 125-126. Bloch writes for example, that “Every great work of art, above and beyond its manifest content, is carried out according to the latency of the page to come, or in other words, in the light of the content of a future which has not yet come into being, and indeed of some ultimate resolution as yet unknown.” Cited by Jameson, *ibid.*, p. 149.


Jameson, *Marxism and Form*, p. 138. The affinity with the pessimism underlying post-structuralism is evident in Sartre’s view of time.


Thompson argues “against the base-superstructure model, for the materiality of culture.” Gray, “History, Marxism and Theory”, p. 172.


Perry Anderson suggests that Thompson’s essay turned an intellectual page - irreversibly” in that “Theory is now history, with a seriousness and a severity it never was in the past; as history is equally theory, in all its exigency, in a way that it typically evaded before.” P. Anderson, *Considerations on Western Marxism*, p. 26. This coming together of history and theory, together with an exchange across national boundaries, “has been among the most fruitful exchanges in the past decade *ibid.*, p. 27.)


Thompson’s essay turned an intellectual page - irreversibly” in that “Theory is now history, with a seriousness and a severity it never was in the past; as history is equally theory, in all its exigency, in a way that it typically evaded before.” P. Anderson, *Considerations on Western Marxism*, p. 26. This coming together of history and theory, together with an exchange across national boundaries, “has been among the most fruitful exchanges in the past decade *ibid.*, p. 27.)


123 Ibid., p. 96.
129 Ibid.
130 Ibid., p. 76.
131 McLennan, Marxism, Pluralism and Beyond, p. 76.
132 Ibid., p. 77.
133 Ibid., p. 82.
134 Ibid.
135 Ibid., pp. 83-84.
136 Ibid., p. 84.
137 Marx, Grundrisse, p. 105.
138 Eagleton, Walter Benjamin or Towards a Revolutionary Criticism, p. 65.
139 Ibid., pp. 65-66.
140 F. Nietzsche, cited by Eagleton, Walter Benjamin or Towards a Revolutionary Criticism, p. 66.
141 McCarthy, Marx's Critique of Science and Positivism, p. 46.
142 Ibid., p. 36.
144 Ibid., p. 13.
145 Ibid., p. 44. Significantly, McCarthy suggests that "more research needs to be undertaken into the logical substratum of his Capital and into the issue of how Hegel's logic, dialectic, notions of rationality and time have influenced Marx' work." (Ibid., p 47) McCarthy has provided a basis for such research, by dealing comprehensively with the Hegelian concept of time, pp. 50-53. See also G. McCarthy, "Temporality and Science in Hegel's Logic", Studies in Soviet Thought, vol. 16, (1976), pp. 251-266.
146 Ibid., p. 34.
147 Ibid., p. 54.
148 Ibid., pp. 56-57.
149 Ibid., p. 118.
150 Ibid., p. 16.
151 Ibid., p. 183.
152 Ibid., p. 117-118.
Chapter Four

Moishe Postone’s *Time, Labor and Social Domination*

*Time must never be thought of as pre-existing in any sense; it is a manufactured quantity.*

Hermann Bondi

**Introduction**

As has been demonstrated, many diverse interpretations of Marx’s concept of time have emerged over the course of the twentieth century. Such studies, which represent a range of different traditions, have made a significant contribution to the understanding of historical time. In regarding time as an important element in their overall analysis, they have ensured that time has continued to be a recognized part of Marxist discourse, even if it has not received the level of attention it deserves. Of the most recent works, Moishe Postone has arguably made the most important contribution with his book *Time, Labor and Social Domination*, published in 1993. Certainly, he has generated further debate around the subject of time, which is a central element of his controversial “reinterpretation” of Marx’s ideas.

A social theorist with strong affiliations to the Frankfurt school and currently Professor of History at the University of Chicago, Postone is, according to Martin Jay, part of a “distinct generation of non-dogmatically leftist intellectuals” who have defined themselves “largely by reference to the absorption of themes from Western Marxism, itself basically the creation of comparably unaffiliated men of ideas rather than action.”¹ He is part of a generation, which, while being inspired by the excitement of the late 1960s, responded in various ways to the disheartening events of the 1970s, which had resulted in a loss of confidence in the theory and practice of Western Marxism. Postone has responded to the “Marx after Marxism”² debate by fundamentally reinterpreting Marx’s “mature” critical theory “in order to reconceptualize the nature of capitalist society.”³ In particular, he has stressed the historical specificity of Marx’s critique, which, in turn, “delineates Marx’s final
break with ... notions of the philosophy of history." In so doing, he has inevitably reconceptualized the nature of historical time.

Postone is difficult to categorize in relation to the spectrum of Marxist theorists discussed in the previous chapter. While he interprets Marx's ideas of time by emphasizing its Hegelian elements, which places him at odds with the positivist Marxists, he rejects, in part, the transhistorical, essentialist elements of Hegelian-Marxism. Again, while he differs from the positivists in invalidating transhistorical elements, he shares with them, in contrast to the Hegelian-Marxists, an emphasis on deterministic forces above human agency as a force underlying the construction of time. Moreover, he is aligned to Althusserian-influenced post-Marxism in his ahistorical rejection of transhistoricity, but departs from it by posing an historically specific notion of historical time as a " totality". At the same time, although he rejects those aspects of Western Marxism that argue for a transhistorical understanding of the "whole", he, like many of them, emphasizes the epistemological aspects of Marx's thought and has a predominant concern with modern, capitalist society and the temporal contradiction which underlies it. Not only is Postone's notion of time characterized by apparent contradictory positions, but it is also central to his reinterpretation of Marx.

Indeed, Postone places considerations of temporality at the centre of Marx's analysis and, in so doing, lays the foundation for an analysis of modern capitalist society as a "directionally dynamic society structured by a historically unique form of social mediation that, though socially constituted, has an abstract, impersonal, quasi-objective character." In suggesting that Marxian theory should be understood as a critical theory specific to capitalist society rather than a universally applicable theory, he bases his argument on an analysis of the historical specificity of capitalism "by means of categories that grasp its specific forms of labor, wealth and time." Postone presents his argument in three parts: first, he critiques "traditional Marxist" views of labour; secondly, he presents his reconstruction of Marx's theory through an analysis of the commodity; and thirdly, he considers the directional, dynamic nature of the trajectory of capitalist development through a reconstruction of Marx's theory of capital.
In Part One of his book, Postone critiques “traditional Marxism,” a term he applies to a diverse range of theoretical approaches which analyze capitalism from the “standpoint of labor” and which consequently characterize capitalist society as structured by private ownership of the means of production and a market regulated economy; that understands relations of domination primarily in terms of class domination and exploitation; and that focus on the mode of distribution, rather than production.\textsuperscript{7} He argues that at the core of all forms of traditional Marxism is a transhistorical conception of labour, according to which labour is understood:

\begin{quote}

in terms of a goal-directed social activity that mediates between humans and nature, creating specific products in order to satisfy determinate human needs. Labor, so understood, is considered to lie at the heart of all social life: it constitutes the social world and is the source of all social wealth. This approach attributes to social labor transhistorically what Marx analyzed as historically specific features of labor in capitalism.\textsuperscript{8}
\end{quote}

He suggests that, so conceived, labour underlies a uniform, evolutionary dialectic that drives the history of all societies. It is an approach, he argues, that no longer grasps social reality adequately, particularly in the light of the growing importance of scientific knowledge and advanced technology in the process of production.\textsuperscript{9}

In Part Two, through a consideration of the \textit{Grundrisse}, Postone demonstrates that Marx’s mature theory developed categories that are historically specific. He argues that Marx established the historical specificity of the commodity by exposing its dual nature as a product of concrete and abstract labour, and by regarding value as an historically specific form of wealth that presupposes an historically specific form of labour. Thus, Postone argues that value does not refer to wealth in general, but “should be examined as a form of wealth whose specificity is related to its temporal determination”\textsuperscript{10} in that value is measured by “abstract time,” which, in turn, is an historically specific, socially constructed, concept. Postone further argues that the forms of social mediation and domination constructed in capitalism are historically specific, and therefore distinguishable from non-capitalist societies, which are characterized by “manifest social relations” through which “the social distribution of labor and its products is effected.”\textsuperscript{11} He suggests that the mediation of social relations by abstract labour creates a “determinate sort of social whole - a totality”
through which social relations are established through commodity exchange, which, in turn, creates an "abstract," or "quasi-objective" form of capitalist domination.¹²

Finally, in Part Three, Postone considers how capital consists of a quasi-autonomous developmental logic which constitutes social structures that exert an impersonal compulsion on people, and that expropriate and usurp the human attributes of "agency".¹³ He argues that this form of social domination, which "induces a rapid historical development in the productive power and knowledge of humanity,"¹⁴ generates an historical dynamic and "trajectory" of development that is beyond the control of the individuals constituting it.¹⁵ Postone describes the movement of historical time that this dynamic generates as a "treadmill effect," consisting of dialectical movement of "transformation and reconstitution" which intensifies capital's fundamental contradiction, eventually rendering it obsolete. He argues that, through the development of technological capacity, value becomes increasingly inadequate as a measure of the material wealth produced, thus giving rise to the immanent possibility of a new social form, one in which human relations are not mediated by abstract labour. Postone contends that his interpretation of Marx's critical theory provides a basis for analyzing the nature of the dynamic of modern society which has become increasingly dominated by state and bureaucratic institutions; for understanding current global social and economic transformations; and for recovering Marx's notion of socialism as a post-capitalist form of social life, where the historically specific role of labour in capitalism could be superseded by another form of social mediation.¹⁶

Reviewers of Postone's book have, in general, been favourably impressed, describing it as a "complex, dense, richly argued and rewarding monograph;"¹⁷ a "skilful reconstruction of Marx's critique;"¹⁸ the "fruit of long years of research and lengthy meditation" that is "well worth waiting for;"¹⁹ and a "timely study" which contains valuable resources for a renewed discussion of Marx in the face of the demise of Eastern European communism, the consequent global socio-economic restructuring and the continued unresolved nature of the crises of capitalism.²⁰ They generally concede that, even for those who hold other perspectives, Postone's argument "opens fresh departure points for the ongoing debate over Marx and Marxism."²¹ Of
particular relevance to this thesis are the references to Postone’s discussion of time and temporality, which is regarded as “especially novel and incisive.”

More detailed analyses of Postone’s argument, however, have identified his ahistorical rejection of transhistoricity, to which his understanding of time is central, as problematic. Geoffrey Kay and James Mott, in their critique of Postone’s interpretation of Marx’s concept of labour, argue that he collapses “the diachronic into the synchronic” by posing abstract and concrete labour as an “immediate unity” located exclusively in the sphere of production. In so doing, they suggest, Postone fails to acknowledge the temporal dimension involved in the commodity-producing process, whereby abstract labour is separated from concrete labour by time being located “some distance from it in the sphere of exchange.” Another reviewer, Joseph Fracchia, also takes issue with Postone on the question of his rejection of the transhistorical notion of labour, by focussing on the historiographical implications of this position.

In taking up these issues raised by Kay and Mott, and Fracchia, this chapter will consider aspects of Postone’s argument which relate to the question of historical time. Postone’s analysis of time is similar to the following two chapters of this thesis in that it is founded on a comprehensive reading of Marx’s later writings, although where it focusses mainly on the Grundrisse, this thesis focusses mainly on the three volumes of Capital. However, Postone’s analysis is based on a set of assumptions about historical time which stems from its disregard for Marx’s early “philosophical” works, which contrasts with the assumptions on which this thesis is based; that is, that those ideas about time that Marx formulated in his early works both influenced, and are present in, his later ideas. In general, Postone’s reinterpretation is similar to this thesis in relation to its analysis of the nature of historical time in capitalist society as a dynamic totality arising out of the contradiction between two opposed concepts of time, but it differs in its assessment of the implications of this position in relation to historical understanding.

This chapter, then, consolidates the general argument of this dissertation by defining it in relation to that of Postone’s. It outlines Postone’s reconstitution of Marx’s
concept of historical time, then notes how his ideas relate to questions of
transhistoricity and historical specificity, human agency and deterministic forces, and
absolute and relative time. In so doing, it identifies the elements of Postone’s
analysis that are both similar and different to the argument presented in this thesis in
general and more particularly in the following two chapters. It also distinguishes
those aspects of time which this thesis considers, but which Postone’s analysis does
not either because it overlooks them or because they are beyond the scope of its
project.

Postone’s interpretation of Marx’s understanding of time

Just as Postone stresses the historical specificity of labour in capitalism, so too, does
he emphasize the historical specificity of its temporal aspects. Thus, he argues that
historical time, as a directional, dynamic “whole”, is specific to capitalist society
only. Further, he suggests that the movement of history in capitalism is constituted
by two forms of time, which he refers to as “abstract time” and “historical time”, the
latter of which is a specific form of “concrete time”. According to Postone, time in
capitalism:

is not simply a linear succession of presents but is a complex dialectic of two
forms of constituted time. It involves the accumulation of the past in a form
that entails the ongoing reconstitution of the fundamental features of
capitalism as an apparently necessary present, marked by the domination of
abstract, homogenous, constant time, of time as present - even as it is hurtled
forward by another form of time, which is concrete, heterogeneous and
directional. This latter movement of time is ‘historical time’.²⁷

Postone establishes the basis of this view of historical time in his discussion of the
contradiction inherent in the commodity form, which is a product of both concrete
and abstract labour. He argues that, while concrete labour produces use-values,
which constitute “material wealth”, abstract labour produces “value” which is a form
of wealth that is historically specific to capitalism. Postone contends that it is this
two-fold character of labour that creates the historical dynamic that constitutes
historical time as a dialectic between “concrete time” and “abstract time”.²⁸ He
suggests, for example, that a distinction can be made between the use-value
dimension of the forms “(concrete labor, material wealth, concrete time)” and the
"value dimension of the forms (abstract labor, value, abstract time)."

Further, he understands the interrelationship between these two non-identical dimensions as:

not simply a static opposition; rather the two moments of labor in capitalism, as productive activity and as a socially mediating activity, are mutually determining in a way that gives rise to an immanent dialectical dynamic.

Postone argues that concrete and abstract labour, and hence material wealth and value, are distinguished by the way in which they are measured, that is, by two different forms of time. The measure of material wealth, he argues:

- can have a temporal aspect, but in the absence of the form of temporal necessity associated with the value dimension, this temporality is a substantive function of production - the amount of time actually required to produce a particular product. This time is a function of objectification and not a norm for expenditure. The changes in this concrete time of production which occur with the development of productivity are changes reflecting the historical movement of time.

Thus, material wealth is measured "either in terms of changes in the quantity of goods produced per unit time, for example, or in terms of changes in the amount of time required to produce a particular product." In contrast, value "is measured not in terms of the particular objectifications of various labors, but in terms of what they all have in common, regardless of their specificity - the expenditure of labor," which is "abstract time". Thus, the measure of value becomes "socially necessary", expressing a general temporal norm to which producers must conform:

- As a category of the totality, socially necessary labor time expresses a quasi-objective social necessity with which the producers are confronted.... The social totality constituted by labor as an objective general mediation has a temporal character, wherein time becomes necessity.

Postone, then, makes a clear distinction between two forms of time, concrete time and abstract time. Concrete time, he argues, refers to "various sorts of time that are functions of events. They are referred to, and understood through, natural cycles and the periodicities of human life as well as particular tasks or processes." Abstract time refers to "uniform, continuous, homogeneous, 'empty' time," which is independent of events and processes. With abstract time, motion and events occur within time as an independent framework, where time is a mathematical time, divisible into "equal constant, nonqualitative units." He demonstrates the way in
which concrete time, which characterized pre-capitalist societies, came to be
superseded by abstract time as a dominant form of time with the development of
capitalism.

Postone argues that the modes of time reckoning associated with concrete time are
based on repetitive natural events such as days, lunar cycles or seasons, or on
temporal units that vary in length, and that these modes were dominant in the ancient
world and medieval Europe. He suggests that abstract time, which divided time into
even, commensurable, interchangeable segments, originated around the fourteenth
century in Europe and gradually superseded concrete time, thus transforming the
social significance of time so that by the seventeenth century, it “was well on its way
to becoming socially hegemonic.”

In explaining the emergence of abstract time, Postone refutes technological
determinist arguments that suggest that it was the development of the mechanical
clock that effected the change in the constitution of time, arguing instead that the
transition was due to a change in sociocultural processes. The mechanical clock, he
suggests, “does not, in and of itself, necessarily give rise to abstract time.” He
supports his argument by reference to historical examples which demonstrate that
many pre-capitalist societies marked variable hours even when they possessed the
technical ability to mark equal hours. In short, Postone contends this was because
equal hours were not significant in terms of the organization of social life.

Postone then demonstrates how constant hours became meaningful in the
organization of social time. He argues that, although the monasteries emphasized
time discipline and time keeping, the mechanical clock originated in the urban
centres, which, by the end of the thirteenth century, had developed a greater need for
time regulation. Postone suggests, however, that this need was related more
specifically to the desire to regulate labour, which was achieved initially through the
use of work bells in the emerging cloth-making trade, the first industry to develop an
early form of the capital-wage labour relationship. Thus, he argues that “the
emergence of such a new form of time was related to the development of the
commodity form of social relations.”
In examining this social context, Postone notes that mechanical clocks spread rapidly in Western Europe throughout the fourteenth century. He suggests that, while initially abstract time did not impinge on rural life or the majority of the urban populace, affecting only merchants and the small number of wage-earners, it came to exert a more widespread form of domination - the “tyranny of time in capitalist society” - as the commodity form gradually became the dominant structuring form of social life over the following centuries.\textsuperscript{43}

In arguing that the forms of concrete time that dominated pre-capitalist society were superseded by abstract time as capitalist society developed, Postone nonetheless stresses that “the opposition between abstract and concrete time overlaps, but is not fully identical, with the opposition between time in capitalist society and time in pre-capitalist society.”\textsuperscript{44} Indeed, he points out that not only does the opposition between concrete and abstract time that he refers to relate to two \textit{forms} of time, rather than two modes of time measuring, but capitalist society also constitutes a particular form of concrete time as well as abstract time.\textsuperscript{45}

Postone argues that the opposition between the two forms of concrete and abstract time in capitalism generates an historical dynamic that is based on the interaction of the two dimensions of the commodity. This interaction involves a “substantive redetermination of an abstract temporal constant” where the “abstract temporal measure of value remains constant, yet it has a changing, if hidden, social content.”\textsuperscript{46} In other words, as productivity increases, the time unit becomes “denser” in terms of the amount of goods produced, yet this density is not manifested in the value sphere, as the abstract temporal unit and the total value produced remain constant. Postone points to the paradoxical nature of this situation, where the “abstract time frame remains constant despite being reetermined substantively.”\textsuperscript{47}

Postone suggests that the paradox this presents is resolved by reference, not only to a framework of abstract time, but also to a form of concrete time as a superordinate frame of reference. He explains that “changes in productivity move the determination of socially necessary labor time along an axis of abstract time,” but
"although the social labor hour is thereby redetermined, it is not moved along that axis." Rather, it remains fixed in abstract temporal terms so that each new level of productivity is redetermined "back" as the base level, yielding the same rate of value. Postone goes on to argue however, that, because a new level of productivity has been achieved, the "position" of that abstract temporal unit changes: "The entire abstract temporal axis, or frame of reference, is moved with each socially general increase in productivity, both the social labor hour and the base level of productivity are moved 'forward in time'."\(^{48}\) He contends that this movement of time can be understood as a sort of concrete time, so that "a feature of capitalism is a mode of (concrete) time that expresses the motion of (abstract time)."\(^{49}\) Further, he argues that this intrinsic dynamic of capital, with its "treadmill pattern," entails a "flow of history", and thus "can be considered historical time, as constituted in capitalist society."\(^{50}\)

Postone's interpretation of historical time, then, is one which expresses "the movement of time, as opposed to the movement in time,\(^{51}\) giving rise to a process of social development and transformation that is directional, and whose flow is a function of social practice. Postone writes that:

Historical time in capitalism, then, can be considered as a form of concrete time that is socially constituted and expresses an ongoing qualitative transformation of work and production, of social life more generally, and of forms of consciousness, values and needs. Unlike the 'flow' of abstract time, this movement of time is not equable, but changes and can even accelerate.\(^{52}\)

While Postone does not consider in any detail the changes in the nature of historical time, they are implicit in his discussion on the trajectory of capitalist development.\(^{53}\) He argues that value, which is the determining form of wealth and social relations in capitalist society, is becoming increasingly anachronistic due to the wealth creating potential of the productive forces to which it gives rise. Thus, he suggests that there is a growing contradiction between value and material wealth, although it does not appear to be so, and is a process intrinsic to the expansion of relative surplus-value. Postone writes that with the:

accumulation of historical time, a growing disparity separates the conditions for the production of material wealth from those for the generation of value ... [whereby] the social necessity for the expenditure of direct human labor in production gradually is diminished.\(^{54}\)
Postone argues that with manufacture, the process of production remains "bound to individual human labor," but with the development of large-scale industrial production, human labour becomes superseded as the primary social source of material wealth. "With the development of this mode of production, living labor gradually ceases to be the active, regulating force of production." However, although the development of large-scale industry means that development becomes independent of the immediate producers, the expenditure of direct labor time is still an essential, necessary element of capitalist production.

The dialectical dynamic involved in the trajectory by which machines gradually displace living labour points to the possibility of the alienated interaction between past and present being overcome. This would involve the abolition of value, and establishing a society based on material wealth, "in which increased productivity would result in a corresponding increase in social wealth." It would also involve the abolition of proletarian labour:

Marx's analysis implies that the abolition of value would allow for a socially general transformation of production that would entail the abolition of proletarian labor - through both the transformation of the nature of much work in industrial capitalism, and the abolition of a system in which people are tied for much of their adult lives to such work - while maintaining a high level of productivity. It would allow for a form of production based directly on the appropriation of historical time.

Postone suggests that the trajectory of capitalist development as presented by Marx can be seen in terms of the development of the social division of time from socially necessary, through socially necessary and superfluous, to the possibility of socially necessary and disposable. He points out that this would mean that work would be "fuller and richer for the individuals," and more varied and that wages would become a "form of socially general distribution," simply remuneration for labour time expenditure. Postone sees that the productive potential of advanced capitalist production means that "extra time" for the many potentially emerges, reducing socially necessary labour time and transforming the structure of labour and the relationship of work to social life. Indeed, the possibility exists for society to transform the social meaning of time. There would still be an "economy of time" but
the form of wealth would not be temporal; rather, people would control the economy of time for their own benefit. ⁶⁵

Postone, then, rejects the notion that historical time is a linear supersession of one mode of production following another:

The dialectic of objectified present time and objectified historical time can be summarized as follows: in capitalism, objectified historical time is accumulated in alienated form, reinforcing the present, and, as such, it dominates the living. Yet, it also allows for people’s liberation from the present by undermining its necessary moment, thereby making possible the future - the appropriation of history such that the older relations are reversed and transcended. Instead of a social form structured by the present, by abstract labor time, there can be a social form based upon the full utilization of a history alienated no longer, both for the society in general and for the individual. ⁶⁶

Thus, Postone endorses the notion that historical time is historically specific to capitalism. He asserts that, although there is a logic of history, it is immanent only to capitalism, not to human history as a whole, and thus history is not a moving force in every human society, nor is there a general directional dynamic of history. ⁶⁷

Postone’s analysis, instead:

seeks to explain the existence of the sort of ongoing directional dynamic that defines modern society.... This analysis implies that any theory that posits an immanent logic to history as such - whether dialectical or evolutionary - without grounding this logic in a determinate process of social constitution ... projects as the history of humanity the qualities specific to capitalism. This projection necessarily obscures the actual social basis of a directional dynamic of history. The historical process is thereby transformed from the object of social analysis into its quasi-metaphysical presupposition. ⁶⁸

Postone’s interpretation of Marx’s concept of time is complex. He sees historical time, which is immanent, dynamic and directional, as historically specific to capitalism, and characterized by two forms of time, concrete time and abstract time. Postone argues that the basis of historical time is located in the contradictory nature of the commodity form, which is produced by concrete and abstract labour and which, in turn, are measured by concrete time and abstract time respectively. He supports his contention that historical time is specific to capitalism by demonstrating that abstract time is a socially constructed concept that arose in the late Middle Ages in response to the need to regulate wage labour. Further, he argues that, in relation to
fully developed capitalism, the dominance of abstract time creates a static frame of reference, while capitalism’s drive to increase productivity, which makes each time unit denser through an accumulation of time, creates a “treadmill effect” which moves historical time forward. Postone concludes that the logic of history that this situation creates is immanent to capitalist society only, and thus cannot be seen to characterize human history as a whole. The cogency of his conclusion is the subject of the following section.

Is historical time transhistorical or historically specific?

Postone’s position on the transhistorical and historically specific elements of historical time, which rejects the validity of any transhistorical elements, and acknowledges only those that are historically specific, is perhaps the most distinctive feature of his overall analysis. It also the most problematic in regards to the question of historical interpretation in that it implies that Marx’s ideas are only applicable to capitalist society, thus rendering them irrelevant to understanding historical time and change in non-capitalist societies, and how one social form gives rise to another, including the rise of capitalism.

Before discussing these difficulties, it is worthwhile considering the nature of Postone’s critique of time, in that it bears some similarities to Marx’s own critique of Hegel’s concept of time. As Chapter Two demonstrated, Marx’s critique of Hegel revolved, in part, around the transhistorical and historically specific nature of time. Marx critiqued Hegel, who posited the “eternal” or “absolute” realm as transhistorical and the material world of “time” as historically specific, for privileging the eternal, or transhistorical aspects of Time (as Concept) over its historically specific manifestation. Marx invalidated the transhistorical notion of the eternal or absolute by making time - as manifested through material, human productive activity - the locus of true reality. Thus, for Marx, the “essence” of time was not its absolute or abstract nature, but its relative or concrete nature; that is, time was manifested through human activity, and did not exist outside or beyond it. Marx saw this essence of time as fundamental to all human societies, although the “form” in which it was manifested - through customs, social practices, beliefs, and
perceptions - changed. Subsequent interpretations of Marx that are based on his critique of Hegel have thus considered Marx’s notion of the essence of time as transhistorical, and its particular forms as historically specific.

In critiquing such “traditional” interpretations, Postone retains the notion of the essence or the “whole” but rejects the idea that this essence is transhistorical, instead making it historically specific to capitalism. He does so in much the same way as Marx rejects the notion that the essence was absolute and eternal, instead making it historically specific to human society. Thus, just as Marx rejects the “eternal” as a primary determining, transhistorical, factor in historical understanding, Postone rejects “historical time” as a transhistorical feature in understanding historical change. Postone’s notion of the essence of capitalism as an historically specific form of labour as both concrete and abstract labour is, like Marx’s notion of essence, contradictory, but because it lacks the ontological basis that Marx provides in his early works, this contradiction is problematic.

Kay and Mott explore this problem in relation to Postone’s understanding of labour as self grounding or self mediating. Noting ambiguities in Postone’s understanding of labour, they question his perception of the nature of the relationship between use-value and exchange-value, concrete and abstract labour:

By bringing concrete and abstract labour into an immediate unity, i.e. positing labour as self-mediating, he closes off the space that the distinction between potentially abstract and actually abstract labour would occupy.⁶⁹

In failing to take account of the distance in time between concrete and abstract labour, Postone fails to distinguish between “potentially abstract and actually abstract labour.” His rejection of ontological grounds “does not afford him adequate protection from the methodological pitfalls of the ‘grounding’ concept,”⁷⁰ which results in the “incapacity to produce the difference between the ground and the grounded.”⁷¹ Postone endows the “activity of production with the immediate capacity to function as social mediation.”⁷² Thus, the validity of Postone’s rejection of an ontological understanding of labour, particularly in relation to broader issues of historical explanation, is questionable.
Postone does not actually deny the transhistorical nature of labour; indeed, at one point he writes that:

In its basic and abstract determinations, the labour process is the universal condition for the transformation of matter, the metabolic interaction of humans and nature and, hence, a universal condition of human existence.\textsuperscript{73}

Nor does he refute the notion that transhistorical categories such as concrete labour, use-value and material wealth exist in both non-capitalist and capitalist societies; he merely renders them groundless. Somewhat disingenuously, then, he uses transhistorical categories to expose the historically specific nature of historical time while, at the same time, he denies them any validity for understanding the movement of history.\textsuperscript{74} For example, he notes two modes of dialectical interactions that exist in some form in various societies: first, the way that people, by acting on external nature and changing it, change their own nature (which are forms of concrete labour); and secondly, the way that social practice and social structure constitute a particular form of social life. He argues, however, that a directional dynamic is not intrinsic to these dialectical modes, but only become so when they are embedded within a third dialectical interaction constituted through the “twofold character of labor” which is specific to capitalist society.\textsuperscript{75} Early social formations, he argues:

possess dynamic elements and point beyond themselves only to the degree that their forms of surplus production possess elements of the commodity form. However, the commodity becomes a totalizing social form, a determination of the mode of existence, only with capitalist society.\textsuperscript{76}

Generally, then, Postone regards transhistorical concepts as invalid to an effective understanding of Marx’s ideas, as a self-reflexive, critical theory.

One of the difficulties that arise from Postone’s denial of the validity of transhistorical concepts is his inability to explain effectively how capitalism, and, specifically, how capitalism’s historical time, arose. Postone argues that abstract time is an historically specific concept, arising at the same time as capitalism. While this is true to a certain extent, it is also clear - as Chapter One pointed out and as is implied in Postone’s own acknowledgment that some pre-capitalist societies such as China measured time, in some circumstances, in constant hours - that certain formulations of abstract or absolute time were also present in ancient and medieval
societies, as were other forms of abstraction such as a transcendent, monotheistic God. Yet, Postone does not acknowledge these abstract forms of thought which point to evident continuities between pre-capitalist and capitalist societies, regarding them as invalid because they are not dominant and hence determining. Thus, because he emphasizes only the discontinuity apparent in the appearance of abstract time, and relatedly also of wage labour, he fails to address or explain how abstract time, abstract labour, and value as historically specific forms came into being. As Kay and Mott put it in relation to the notion of abstract labour, but which equally applies to the notion of abstract time:

Postone assumes abstract labour to be present in a fixed form from the start, as though abstraction was an event that occurred in the immediate pre-history of capitalism, a sort of primal implosion. 

Postone's seeming lack of concern with the question of historical explanation, together with his rejection of transhistoricity and the associated notion of "an immanent logic of human history," allies him, in some respects, to the postmodern position. Yet, because he posits an "essence" to capitalist society, he distinguishes himself from them, denying that his view implies a relativism where history is "the result of the intersections of a variety of social processes each with their own temporalities." Rather, he argues that historical time is the historically specific form of a global process, mediated by a "world market that becomes increasingly integrated in the course of capitalist development," and which entails "the constitution of world history".

To the degree that one can speak of a notion of human history in Marx's mature works, then, it is not in terms of a single transhistorical principle; rather, it refers to a movement, initially contingent, from various histories to History - to a necessary, increasingly global, directional dynamic.

However, Postone does not address or explain this movement from "histories" to History, from pre-capitalist "times" to capitalist "historical time". Indeed, his rejection of the validity of transhistorical concepts precludes this possibility. He can only conclude that pre-capitalist development can be understood as logically necessary only when viewed from the present, retrospectively:

the process of historical transformation from one social mode to another is to be seen as a progressively less random development with the rise and full development of the commodity form. Not, however, as the unfolding of an
immanently necessary principle of motion.... The dialectic is not coextensive with the course of history but allows for its retrospective understanding.83

Thus, he sees that an acknowledgment of the transhistorical aspects of time results in a “projection onto history in general of capitalist society’s conditions,” which, in his view, is unjustifiable. In short, Postone’s argument implies that Marx’s ideas are only valid for an understanding of capitalist society.

In some respects, however, Postone’s emphasis on the epistemological aspects of Marx’s ideas are valid in that clearly, a self-reflexive element is present in Marx’s ideas. Indeed, the previous chapter acknowledged that, if we are to follow Marx’s own injunctions concerning the subject, his ideas about historical time could be understood as a product of the historically specific conditions under which they were formulated. Chapter Three also discussed the dilemma facing the Marxist historian who must recognize that, on the one hand, ideas are always based in historically specific conditions and that, as such, historical understanding always occurs through the lens of the historian’s present standpoint, and, on the other hand, there are continuities between our own and past societies that justify, and indeed enable, a retrospective understanding of the historical process as a whole.

However, acknowledging the historically specific elements of Marx’s concept of historical time does not necessarily preclude an acknowledgment of the transhistorical elements. Indeed, as Kay and Mott point out:

the labour process is both transhistorical and historically specific, transhistorical in the sense that it is a condition of all forms of society; historically specific in the sense that consciousness of this belongs exclusively to capitalist society.84

Fracchia also articulates this argument, suggesting that historical understanding requires a consideration of transhistoricity:

In his methodological reflections on the nature of Marx’s categories, Postone establishes an either/or situation: either categories are transhistorical and ontological, the consequence of which is a teleologically driven theory of inevitable historical evolution, or they are determinate and historically specific as, in Postone’s view, Marx constructed them. Wanting understandably to avoid the former, Postone goes on to the opposite extreme. But the major consequence for historical theory of his categorial imperative is
either to relegate it to the status of untenable universalizing or to render it impossible. I would argue, however, that the lack of historical theory results in a degree of historical shortsightedness whose consequences become visible at the margins of his analysis; and I would argue that these problems can be corrected only by ‘transhistorical’ reflection.85

Fracchia contends that Marx:

rejected the mutually exclusive choice of either transhistorical, ontological categories or historically specific categories and developed instead transhistorically abstract categories as a necessary prelude to the construction of historically specific categories.86

To support his argument, Fracchia draws on The German Ideology, where Marx and Engels suggest that:

When reality is depicted, philosophy as an independent branch of knowledge loses its medium of existence. At the best its place can only be taken by a summing-up of the most general results, abstractions which arise from the observation of the historical development of men. Viewed apart from real history, these abstractions have in themselves no value whatsoever. They can only serve to facilitate the arrangement of historical material, to indicate the sequence of its separate strata. But they by no means afford a recipe or schema, as does philosophy, for neatly trimming the epochs of history. On the contrary, our difficulties begin only when we set about the observation and the arrangement - the real depiction - of our historical material, whether of a past epoch or of the present.87

Fracchia claims that Marx sees transhistorical reflection as necessary to determine the “prerequisites” of history. However, he points out that Marx also cautions that the highly abstract character of transhistorical reflections “prevent them from providing a ‘recipe or grid’ for the historically specific understanding of any particular social form.” Fracchia writes:

At this level of transhistorical reflection, the categories, like the prerequisites, are abstract enough to be common to all societies and thus able to serve as guides to approach the analysis of a given social form; yet the abstract character of these assumptions and categories prevents them from grasping any social form in its historical specificity.88

Thus, Fracchia notes that, while transhistorical reflections are useful for differentiating between social forms, they are without value if considered independently of concrete analyses.89 In short, historical understanding must involve both transhistorical and historically specific elements.
Unlike Postone's stance, this thesis adopts a view similar to Fracchia, in that it argues that an understanding of Marx's concept of historical time should incorporate both transhistorical and historically specific features and that, by acknowledging historical specificity, transhistoricity is not necessarily invalidated. It suggests that, on the one hand, Marx offers an explanation of historical change that applies to history as a whole in the form of a dialectical force that manifests historical time through human productive activity, while, on the other hand, he recognizes that capitalism constitutes an historically specific temporal logic or form of historical time. Further, it contends that this position enables the historian to trace continuities both within, and between, societies with reference to the transhistorical elements of historical time, and, in so doing, to give expression to history as a whole, while at the same time recognizing that the whole consists of many interrelated parts. It demonstrates that this continuity is found, not in an overriding temporal structure, but in the human experience of time as expressed through creative activity.

Despite the difficulties inherent in Postone's approach to the transhistorical aspects of historical time, his critique performs an important function by challenging assumptions about time in much the same way as the postmodern critique does. It presents new ways of exploring the historically specific features of time that are more inaccessible when operating under the assumption that time has transhistorical features, and prompts a questioning of the assumptions themselves. In particular, Postone's critique opens up new, useful ways of thinking about the forces that underlie the constitution of capitalist historical time and the relationship between concrete and abstract time in the capitalist process, issues which are the focus of the remainder of this chapter.
Do human agents or deterministic forces construct time?

The first theme underlying this thesis concerning the transhistorical and historically specific features of time is integrally related to the second theme; that is, the extent to which human agency and deterministic forces underlie the construction of time. Indeed, for this thesis, an acknowledgement of the validity of transhistorical elements of time implies an acknowledgement of the central, determining role for human agency, as it is human productive activity that constitutes the transhistorical elements of time. Thus, Postone’s rejection of the validity of transhistorical categories implies a denial of human agency as a primary historical force and a recognition of objective laws of capitalist development as the main determinant of historical time.

One of the consequences of his position on this issue is that Postone is prevented from adequately theorizing or explaining historical change. According to Bob Jessop, “although Postone provides an interesting account of the contradictions within capitalism, he hardly considers how they might be materially abolished and what social forces might accomplish this.” David McLellan also makes this point:

Postone does not provide us (any more than Marx himself) with an account of alternative, postliberal, collective forms of social organization outside the sphere of immediate production. We are left to imagine how workers might become collective commodity owners. This ‘political deficit’ is one that Marx bequeathed to his followers and that remains unfulfilled.

Again, Martin Jay points out that “Showing that structural conditions for change exist is a far cry from explaining the motor of the change itself.”

Interestingly, these are similar criticisms to the one that Postone levels at Jacques Derrida in his review of Derrida’s Spectres of Marx. Postone suggests that, for Derrida, “fundamental change can occur only as the result of a completely unexpected rupture; it is not a possibility immanent in the present.” In contrast, Postone suggests that it is the “accumulation of past time that undermines the necessity of the present and makes possible a different future. Here the future is made possible by the appropriation of the past.” However, Postone does not regard an understanding of the transhistorical elements of historical time to be necessary to
explain fully the “motor” or forces of history, an understanding which, as this thesis argues, involves the idea that time, as it is manifested at the level of people’s activity, their experiences, and their lives, fundamentally shapes the structures of time of a particular society, including capitalism.\textsuperscript{95}

Postone’s views on the fundamental forces underlying the constitution of historical time in capitalism are evident in his comments on the subject of historical process, whereby he argues that “capital - not labour - is the self-moving substance which is Subject.”\textsuperscript{96} His position suggests that deterministic forces of capitalist logic are more fundamental to the construction of historical time than human agency. Indeed, Postone argues that:

Marx suggests that a historical Subject in the Hegelian sense does indeed exist in capitalism, yet he does not identify it with any social grouping, such as the proletariat, or with humanity. Rather, Marx analyzes it in terms of the structure of social relations constituted by forms of objectifying practice and grasped by the category of capital (and hence, value).\textsuperscript{97}

Thus, Postone suggests that it is the “quasi-objective structures grasped by the categories of Marx’s critique of political economy” that constitute the historical Subject,\textsuperscript{98} and that Marx accords capital - as an alienated, quasi-independent social form which “exerts a mode of abstract compulsion and constraint on people” and which is thus “independent of individual will”\textsuperscript{99} - the “attribute of agency.”\textsuperscript{100} He argues, for example, that Marx shows “how the labor process in capitalism is structured in such a way that precisely those aspects that initially were presupposed as uniquely ‘human’ - for example, purposiveness - become attributes of capital.”\textsuperscript{101} Postone’s view, then, is that historical time as a dynamic directional totality is constituted primarily by objective structures determined by an impersonal capitalist logic. This is increasingly the case with the development of large-scale industry, and the shift to the predominance of relative surplus-value production, when “living labor gradually ceases to be the active, regulating force of production.”\textsuperscript{102}

The consequence of this position is that Postone sees human agency - in the form of class activity - as a secondary element in the constitution of historical time. He acknowledges that “class relations of exploitation are an important element of the
dynamic development of the social formation of the whole,” but sees that “those relations do not, in and of themselves, give rise to that dynamic development.”

Rather, he suggests that class relations are constituted by, and embedded in, forms of quasi-objective social mediation, on both the level of highly politicized social action and on an “everyday” level. Postone contends that:

class conflict becomes an important factor in the spatial and temporal development of capital, that is, in the distribution and flow of capital, which becomes increasingly global, and in the dialectical dynamic of the capital form. Class conflict becomes a driving element in the historical development of capitalist society,... however, it neither creates the totality nor gives rise to its trajectory ... because it is structured by, and embedded in, the social forms of commodity and capital.”

Thus, Postone sees that while human agency does play a significant role in shaping historical time, it is not a primary force underlying its constitution.

Postone argues, though, that historical time is constituted by a complex relationship between objective, impersonal forces of capital and the will of people to shape their world:

Marx’s analysis can be understood as a very powerful and sophisticated attempt to show that, with the development of the commodity as a total social form, people already ‘make’ the world around them. This indicates retrospectively that people earlier also constituted their world; the form in which people make the world under capitalism, however, is very different from earlier forms of social constitution. The modern, capitalist world, according to Marx, is constituted by labor, and this process of social constitution is such that people are controlled by what they make.

However, Postone’s statement, as does his “historically specific” position in general, begs the question, how did people in non-capitalist society make their world? In other words, what is the motor of history, or the fundamental force underlying the construction of time in non-capitalist societies? Postone seems to be suggesting that human agency is a force underlying the constitution of non-capitalist time to a much greater extent than the construction of capitalist time. He writes, for example, that in pre-capitalist social formations, “the social distribution of labor and its products is effected by a wide variety of customs, traditional ties, overt relations of power, or, conceivably, conscious decisions.” As the previous section pointed out, Postone sees that, while labour in these circumstances may have a dialectical character, it
does not constitute a dynamic totality. He seems to be suggesting, then, that non-capitalist societies as a whole are static and have no historical time, and that any movement of time occurs on an individual level, not on the level of a particular society as a whole.

Jay takes issue with Postone in this regard. He points to the existence and influence of commodities, money and abstract philosophy in earlier societies, as well as other sources of abstraction "which may also dominate the human subject to them." Jay notes, for instance, that monotheism provides a "salient instance of abstraction," while language also "necessarily employs abstract signifiers to signify an infinity of different phenomena." He argues that these examples suggest that pre-capitalist social relations were less overt and transparent than Postone avers. Jay implies that, in non-capitalist societies, deterministic, objective forces as well as human agency influence the construction of time and shape the temporal logic of a particular social form.

While Postone appears to exclude the possibility that such structural forces exist in pre-capitalist society, he nonetheless admits that a form of necessity and universality would operate in a future, post-capitalist society. He suggests, for example, that Marx's "analysis points toward the possibility that another dominant form of universality might be constituted," a possibility that stems from Marx's notion that "the existence of surplus production - more than is necessary to satisfy producer's immediate needs - is a condition of all 'historical' forms of social life." Postone appeals to this transhistorical element as a form of necessity that would operate in a future society:

Just as one must distinguish between an economy of time and the domination of time, in Marx's mature theory, one must also, in considering the relation between labor and social necessity, distinguish between transhistorical social necessity and historically determinate social necessity.

He argues that, while capitalist society is bound to both forms of necessity, a post-capitalist society would contain only a transhistorical form of social necessity that is "rooted in human life itself." As this chapter outlined earlier, he then goes on to discuss the way time would be constructed in post-capitalist society. Thus, when
contemplating the forces underlying non-capitalist society, Postone cannot avoid resorting to the notion of human agency as a transhistorical element underlying the construction of time, despite his denouncement of its validity as a means of understanding historical time in capitalist society. Needless to say, he does not examine the influence of human agency in any depth.

Indeed, whether it is consequent to his position on human agency or due the "preliminary" nature of his analysis, Postone does not consider the particular social and historical temporal forms that human agency gives rise to. He writes:

I shall not be able to consider other important dimensions ... such as the processes by which a class is constituted socially, politically and culturally on a more concrete level, or relatedly, the question of collective social and political action.115

As a result, Postone has been open to the charge by Robert Antonio "that he poses an ahistorical, capital logic," a problem which "would not arise if he mediated his conceptual analysis with illustrations from actually existing capitalism."116 Similarly, Kay and Mott question Postone's claim that his analysis "grasps social reality adequately," expressing doubt over whether a post-capitalist liberal society as outlined by Postone could be understood by an approach which emphasizes impersonal and abstract forms of power over personal or concrete forms: "the introversion brought about by his notion of labour as self-grounding makes it hard to see how his approach can ever step down from the plane of high abstraction."117 He is also criticized on this point by George McCarthy.

McCarthy's analysis of Marx's concept time, which was outlined in the previous chapter, bears certain similarities to Postone's in that it emphasizes that time is an expression of the Concept as capital, and that, consequently, logic determines the ground of history. He writes, for example, that the: "Concept, though grounded in the historical, for Marx, moves according to its own logic constantly adjusted and informed by history."118 At the same time, McCarthy suggests that one of the weaknesses in Postone's analysis is how to justify "the relationships between Marx' economic categories and the social reality." He argues that Postone's approach fails to explain the relationships between ideas and reality, subjectivity and objectivity,
thus creating a conflict between the perspective that emphasizes that Marx begins with an actual historical entity, and that, as held by Postone, which suggests that Marx begins with an “abstract universal category that is historically specific.”

McCarthy suggests, however, that if we understand the commodity to be both an historical category, and a theoretical abstraction, both moments are true. In this way, he claims to demonstrate, unlike Postone, that this logic has a material dimension in that capitalist society expresses this logic through the commodity form. McCarthy concludes that how “the contradictions are worked out in the social reality is an historical question, which can only wait for the intervention of social action on the structures of political economy.” It is, nonetheless, a question that, like Postone, he does not address.

**What is the relationship between absolute and relative time?**

If Postone rejects the idea of tranhistoricity and that of human agency, he accepts the concepts of absolute and relative time. In noting that abstract time is “independent of events” while concrete time is a “function of events”, he employs definitions similar to those adopted in this thesis. Indeed, in arguing that abstract/absolute and concrete/relative time are integrally related to one another in the constitution of historical time in capitalism, which, due to the co-existence of these two forms of time, is a directional, dynamic totality, he reflects the position of this thesis.

Postone’s identification of the co-existence of abstract and concrete time, which constitutes an historically specific form of concrete time in capitalism, is a valuable contribution to understanding Marx’s concept of historical time. His perception of the role of abstract time as an historically specific construct is useful, and is well supported by his depiction of its emergence in the fourteenth century and its rise to dominance by the seventeenth century. Furthermore, his argument that there are different “forms” of concrete time, of which capitalist historical time is one, is sound, as Marx clearly does understand historical time as a function of events, expressed through historical processes, an understanding which derived from the influence of ancient Greek philosophy and Romantic Idealism on his thought, and which
distinguished him from the Enlightenment thinkers, who tended to see historical time as abstract, existing independently of events.

However, while this thesis has no major disagreement with Postone’s argument in relation to absolute and relative time, aside from the issues it raises in relation to transhistoricity and historical specificity which has been addressed earlier in this chapter, it is concerned to examine, in more detail than Postone, the nature of the relationship between absolute and relative time. In particular, there are four important areas which Postone fails to develop: how concrete time underpins the categories of use-value and concrete labour; how other features of concrete time are part of the nature of historical time; changes in the “form” of concrete time itself; and its implications for historical understanding.

First, while Postone argues that concrete time underlies the categories of use-value and concrete labour, he does not effectively demonstrate how it does so. Rather, he contradicts this position when he discusses the temporal dimension of material wealth, which is created by the production of use-values by concrete labour, in terms of abstract time, not concrete time. For example, he writes that the temporal measure of material wealth is “the amount of time required to produce a particular product.”\(^{122}\) Thus, while he sees this measure as individual to the specific product, it is nonetheless measured by an evenly divisible concept of time.

Postone’s positing of abstract time as underlying the measure of both use-value and exchange-value, and both concrete labour and abstract labour, is perhaps a part of the same problem concerning his concept of labour that Kay and Mott have identified, when Postone posits concrete and abstract labour as existing simultaneously: “labour is actually concrete and actually abstract at the same time.”\(^{123}\) In contrast to this view, Kay and Mott argue that use-value and exchange-value, and concrete and abstract labour, are not only separated by time - the former being present in the act of production and the latter in the act of exchange - but also qualitatively different from each other.\(^{124}\) It follows from this that the concept of time that underlies them, and which acts as their measure, are also fundamentally different.
Indeed, unlike abstract or absolute time, which measures abstract labour and the magnitude of exchange-values, the temporal aspect underlying concrete labour and the production of use-values needs to be understood in qualitative, rather than quantitative, terms. As such, a form of relative time emanates through the actual productive activity involved in creating a particular product, manifesting itself in the use-value of the product, both in terms of the concrete labour that underpins its production and in terms of its own life-span.

Consideration of the temporality of the commodity form itself is important to an understanding of the nature of relative time. Kay and Mott note that “commodities have a life-history which unfolds though time.” Moreover:

the commodity changes its character during the course of its life ... [its] double character changes with time and is not constant. As it is with commodities so it is with the labour which produces them.\textsuperscript{125}

Kay and Mott compare this temporal process of labour, which comprises abstract and concrete labour, with that of capital, which comprises of commodities in their natural form, as money. These elements “retain their separate identities” and:

are held together by the constantly recurring change from one form to the other. They are capital only in the circuit M-C-M’ which is a ‘movement’ or ‘process’ which necessarily occurs in time. As Postone makes time a central issue in his work, it is surprising that he ignores it as a dimension of the nature of labour, but then, unlike the Aristotelian-inspired distinction between potentiality and actuality which is ideally suited to take it into the reckoning, the notion of self-grounding as Postone employs it in relation to labour squeezes it out.\textsuperscript{126}

This suggests that, had Postone considered the Aristotelian aspects of Marx’s thought, he may have examined how relative time is a function of an organic temporal process, and, in so doing, have gained a better understanding of the complexities of the temporal process in both the production and circulation spheres.

Secondly, Postone does not consider certain features which are inherent in relative or concrete time and which manifest themselves through the production and circulation processes. Although he notes that an increased “density” or “accumulation” of time occurs and that acceleration is also evident, he considers these features in relation to
historical time as a whole and not on the level of specific processes. Thus, while his description of the movement of historical time in terms of two “frames of reference” constituted by abstract and concrete time is useful and innovative, it does not fully describe the nature of capitalist historical time. Certainly Postone needs to examine the way in which relative time is expressed through the method of producing relative surplus-value, which involves a consideration of certain features of relative time such as multiplicity, discontinuity, fragmentation and acceleration. Moreover, he should analyze how these features of relative time are evident in circulation processes as well as production processes. Indeed, as Kay and Mott note, one of the problems of Postone’s approach is his emphasis on production at the expense of circulation. This problem is exacerbated by Postone’s neglect of Marx’s ideas about time as expressed in Capital: Volume 2, a major theme of which is the way relative time – and its accompanying features of multiplicity, discontinuity and fragmentation – emanate through the circulation and reproduction of capital.

Thirdly, Postone tends to deal only with historical time as a “whole”, resulting in what is, essentially, a synchronic analysis of capitalist society. In so doing, Postone notes that his “investigation of the dynamic relationship of productivity and value presupposes fully developed capitalism; this relation is the core of a pattern that only fully comes into its own with the emergence of relative surplus-value as a dominant form.” Thus, while he does discuss the trajectory of capitalism in terms of the increasing significance of technological productivity and a corresponding decrease in the importance of labour, he does not link these changes with changes in the nature of time. Postone tends to see the relationship between abstract and concrete time as static, changing only when historical time itself is rendered obsolete with the eventual transition from capitalism to a future, post-capitalist society. Ironically, then, Postone’s ahistoricity in this regard means that he poses a “transhistorical” concept of capitalist historical time in that he overlooks the way that material changes within capitalism itself change the nature of historical time. Clearly, while there are constant, unchanging or “essential” features of capitalist historical time, there are also significant, historically specific changes in its nature, particularly in terms of the relationship between relative and absolute time.
Finally, Postone fails to emphasize the implications of the co-existence of absolute and relative time for the question of historical understanding. While, as he argues, capitalism does produce a specific form of historical time which can be understood as being constituted by two forms of time, absolute and relative, historical time should also be seen as a complex and changing, but nonetheless singular, organic process which consists of multiple times subsumed within it. Again, while he rightly acknowledges that capitalist historical time is a product of "modern" society, he needs to consider shifts in how historical time has been understood within modern society itself, shifts which reflect changes in the material conditions of society, particularly its methods of producing surplus-value.

Conclusion

Undoubtedly, Moishe Postone has made a significant, albeit controversial, contribution to understanding Marx's concept of historical time by emphasizing its epistemological aspects and historical specificity. In arguing that historical time as a dynamic, directional totality is historically specific to capitalism, and is constituted by abstract and concrete time, he suggests that the historical process inherent in this temporal logic does not characterize human history as whole, but merely capitalist society. In so doing, he opens up possibilities for reassessing the assumptions about transhistoricity and historical specificity that, too often, remain unquestioned in the Marxist literature.

Yet, as this chapter has argued, Postone's rejection of the tranhistorical elements of historical time is problematic in that it implies that Marx's concept of time has little to offer the historian who wishes to understand historical time in non-capitalist societies, or how change occurs between different social forms. Again, it poses problems for historical explanation in that it fails to address or explain how capitalist historical time as a totality came into being, or what existed prior to capitalism.

As has been noted, Marx's comments in The German Ideology support the idea that an understanding of historical time requires a consideration of both transhistoricity and historical specificity, and that time can be understood as tranhistorical in that it is manifested through human productive activity, and as historically specific in that
the forms in which this time is manifested, including that of capitalist historical time, changes.

Postone also emphasizes determinism as a primary historical force at the expense of a regard for the role of human agency. In fact, Postone sees that, while a complex relationship between objective forces of capital and human will shape historical time, human agency plays a secondary role in this process. In all of this, he does not address the forces that underlie the construction of time in non-capitalist societies, although he implies that human agency plays a greater role in those societies than in capitalist society, even though it does not give rise to historical time as a “whole”, a characteristic which is specific to capitalism. As has been pointed out, in making this argument, Postone disregards the deterministic, abstract forces that operate in pre-capitalist societies, while acknowledging their necessary existence in a future, post-capitalist society. Similarly, in not considering the particular temporal forms to which human agency gives rise, his analysis is divorced from concrete, empirical realities.

Finally, while he acknowledges the significance of absolute and relative time, concepts that he refers to as abstract and concrete time, he fails to probe fully their respective meanings. He does not analyze how concrete time is implicated in the categories of use-value and concrete labour, nor consider how it is involved in the actual methods of the production of relative surplus-value or through circulation processes. Above all, Postone’s synchronic analysis of capitalist society as a “whole” precludes him from analyzing changes in historical time itself, particularly in regard to the changes in the nature of the relationship between absolute and relative time, and from noting its implications for historical understanding.

In critiquing Postone’s interpretation of Marx’s concept of time in these ways, then, this chapter has highlighted where the argument of this thesis is both different and similar to that of Postone’s. It has pointed out that the two arguments are similar in their focus on Marx’s ideas regarding the nature of historical time in capitalism as a “whole” consisting of a dialectical relationship between absolute and relative time, but are different in their treatment of the role of human agency and the transhistorical
elements of Marx's concept of time. In the chapter that follows, these similarities and differences are explored by taking up the question of how Marx understood historical time to be socially constructed.
Endnotes

5 Ibid., p. 5.
6 Ibid.
7 Ibid., p. 7. Postone includes thinkers as diverse as Paul Sweezy, Ernst Mandel, Maurice Dobb, Rudolf Hilferding, Joan Robinson, Helmut Reichelt, and Georg Lukács. (See his Chapter Two entitled “Presuppositions of Traditional Marxism”, pp. 43-83). In so doing, he has raised concerns. Jay writes, for example, “the intellectual historian will want to know why Marx was so easily and consistently misunderstood by the multifarious figures Postone lumped together under the rubric of ‘traditional Marxism’; this is not a trivial issue.” (“Marxism after Marx”, p. 186.) Similarly, Joseph Fracchia notes that “the sweeping character of his category of ‘traditional Marxism’ might be disturbing. It is easy, for example, to be sceptical about what might seem to be making fellow travellers out of Marxists as diverse as the reductionist Soviet version and the innovative Western theoretical tradition.” J. Fracchia, “Review Essay of M. Postone’s ‘Time, Labor and Social Domination’”, History and Theory, vol. 34, (1995), p. 357.
8 Postone, Time, Labor and Social Domination, pp. 7-8
9 Ibid., pp. 10-11.
10 Ibid., p. 123.
11 Ibid., pp. 149-150.
12 Ibid., p. 159.
13 Ibid., p. 269.
14 Ibid., p. 30.
15 Ibid., p. 31.
16 Ibid., p. 39.
23 G. Kay and J. Mott, “Concept and Method in Postone’s ‘Time, Labor and Social Domination’”. Forthcoming in Historical Materialism.
24 Ibid.
25 Ibid.
26 Postone’s reinterpretation can be understood in the context of the increasing legitimacy of the notion that we have moved beyond the need to discover the ‘real’ Marx, a notion supported by Martin Jay: “Unless one is caught up in the increasingly tedious game of discerning intentions and relying on their authority in legitimating arguments, it is irrelevant whether Postone’s Marx is the ‘real’ one.” Jay, “Marx after Marxism”, p. 186.
28 Postone, Time, Labor and Social Domination, p. 305.
29 Ibid., p. 287.
30 Ibid.
Postone gives the example of China, which, after the second century BC, used one system of constant hours devised by the Babylonians, and, moreover, devised a sophisticated water-clock between 1088 and 1094 AD which measured constant hours and was used for astronomical calculations. Yet, Postone argues, these measures were not significant in the organization of social life. Similarly, the Japanese retained variable hours after the mechanical clock was adopted from the Europeans in the sixteenth century, and even modified the mechanical clock to read variable hours. (Ibid., pp. 204-206).

Postone also hints at this by suggesting that “the development of the capital form could, then, serve as the starting point for a sociohistorical examination of changing conceptions of time in the West since the seventeenth century”. (Ibid., in footnote 9).

Kay and Mott, “Concept and Method …”

Postone, *Time, Labor and Social Domination*, p. 279.


Postone, *Time, Labor and Social Domination*, p. 305.


Kay and Mott, “Concept and Method …”

Postone, *Time, Labor and Social Domination*, p. 258.
Ibid., p. 306, in footnote 22.
81 Ibid., p. 258.
82 Ibid., p. 377.
83 Ibid., p. 137.
84 Kay and Mott, “Concept and Method…”
86 Ibid.
89 Postone, Time, Labor and Social Domination, p. 369.
94 Ibid., p. 386. Postone’s position in regards to postmodernism is evident in his statement that: “The problem with many recent critical approaches that affirm heterogeneity, including Derrida’s, is that they seek to inscribe it quasi-metaphysically, by denying the existence of what could only be historically abolished. In this way, positions intended to empower people end up being profoundly disempowering, inasmuch as they bracket and render invisible central dimensions of domination in the modern world.” (Ibid., p. 383)
95 This argument is supported by E.P. Thompson, who points out that the creation of social structures and practice occurs through experience and process, which are based on human activity. For example, he writes that “changes take place within social being, which give rise to changed experience: and this experience is determining, in the sense that it exerts pressures upon existing social consciousness…” E.P. Thompson, The Poverty of Theory and Other Essays, (London: Merlin Press, 1978), p. 200.
96 Postone, Time, Labor and Social Domination, p. 75. Postone argues that capital is the “substance” or essence of capitalist society, the “self-moving substance” with no “fixed form” but which “appears at different stages of its spiralling path in the form of money and commodities.” Value, or capital, is constituted by labor which exists “behind” the commodities (Ibid., p. 269).
97 Ibid., p. 75. See pp. 75-80 for a fuller discussion.
98 Ibid., p. 78.
99 Ibid., pp. 76, 77.
100 Ibid., p. 269.
101 Ibid., p. 279.
102 Ibid., p. 342.
103 Ibid., p. 316. For the full discussion of class conflict, particularly in relation to the length of the workday, see pp. 316-323.
104 Ibid.
105 Ibid., p. 319.
106 On this point Postone acknowledges his similarity to G.A. Cohen, who also argues that class struggles do not constitute the trajectory of historical development, but must be understood with reference to that trajectory. However, he also distances himself from Cohen’s “transhistorical” presuppositions which see history as teleological and linear, claiming them to be “very dubious historically.” (Ibid., pp. 319-320, footnote 27).
107 Ibid., pp. 383-384.
108 Ibid., p. 149.
109 Ibid., p. 187.
110 Ibid., p. 188.
111 Ibid., p. 368. “Marx implicitly grounds socially the historical constitution of two very different modes of generality - one in the objective form of social mediation grasped by the category of value, and the other as an aspect of the use value dimension. The latter, according to Marx, is generated historically by the abstract form of mediation but is separable from it.” (Ibid.)
112 Ibid., p. 374.
113 Ibid., p. 380.
114 Ibid., p. 382.
Kay and Mott, "Concept and Method...") As Kay and Mott point out, part of the problem lies in the way Postone locates abstract labour in the sphere of production rather than exchange, which "necessarily conceives it as activity in some sense or other." They suggest that abstract labour is not activity, as "productive activity must be specific," as concrete labours. Further, they argue that Postone undermines the process of abstraction, as "abstraction can only be brought to bear directly on things like products which already have an established existence as concrete." In short, it is "not immediate and this further safeguards the 'natural form' of commodities." (Ibid.)


Ibid., p. 113. McCarthy is basing his critique on Postone's position as outlined in Postone and Reinecke, "On Niclas' 'Introduction' to the Grundrisse".

Ibid.

Ibid., p. 118.

Postone, Time, Labor and Social Domination, p. 297.

Kay and Mott, "Concept and Method..."

Ibid.

Ibid.

Ibid.

Ibid.

Maria Turchetto does this, and is so doing, engages more closely with Marx's consideration of historical, material conditions by considering the various histories of the proletariat and of monetary capital. Adopting a similar stance to Postone in arguing for the historical specificity of Marx's categories which operate within the parameters of a non-universal 'economic law' of capitalist motion, she argues for the existence of different, discrete and discontinuous processes which are many-sided, fragmented, and displaced chronologically. See M. Turchetto, "The Historicity of Marx's Categories", Science and Society, vol. 64, (2000), pp. 365-374.

Postone, Time, Labor and Social Domination, p. 287.
Chapter Five

The Social Construction of Historical Time

You know that Monday is Sunday's brother;
Tuesday is such another;
Wednesday you must go to Church and pray;
Thursday is half-holiday;
On Friday it is too late to begin to spin;
Then Saturday is half-holiday again.

Popular rhyme, 1639

Every morning at five o'clock the Warden is to ring the bell for beginning to work,
at eight a clock for breakfast, at half an hour after for work again, at twelve a clock for dinner,
at one to work and at eight to ring for leaving work and all to be lock'd up.

Law Book of the Crowley Iron Works, 1700

Introduction

From the late-thirteenth century on, a significant change in European society's perception and awareness of time gradually transpired, when people began to be conscious of the passage of time marked by clank of clock bells, which served, not only to regulate their day's activities, but to also remind them of time's fleeting nature and its inexorable march from birth to death. Renaissance writers like Shakespeare were expressive of this consciousness: "When I do count the clock that tells the time/ And see the brave day sunk in hideous night/ ... nothing 'gainst Time's scythe can make defence." This change was part of a momentous shift in Europe that saw feudal societies gradually decline and, in their place, capitalist society emerge and develop. How can this important transformation in time be understood and explained?

Marx's ideas about time provide a means to understand this shift, that is, in terms of the notion that time is a social and cultural construction that is a reflection of the material conditions of the society in which it is shaped. Indeed, such an understanding informs this chapter, which examines the different and changing constructions of time within and between feudal and capitalist societies in three main ways: firstly, by identifying the similarities and differences between the different social forms, and, in so doing, highlighting the transhistorical and historically specific aspects of historical time; second, by considering the forces underpinning the
way in which the forms of time arise, such as the role of the structures of time, people’s experiences of time, and the complex interaction between them; and third, by looking at the supersession of the feudal understanding of time and the idea of relative time which underpinned it, by capitalist society’s comprehension of time, to which the concept of absolute time is central. In these ways, this chapter considers the processes involved in the construction of historical time, processes which are shaped, in large part, by the means by which societies measure time.

In general, feudal societies measured time in reference to their agrarian life, which was governed by natural cycles and repetitive events such as days, lunar cycles and seasons, as well as particular events and processes. As Nigel Thrift suggests, these societies saw time as rhythmic rather than measured, with an “uneven quality,” consisting of “islands of time, self-enclosed units rather than segments of a continuous line.” For example, people understood time with reference to the “twelve months and four seasons, intermixed and sometimes isomorphic with the more formal church calendar and a ritual calendar.”

Feudal societies used relatively primitive devices to measure time, such as the sundial, invented by the Egyptians as early as 1500 BC. They often located the sundials, which were the main formal device used for telling the time in Europe until the fifteenth century, on church walls. Feudal societies also used the water-clock, or “clepsydra”, the hourglass and the technique of burning marked candles to mark the passage of time.

However, owing to the rarity of these devices and the difficulty of accuracy, people in feudal societies paid little attention to time, and measured it imprecisely. As Marc Bloch suggests, they:

lived in a world in which the passage of time escaped their grasp all the more because they were so ill-equipped to measure it. Water-clocks, which were costly and cumbersome, were very rare. Hour-glasses were little used. The inadequacy of sundials, especially under skies quickly clouded over, was notorious.
Bloch illustrates this with an anecdote about a judicial duel that was scheduled to take place at dawn, but for which one of the adversaries fails to arrive. At:

the ninth hour, which marks the end of the waiting period prescribed by custom, he requests that the failure of his adversary be placed on record. On the point of law, there is no doubt. But has the specified period really elapsed? The country judges deliberate, look at the sun, and question the clerics in whom the practice of the liturgy has induced a more exact knowledge of the rhythm of the hours than their own, and by whose bells it is measured, more or less accurately, to the common benefit of men. Eventually the court pronounces firmly that the hour of 'none' is past. To us, accustomed to live with our eyes turning constantly to the clock, how remote from our civilisation seems this society in which a court of law could not ascertain the time of day without discussion and inquiry?

In short, then, people in feudal societies measured the day with reference to variable natural time, from sunrise until sunset, when the day "was marked off in an approximate way by religious time, the horae canonicae, borrowed from Roman antiquity." Moreover, they did not mark the hours of the day into equal lengths but rather divided the periods of daylight and darkness into twelve hours each, which meant the hours would grow or diminish according to the time of year.

The development of the mechanical clock in the late thirteenth century introduced a very different means of measuring time to that which operated in feudal societies, and with it a radically new way of perceiving and understanding time. While the clock was a novel invention, and thus represents discontinuity in methods of time-measurement, it nonetheless involved technical aspects derived from past technological innovations, and, in this sense, represents continuity with previous societies.

Indeed, the origins of the mechanical clock can be traced back to ancient Greece, where astronomers used geared mechanisms to construct mechanical models that reproduced the relative motions of the heavenly bodies. In preserving and developing this knowledge of mathematical gearing, medieval Islamic astronomers extended the possibilities of this device. As Whitrow points out:

Although no definite links have yet been discovered between the first mechanical clocks and earlier geared astronomical models and automata, the
way in which a surviving late fourteenth-century clock such as that of Wells Cathedral displays the phases of the moon and figures which emerge at successive hours suggests that clocks were the product of a continuing tradition from the distant past. There is also textual evidence to support this view.\textsuperscript{11}

However, the latter instruments were distinctively different from the earlier devices in that they involved the use of oscillatory motion (continuous back and forth movement) provided by the invention of the “verge and foliot” escapement.\textsuperscript{12} According to Whitrow, the earliest European record of a clock with a mechanical escapement dates back to 1283, while the oldest surviving clock in England is the Salisbury Cathedral clock, which was constructed around 1386.\textsuperscript{13}

The church monasteries played an important role in the development of the mechanical clock in that they were very concerned with exact time-keeping, demanded by their daily prayers and observances that followed the Benedictine monastic day of seven daytime services, which were designated and set in terms of variable clock hours.\textsuperscript{14} Moreover, the church had preserved the knowledge of the mathematics of gear-trains, and developed mechanisms involving toothed wheels and oscillating levers for the ringing of church bells, both of which were essential to the invention of the clock.\textsuperscript{15}

During the fourteenth century, mechanical clocks became more numerous, with church and public clocks, which initially struck the hour, and later in the century the quarter hour, being erected in most cities and large market towns. However, owing to the effects of friction, and the fact that the foliot and wheel had no natural periods of their own, the clocks were not very accurate.\textsuperscript{16} In fact, most clocks remained with one hand, and a dial divided into hours and quarter hours, until the middle of the seventeenth century.

By this time, however, a framework of uniformly divided time had gradually become “the new medium of daily existence,” fostered by the rise of mercantile capitalism.\textsuperscript{17} As the new time became increasingly associated with everyday life in the fifteenth century, people needed smaller and more portable mechanisms, a need which was
met by the development of springs in place of weights in clocks that made the invention of the domestic clock and the watch possible. Until the mid-seventeenth century, nevertheless, domestic clocks and watches were fairly rare in England, with ownership seen as a sign of affluence rather than necessity. Most people still relied on public clocks and bells, which most English parishes possessed by then, and which they rang at increasingly fixed times. By the second half of the seventeenth century, however, people in England increasingly owned household clocks and pocket watches and, by the mid-eighteenth century, they were widespread.\textsuperscript{18}

Meanwhile, spurred by the scientific revolution, Christiaan Huygens invented the pendulum clock in the mid-seventeenth century. Containing its own periodic motion, the pendulum clock allowed for much greater accuracy in measuring time, as did the invention, at the same time, of the balance-spring, which greatly improved the accuracy of watches.\textsuperscript{19} These advances gave an enormous impetus to the development of science and technology, a crucial underpinning to the progress of capitalism.

Another remarkable time-keeping instrument that proved pivotal in the development of capitalism was the marine chronometer, invented by John Harrison in the eighteenth century. This remarkable, sea-worthy clock, which enabled accurate time keeping at sea, consequently revolutionized navigation by making the calculation of longitude possible, the need for which had been apparent since the fifteenth century, when explorers rounded the Cape of Good Hope.\textsuperscript{20} In turn, sea exploration gave the process of global expansion a significant boost in the late eighteenth century by opening up new markets for selling commodities and buying raw materials.

The process by which time was standardized, and eventually universalized, emerged with the development of transport and communication systems, on both a domestic and world scale. It was part of a larger restructuring of the world economy, and arose out of the extension of capitalist markets through colonial and imperialist expansion. Beginning in England in the late-eighteenth century, this process initially gave rise to the introduction of the mail coach system, which was the first unified network of public transport based on strict timekeeping. In reaction to the inevitable inefficiency
arising out of each town operating on its own local time as prescribed by the public clock, erected on a town hall or local church, communities began to set their time by Greenwich time.

While the development of the railways, the increasing speed of trains and the strict punctuality of its schedules created the acute need for a uniform time, the telegraph established the means by which the state could implement a system of standard time, in that it had the capacity to communicate instantaneously a time signal over long distances. Its invention enabled the master clock at the Royal Observatory at Greenwich to become the standard time-piece for all England and Wales by the 1850s. Increasing co-ordination between European countries, and between Europe and North America, resulted in the 1884 International Meridian Conference where delegates from twenty five countries met in Washington to discuss the principles and logistics of a universal and standard measure of time, and where they agreed to adopt the time zone system based on the prime meridian of Greenwich.21

In the transition from feudalism to capitalism, then, a significant shift occurred in time measurement, from the various devices and natural cycles that measured variable hours in feudal societies to the use of the mechanical clock that measured constant hours in capitalist society. For Marx, there was little doubt about the significance of the mechanical clock in this transition, as is indicated in a letter he wrote to Engels in 1863. He noted that:

The re-reading of my excerpts bearing on the history of technology has led me to the opinion that, apart from the discovery of gunpowder, the compass and printing - those necessary prerequisites of bourgeois development, - the two material bases on which the preparations for machine-operated industry proceeded within manufacture during the period from the sixteenth to the middle of the eighteenth century (the period in which manufacture was developing from handicraft into large-scale industry proper) were the clock and the mill (at first the corn mill, specifically, the water-mill) Both were inherited from the ancients. (The water-mill was introduced into Rome from Asia Minor at the time of Julius Caesar). The clock was the first automatic device applied to practical purposes: the whole theory of the production of regular motion was developed through it. Its nature is such that it is based on a combination of semi-artistic handicraft and direct theory. Cardanus, for instance, wrote about (and gave practical formulas for) the construction of clocks. German authors of the sixteenth century called clockmaking ‘learned (non-guild) handicraft’ and it would be possible to show from the
development of the clock how entirely different the relation between science and practice was on the basis of handicraft from what it is, for instance, in modern large-scale industry. There is also no doubt that in the eighteenth century the idea of applying automatic devices (moved by springs) to production was first suggested by the clock. It can be proved historically that Vaucanson’s experiments on these lines had a tremendous influence on the imagination of the English inventors.\textsuperscript{22}

The shift that gave rise to the mechanical clock was underpinned by a gradual move from an understanding of time as predominantly relative, to one as predominantly absolute. Indeed, as Postone pointed out in his analysis, absolute or abstract time became a principal feature of capitalist time, imposing a universality and creating historical time as a whole or totality. However, as he also argued, this shift in the nature of historical time cannot be explained solely by reference to the technical invention of the mechanical clock, but rather by reference to the socio-cultural practices that underlined its development. These shifts arose out of the demands of capitalism, both in relation to the need to regulate wage labour and the need to develop the means of production. In turn, these needs shaped the social and cultural construction of time.

Certainly, Marx’s understanding of the social and cultural construction of time revolves around the notion of the appropriation and control of time spent in productive activity. Indeed, he argues that all societies construct time according to the way in which one group appropriates the time of another group (that which produces the surplus) for its own benefit. In Capital, Marx maintains that most, if not all, societies produce a surplus, although the manner and amount differ according to different material conditions.\textsuperscript{23} He implies that the time that emanates through the production of a surplus, by whatever methods or means, shapes the nature of the structure of that society. As he suggests:

The specific economic form in which unpaid surplus labour is pumped out of the direct producers determines the relationship of domination and servitude ... in which we find the innermost secret, the hidden basis of the entire social edifice ... \textsuperscript{24}
Marx shows, then, that the different ways in which time was appropriated in both feudal and capitalist societies is closely linked to the way in which it was socially and culturally constructed.

**The construction of time in feudal and capitalist societies**

What then are the various social and cultural forms through which time is expressed in both feudal and capitalist societies and the processes that underlie their construction, with particular reference to capitalism's need to regulate labour-time and increase productivity as a defining force in this shift? How did people view the relationship between time and labour as feudal peasant and crafts based economies gradually give way to one based on the rise of the capitalist economic system of manufacturing and wage labour?

As has been noted, people in feudal society were generally unconcerned with the passage of time, where natural, seasonal cycles such as the sun and moon, guided their activities. Their understanding of time was reflected in the way in which they viewed labour. As E.P. Thompson and others have shown, during this period there was little demarcation between "work" and "life", with the working day lengthening or contracting according to the task, and the working year operating discontinuously, punctuated by church feasts and festivals. In the guilds, too, masters and apprentices combined economic functions with social and religious ones, and saw work as a collective social responsibility. From the thirteenth century on, for example, "the by-laws of English villages required all the inhabitants to participate in the common work of the harvest." Jacques Le Goff sums up this medieval sense of time when he suggests that, on the whole:

> labor time was still the time of an economy dominated by agrarian rhythms, free of haste, careless of exactitude, unconcerned by productivity - and of a society created in the image of that economy, _sober and modest_, without enormous appetites, undemanding, and incapable of quantitative efforts.

Both qualitative and variable, feudal time was reflected in the way labour was measured by space as much as by time. As Witold Kula points out, feudal Europeans devised one of the major methods of measuring a cultivable area from the labour-
time required for ploughing a particular area.\textsuperscript{25} He cites an example where Croatians based two measures of land - the summer \textit{ral} and the winter \textit{ral} - on a day’s work, in which the latter measure was naturally smaller as the day was then shorter. Sometimes the representational character of the measure would lead to certain representational portions of land, such as the Ukrainian “days measure” - that is, the area that could be ploughed in one day - divided into three \textit{upruikh}s or shifts (morning, afternoon, evening) partitioned by two mealtimes for the plougher.\textsuperscript{29} Kula notes that this dominance of qualitative over quantitative considerations in the social thinking of pre-industrial societies applies to other areas of traditional metrology as well, and is a truly fundamental characteristic of traditional mentality which would not disappear until the onset of industrialization and the coming of the metric system took hold.

Indeed, during the transition to capitalism, people’s experience of time began to change significantly. It was a gradual diffusion, the clock initially making a direct impact only on the lives of merchants and wage earners, while daily life continued to be task-orientated, rhythmic and uneven. As Le Goff suggests, it “was a nonunified time, still urban rather than national, and unsynchronized with the state structures then being established: a time of \textit{urban monads}.”\textsuperscript{30}

From the thirteenth and fourteenth centuries onward, a shift in the way that time was measured emerged as one overriding economic system gradually began to replace the various systems of time and labour that operated in feudal societies. As wage labour and commodity production came to dominate as a universalizing economic mode, the notion of time underwent significant change. Yet the rate at which this change occurred varied markedly throughout Europe. For example, as Kula has demonstrated, the Croatian system still prevailed in the eighteenth century, when similar systems had long since disappeared in England. Nonetheless, in spite of this uneven change, the perception and measurement of time also changed, gradually but fundamentally, especially with the invention, development and spread of the mechanical clock.
Despite the significant attention that the church placed upon the regulation of time, it was in the growing towns, rather than the monasteries that clocks first began to appear, a development which reflected the need to adjust to “economic development and more precisely, to the conditions of urban labor.”

Beginning in the thirteenth century, this shift in the relationship between labour and time occurred in urban areas that engaged in textile manufacture, which was the first industry to engage in large-scale production for export and hence to engage a dispensed workforce. The organizing principle of the medieval cloth industry was an early form of the capital-wage labour relationship, which recognized the importance of productivity as well as the necessity for coordination, including the need to signal the beginning and end of the workday, which, while timed by a mechanical clock, was initially signalled by work bells.

The need to regulate labour time, which accompanied wage labour, involved redefining the working day, from one marked by sunrise and sunset - and hence variable in length - to one defined by the standardized constant measure of the clock. In this way, then, the bourgeoisie developed the clock to dissociate or abstract time and labour from the particularities of feudal time. Indeed, clock time “has to be understood as part of a wider severance from concrete events and contexts, as a shift from a personal to an abstract economic exchange.” By the end of the fourteenth century, “the sixty-minute hour was firmly established; at the dawn of the preindustrial era, it replaced the day as the fundamental unit of labor time.”

As wage labour became increasingly predominant and the measurement of the working day more regulated, the mechanical clock became more prevalent in structuring daily life. Subsequently a gradual change in the time-consciousness of people occurred between the fifteenth and eighteenth centuries. As David Landes suggests, the revolutionary implications of the development and spread of the mechanical clock for cultural values, technological change, social and political organization, and personality were profound. “Equal hours announced the victory of a new cultural and economic order,” a new order that accompanied the rise of the state.
Indeed, the new sense of time began to become all-pervasive when the state began to emerge in the fourteenth century, and the authorities instigated the use of town bells and clocks for functions such as defence and administration. As Le Goff points out, although the new time owed its inception primarily to the needs of the bourgeoisie, it "was quickly taken over by the higher authorities... The new time thus became the time of the state." In so doing, it contributed to a change in time-consciousness that pervaded society as a whole.

In dividing time uniformly into discrete, equal segments, the clocks brought with them, as Marc Bloch suggests, "not only the mechanization of the instrument, but, so to speak, of time itself." Essentially, this meant that:

instead of a time linked to events, which made itself felt only episodically and sporadically, there arose a regular, normal time. Rather than the uncertain clerical hours of the church bells, there were the certain hours spoken of by the bourgeoisie... Time was no longer associated with cataclysms or festivals but rather with daily life, a sort of chronological net in which urban life was caught.

During the seventeenth century, owing to the development of spring-driven clocks that made the domestic clock and the watch possible, this sense of time-consciousness became internalized. There was a shift from a reliance on public clocks and bells to domestic clocks and watches, which became, as Landes suggests, "an ever visible, ever audible companion and monitor,... a measure of time used, time, spent, time wasted, time lost." It is the mechanical clock, he suggests, "that made possible, for better or worse, a civilisation attentive to the passage of time, hence to productivity and performance." Mumford also captures this sense of the internalization of time-consciousness when he points out that the:

clouds that could paralyze the sundial, the freezing that could stop the water clock on a winter night, were no longer obstacles to time-keeping: summer or winter, day or night, one was aware of the measured clank of the clock.

Thus, concurrent with this increased consciousness of the importance of productive time, a work ethic, closely allied to the rise of Protestantism but derived, in part, from earlier attitudes to labour present in monastic Catholicism, developed. While an emphasis on the duty of every individual to work was present in Christianity before the Renaissance, Keith Thomas suggests that the medieval church showed some:
ambiguity as to whether work was to be despised or rejected. Labour was a curse imposed at the Fall of Man. But from St Augustine onwards there seems to have been a reluctance to concede that there was no work at all in the Garden of Eden.\textsuperscript{45}

Thomas goes on to argue that there is a long medieval tradition behind the idea that Adam’s work in Paradise, in Milton’s words, “declares his dignity” - “Idleness has been worse.”\textsuperscript{36} He makes an important distinction, however, between the preaching of the work ethic by the Protestants, particularly the Puritans, and the ethic derived from monasticism:

for although the early monastic founders had various motives for including labour as part of their regime, their most characteristic attitude was to regard work as a mortification of the flesh, a remedy for idleness, but not a productive good in itself.\textsuperscript{47}

During the Renaissance, the attitude that time was short, valuable and constantly slipping away, and thus must be utilized and controlled, gained currency. Ricardo Quinones notes that, at this time, there were many moral exhortations to make good use of time which reveal a conformity between the defenders of the seventeenth and eighteenth century “Protestant ethic” and those of the early burghers.\textsuperscript{48} To use Le Goff phrases, this period saw “merchant’s time” triumph over “church time.”\textsuperscript{49}

Indeed, as Max Weber has shown, the Puritan work ethic is strongly allied to the growth of capitalism.\textsuperscript{50} This process included the imposition by Protestants of a regular work routine of six days a week followed by a day of rest on the Sabbath, a structure that was widely accepted by the end of the seventeenth century. This shift effectively displaced the Roman Catholic tradition of celebrating special days in the ecclesiastical calendar,\textsuperscript{51} although, as Douglas Reid shows, the working class continued to assert their customary celebrations, for example, in continuing to maintain the tradition of “Saint Monday.”\textsuperscript{52}

The argument for imposing a regular and longer working week was supported by economic theory. The mercantilists, a group of political economists who dominated economic thought from approximately the sixteenth to the eighteenth century, were the first to analyze seriously the relationship between work and time in a market
economy. Stressing the idea of the national importance of the labourer, they advocated a low wage policy that they saw as necessary because of the “normal” workers’ response to an increase in income, which was to limit the time they were willing to work.\textsuperscript{53} As Chris Nyland points out, the mercantilists believed that labour was the primary source of the nation’s wealth, and argued that the “nation had the right to demand and compel the direct producers to maximize their work effort.” Accordingly, the mercantilists urged the state:

\begin{quote}
 to intervene by the use of force, moral persuasion and intervention in the labour market to manipulate the price of labour-power so as to ensure that the workers laboured on a constant and extended basis.... The state, therefore, had a duty to intervene to ensure not just that wages were kept low, but that the poor were kept poor.\textsuperscript{54}
\end{quote}

Until about 1750, the majority of commentators considered low wages to be one of the most effective ways “to impose a rigorous labour discipline upon their intractable employees.”\textsuperscript{55}

Significantly however, in the first half of the eighteenth century, Adam Smith challenged the mercantilist doctrine concerning the importance of long hours and low wages to high productivity. He noted in the \textit{Wealth of Nations}, for example, that shorter hours and higher wages could enhance both the incentive, and the physical capacity, to work. He regarded humans to be rational beings endowed with “the human propensity to barter and exchange together with an egoism that manifests itself as a relentless drive to pursue self interest.”\textsuperscript{56} In so doing, he recognized the limited capacities of workers, and the disastrous physical and psychological effects of overwork:

\begin{quote}
 after all, men’s understandings are formed by their day-to-day occupations, hence the man who has no need to use his mind or exercise his inventiveness must lose ‘the habit of such exertion’, and generally ‘becomes as stupid and ignorant as it is possible for a human creature to become’.\textsuperscript{57}
\end{quote}

Smith also argued against the idea that there were natural differences between humans that made some inherently lazy and others hardworking.\textsuperscript{58}

In spite of Smith’s critique, the idea that the worker was innately slothful prevailed, fostering a particular attitude toward recreation and leisure. For example, in the mid-
eighteenth century, the bourgeoisie responded to the Glasgow Hammermen striking for shorter hours by claiming "the leisure time thus created would be spent in the public house with a resulting loss of working efficiency."\textsuperscript{59} Indeed, the bourgeoisie levelled many such complaints against the working classes about "time wasted at seasonal fairs, market days, and the annual parish feasts or 'wakes'."\textsuperscript{60} As a result of such complaints, there was "a gradual undermining of the traditional working calendar and working week with the intent of making the week, like the day, more regular."\textsuperscript{61}

In fact, it was the development of large-scale industry and the factory system in the late eighteenth century that saw an intensification of time discipline. Thrift suggests that:

Modern industry required the transformation, both technical and organisational, of the productive process with big cities as the main source of labour power. But, above all, modern industry required worker discipline if machine and man were to be integrated. This requirement, in turn, demanded the worker to be trained to take for granted a new time structure suited to this reorganisation.\textsuperscript{62}

The factory clock was an important factor in this time discipline: the capitalists' ownership and control of the clock represented their ownership and control of the labour time of the workers. As early as 1700 there were explicit references in factory documentation to time-Monitors in factories, who kept employee's time-sheets. Dan Thu Nguyen describes this process as one in which:

the correct measurement of the duration of the working day, that is, the definition of time itself, was the prerogative of the employer whose (factory) clock determined the one true time of labour. Thus Crowley's Law Book stated: 'it is therefore ordered that no person upon the account doth reckon by any other clock, bell, watch or dyall but the Monitor's, which clock is never to be altered but by the clock-keeper'.\textsuperscript{63}

As E.P. Thompson puts it:

those who are employed experience a distinction between their employer's time and their 'own' time. And the employer must use the time of his labour and see it is not wasted: not the task but the value of the time is dominant. Time is now currency: it is not passed but spent.\textsuperscript{64}
As early as the fourteenth century, wage labourers had protested against the imposition of the clock, opposing the changing definition of the “day”, which no longer took account of either qualitative variability or the natural rhythms of activity and rest.65 Ironically, it was the workers who first asked for a lengthening of the working day as a means of increasing their wages. However, as employers sought to regulate the working day more closely, worker uprisings were “aimed at silencing the Werkglocke.”66 Landes notes that such efforts never achieved success:

Besides, once the workday was defined in temporal rather than natural terms, workers as well as employers had an interest in defining and somehow signalling the boundaries. Time measurement here was a two-edged sword: it gave the employer bounds to fill and the worker bounds to work.67

As they internalized time discipline, workers’ “fights against time ...[were] replaced by those about time,”68 and disputes became centred on the duration of the working day and week.

In a different way, the clock was also important to the development of the capitalist means of production, in the emergence of the division of labour in manufacturing and the development of machinery. Indeed, clock manufacture was one of the first industries, not only to introduce division of labour but also to develop mass production in the eighteenth century. The large demand for clocks and watches compelled crafts workers to rationalize both their design and production. Consequently, they developed a comprehensive system of division of labour and the interchangeability of parts. In 1772, French clockmaker, Frederic Japy, set up the first watch factory in which he employed three hundred local crafts workers and peasants who produced some 100,000 roughly assembled watches per year. In this respect, they became the first wage workers to engage in industrial mass production.69

In this way, then, the clock came to symbolize the ideology of capitalism, something that Adam Smith acknowledged when he noted the crucial role of absolute time and the clock in the development of the division of labour and mechanical productivity. In frequently referring to the production of the watch as the most impressive example
of price reduction through the rationalization of production by the division of labour, he continued to emphasize this point.

The clock was also an important model for other mechanical works and the application of power machinery. Samuel Macey suggests that there is much evidence that points to the importance of a large, indigenous, supply of clock-makers available for the manufacture and maintenance of machinery for the British industrial revolution. Indeed, the horological revolution in the eighteenth century was a precursor to the industrial revolution as it was central to the application of power machinery to the manufacturing process. Some of the earliest published works on modern technology, which dealt with clockmaking, contained detailed analyses that were the first step toward industrial engineering, the time-and-method study, and the development of precision mechanics. As Lewis Mumford notes, the:

clock, not the steam-engine, is the key machine of the modern industrial age. For every phase of its development the clock is both the outstanding fact and the typical symbol of the machine: even today no other machine is so ubiquitous.

What is clear, then, is that the advent and spread of the mechanical clock was closely allied to the growth and development of capitalism, both in terms of the production of absolute surplus-value, in the regulation of wage labour, and in terms of the production of relative surplus-value, in the development of division of labour in manufacturing and machine production. The particular social and cultural forms in which time was expressed, as it was constructed through the capitalist process, pervaded all levels and aspects of society. How Marx understood the social construction of time as he expressed it in *Capital*, is closely tied to his notion of the state.

**The construction of time through legislation**

For Marx, the state assumes a central role in constructing time, especially through the vehicle of legislation, which dealt with labour time as a particular social form of defining time. In tracing the shift from the regulation of time through feudal customary laws to that encoded in state legislation, Marx sees the state to be largely a
tool of the bourgeoisie, who sought to appropriate the time of individuals by employing wage labour in the service of the production of surplus-value. In so doing, Marx demonstrates how legislation became a means by which the state could appropriate and control time, giving rise to a process that saw one form of law give way to another. In particular, Marx identifies the way in which the state made the laws that defined and expressed a certain understanding of time in the feudal system redundant. In this way, he depicts how the independent producer gave way to the capitalist farmer, and how this shift led to a new form of legislative power and way of understanding and constructing time.

Marx recognizes that in feudal societies, the right to appropriate another’s labour time was a given assumption, whereby the peasant owed a certain number of days of labour to the lord, who often encoded them in customary law. However, the notion of what constituted a “day” was variable, determined by productivity outcomes rather than an objective measure. According to Marx, the working day is:

not taken in its ordinary sense, but as the working day necessary to the production of an average daily product; and that average daily product is determined in such a sly manner than even a Cyclops would be unable to finish the job within 24 hours.  

Drawing on the example of the corvée system of the Danubian principalities, Marx points out that the Règlement organique itself declared “by 12 working days one must understand the product of the manual labour of 36 days.” Moreover, he suggests, the “legal day’s work for some kinds of agricultural labour can be interpreted in such a way that the day begins in the month of May and ends in the month of October.” Here, Marx is pointing to the way in which people measured space in terms of time (that is, land measured according to how long it took to work), and time in terms of space (that is, the day defined by reference to the amount of land worked). “Among the ancient Germans,” Marx writes, “the size of a piece of land was measured according to the labour of a day, hence the acre was called Tagwerk, Tagwanne ... Mannwerk ... etc.”

Marx argues that the legalized nature of time in the feudal regulations and codes, which specified amounts of time and labour owed by the peasant to the lord, played a
key role in the emergence of the capitalist farmer. He notes that wage labour emerged out of a kind of fissure in the legislation, where the amount of time owed to the lord remained sanctified in law, while productivity increased. According to Marx, the existence of “labour-rent”, a simple form of ground rent where the serf gave the surplus product, or that which was produced in a given time, to the landlord, characterized feudal society. The producer, he argues, devoted one part of the week to his own land, and worked the other days on the landlord’s estate. Marx then notes that, consequently, unpaid surplus labour, which was measured in time, expressed itself in the form of rent, while the labour owed to the landlord became encoded in statutes, sanctified in the law, a process that occurs as:

soon as the constant reproduction of the basis of the existing situation, the relationship underlying it, assumes a regular and ordered form in the course of time.... It can attain this form in stagnant conditions of both the production process and the social relations corresponding to it, simply by reproducing itself repeatedly.76

Marx goes on to argue that, as productivity accelerated from the end of the fifteenth century and during the sixteenth century as a result of the agricultural revolution, the statute-law, whereby a certain amount of labour time was accorded to the immediate producer, remained.77 As he points out, the immediate producer “has the use of more or less his entire labour-time, even if one part of this labour-time, originally it would seem the whole surplus part, still belongs for free to the landowner.”78 Thus, surplus production occurs on his own land, “instead of on the lord’s estate alongside and outside his own.”79 Essentially, as Marx sees it, the immediate producer has appropriated for himself more time; the surplus production occurs on his own land, and the producer “has a greater room to manoeuvre, compared with labour rent, to gain time for excess labour whose product belongs to himself.”80 This process saw the bailiffs, serfs and free small-scale proprietors being replaced by the farmer, who, while similar to the serfs, was able to employ wage labour as well as pay ground rent as surplus product or money.81 In so doing, he was able to create time in the form of a surplus that, when accumulated as capital, he could then use to appropriate the time of others. Moreover, as Marx shows, legislation - this time implemented by the newly emerging state - provided a means by which the bourgeoisie could effect this process.
Marx also notes that state legislation concerning time and how people spend it played a key role in bringing about a class of wage labourers. Indeed, he argues that the regulation of time by the state was an integral part of the process of primitive accumulation, and can be seen to underline aspects of the capitalist system that:

employ the power of the state, the concentrated and organized force of society, to hasten, as in a hothouse, the process of transformation of the feudal mode of production into the capitalist mode, and to shorten the transition. Force is the midwife of every old society which is pregnant with a new one. It is itself an economic power.\textsuperscript{82}

In a powerfully written section of Capital, Marx shows the way that the state enforced the “bloody legislation against vagabondage”\textsuperscript{83} during the fifteenth and sixteenth centuries. It was, he argues, part of a complex and slow process evolving through many centuries according to which peasants were expropriated from their land, “dragged from their accustomed mode of life” to form the “free and rightless proletariat.”\textsuperscript{84} According to Marx:

the agricultural folk [were] first forcibly expropriated from the soil, driven from their homes, turned into vagabonds, and then whipped, branded and tortured by grotesquely terroristic laws into accepting the discipline necessary for the system of wage-labour.\textsuperscript{85}

Marx describes how gradually, their emancipation from serfdom and the guild system transformed direct producers into wage labourers. Whereas in the late fourteenth century, the majority of the population consisted of “free peasant proprietors”, by the arrival of the agricultural revolution in the late fifteenth and early sixteenth centuries, most of the peasantry had been forced from the estates and common lands, which the rural bourgeoisie had appropriated for large-scale agricultural production. According to Marx, the expropriated peasants became the new proletariat, congregating in urban centres and performing unskilled labour in the newly forming manufacturing industries, supplied with raw materials created by the recently emerging capitalist farmers.\textsuperscript{86}

Marx then outlines how, as this new society began to emerge, so too did the conditions under which time was constructed. In this respect, he notes that the state assumed a key role by implementing legislation that defined capitalist time to meet
the needs of capital to employ wage labour. Marx describes how, beginning in the fourteenth century, the state embodied the extension of the working day in law. For example, he notes that through enactments in 1349 and again in 1496, the state stipulated the working day for all craftsworkers and field labourers to be from five in the morning to between seven and eight in the evening, with three hours in total for meal-times. Significantly, the state never enforced these hours, although in 1562 it sought to limit the intervals for meals.  

In fact, by the seventeenth and eighteenth centuries, workers could live comfortably by working only four days a week, for, as Marx notes, there “did not appear to the workers to be a sufficient reason for working for the capitalist for the other two days.” However, as the manufacturing industry expanded, the demand for labour led to attempts to enforce labourers to work a six day week by lowering wages. By the end of the eighteenth century, which marked the beginning of large-scale industry in England, the bourgeoisie had gained control of the “worker’s whole week by paying the weekly value of his labour-power.”

The state, as the judiciary and legislature, was an important institution in that it had the power to define, and hence control time, as Marx notes:

> Even the ideas of day and night, which in the old statutes were of peasant simplicity, became so confused that an English judge, as late as 1860, needed the penetration of an interpreter of the Talmud to explain ‘judicially’ what was day and what was night.

Of course, the construction of time was not the sole prerogative of a bourgeoisie-controlled state. On the contrary, it was a matter of ongoing contestation between the classes. Marx highlights this struggle to shape the way in which the state defined and controlled time by reference to the specific conflict, which occurred between 1833 and 1864, as “a protracted and more or less concealed civil war between the capitalist class and the working class.” Unlike the earlier legislation of the fourteenth to sixteenth centuries, in which the state represented the interests of the rising bourgeoisie, the nineteenth century legislation, which consisted of a series of “Factory Acts”, and which “legally limits, regulates and makes uniform the working day and its pauses,” was introduced in support of the working class.
Marx documents how the state's interests were articulated by Factory Inspectors, who reported extensively, and in great detail, on factory working conditions. As he demonstrates by many references to these reports, the Factory Inspectors argued strongly for the shortening of working hours by, among other things, highlighting the detrimental effects on workers of long working hours. He notes how, in stressing the importance of recreational time for workers, they emphasized that free time was crucial to maintain, not only the family structure, but also the worker's health, self-development and eventual possession of political power. One Inspector noted, for example, that:

any constant work beyond 12 hours a day encroaches on the domestic and private life of the working man, and so leads to disastrous moral results, interfering with each man's home, and the discharge of his family duties as a son, a brother, a husband, a father. That work beyond 12 hours has a tendency to undermine the health of the working man, and so leads to premature old age and death, to the great injury of families of working men, thus deprived of the care and support of the head of the family when most required.

Marx suggests that, when parliament eventually passed the Factory Acts relating to strict time keeping, it did so in response to the demands of workers who argued that factory owners controlled the keeping of time, which they structured according to their definition of time. He provides an example of thirty power-loom weavers at Leower's Mill, Westbury Leigh, who went on strike because the employer, named Harrup, indulged in the habit:

of making deductions from their wages for being late in the morning.... Harrup also appointed a boy to announce the starting time by a whistle, which he often did before six o'clock in the morning and if the 'hands' were not all there at the moment the whistle ceased, the doors were closed and those who were shut out were fined. As there was no clock on the premises, the unfortunate workers were at the mercy of the young Harrup-inspired time-keeper. The striking 'hands', mothers of families as well as girls, offered to resume work if the time-keeper were replaced by a clock, and a more reasonable scale of fines introduced.

Marx notes how, in attempting to address difficulties of this nature, the Factory Act of 1844 emphasized the need for strict attention to, and regulation of, time, stipulating that:
‘The hours of work of children and young persons shall be reckoned from the time when any child or young person shall begin to work in the morning.... The time shall be regulated by a public clock’, for example the nearest railway clock, by which the factory clock is to be set. The manufacturer has to hand up a ‘legible’ printed notice stating the hours for the beginning and ending of work and the pauses allowed for meals.96

Further, he makes the observation that these:

highly detailed specifications, which regulate, with military uniformity, the times, the limits and the pauses of work by the stroke of the clock, were by no means a product of the fantasy of Members of Parliament. They developed gradually out of circumstances as natural laws of the modern mode of production. Their formulation, official recognition and proclamation by the state were the result of a long class struggle.97

Marx, then, is describing a process whereby the state overrules the bourgeoisie’s power to construct time. He cites, for example, a Factory Inspector who noted that the Factory Acts made the workers “masters of their own time,” giving them a “moral energy which is directing them to eventual possession of political power.”98

However, the extent to which the legislation successfully defended workers’ interests is debatable. Gary Cross notes that the nineteenth century state was reluctant to regulate the labour contract, including hours of employment, and resisted reform in the “name of freedom to work and the extraterritoriality of the workplace.”99 He describes the long record of liberal state intervention in work time as characterized by some success, as it was an area of industrial reform where the parties reached an early consensus on regulating working hours. However, he notes that ambiguity and failure also characterized the process.100

Indeed, as Marx makes clear, in introducing such legislation the state was ultimately acting in the long term interests of the capitalist class in that the excessive hours of work were threatening the existence of the working class itself, upon which the capitalist class relied for its source of surplus-value. “The interest of capital itself,” Marx writes, “points in the direction of a normal working day.”101 He notes how the nineteenth century factory legislation arose out of necessity, as the deleterious effects of overwork had “seized hold of the vital force of the nation at its roots.”102
Moreover, the effectiveness of the legislation, at least in the short term, is also debatable. As Marx describes, ruthless exploitation continued, with capitalists devising innovative methods such as shift work and irregular hours to structure and control the time of workers. Moreover, he notes how, while they risked prosecution by flouting the laws and finding loopholes in the legislation, they began to measure time in smaller and smaller units, to the point where they accounted for every second of time. According to Marx, capitalists gained additional time by “a multiplication of small thefts in the course of the day,” described by the inspectors as “petty pilferings of minutes,” where “moments are the elements of profit.”

During the 15 hours of the factory day, capital dragged in the worker now for 30 minutes, now for an hour, and then pushed him out again, to drag him into the factory and thrust him out afresh, hounding him hither and thither, in scattered shreds of time, without ever letting go until the full 10 hours of work was done. As on the stage, the same persons had to appear in turn in the different scenes of the different acts. And just as an actor is committed to the stage throughout the whole course of the play, so the workers were committed to the factory for the whole 15 hours, without reckoning the time taken in coming and going. Thus the hours of rest were turned into hours of enforced idleness, which drove the young men to the taverns and the young girls to the brothels. Every new trick the capitalist hit upon from day to day for keeping his machinery going for 12 or 15 hours without increasing the number of the personnel meant that the worker had to gulp down his meals in a different fragment of time.

One of the major effects of the legislation that Marx notes was the impetus it gave to the development of machinery, which mitigated against the interests of workers by creating long and irregular working hours. Marx suggests that machinery is “the most powerful means of lengthening the working day beyond all natural limits in those industries first directly seized on by it.” The irony of this situation does not escape him:

Hence that remarkable phenomenon in the history of modern industry, that machinery sweeps away every moral and natural restriction on the length of the working day. Hence too the economic paradox that the most powerful instrument for reducing labour-time suffers a dialectical inversion and becomes the most unfailing means for turning the whole lifetime of the worker and his family into labour-time at capital’s disposal for its own valorization.
Marx highlights the paradoxical nature of this aspect of capitalism by comparing capitalism's attitude to machinery with that of the Greek philosophers, Aristotle and Antipater, who believed that machinery would do away with the need for slaves and workers. These "heathens", Marx ironically notes, did not "comprehend that machinery is the surest means of lengthening the working day."  

Marx documents in detail the adverse effects of machinery production on workers, including the results of irregular hours. With piece wages, for example, "loss of time in one part of the day or week can be made good by subsequent overtime or by night-work, a process which brutalizes the adult worker and ruins his wife and children." He notes that the irregularity of working hours was an important way to create a surplus population that is "compelled to submit to the dictates of capital," a situation that was due, in part, to the development of the realm of circulation, an area of capitalist production that also expanded significantly in the nineteenth century. Indeed, it was through the extension of railways and telegraphs, Marx notes, that the frequency of the practice of "fashion, and the sudden placing of large orders that have to be executed in the shortest possible time," arose. As a result of these sudden orders, "the most fearful over-work prevails periodically during what is called the season." Marx argues that the capitalist forms an industrial reserve force "that shall be ready at a moment's notice; during one part of the year he decimates this force by the most inhuman toil, during the other part he lets it starve for lack of work."

Marx notes that the rapid increase in the speed of machines and the related acceleration of the production process was part of the attempts by capitalists to increase the production of relative surplus-value, the necessity of which arose as a result of the working-hours legislation. Indeed, he argues that once the legislation fixed the length of the working day, increasing the production of absolute surplus-value by prolonging the working day was no longer possible. Aware of this, he argues, capital "threw itself with all its might, and with full awareness of the situation, into the production of relative surplus-value, by speeding up the development of the machine system."
Just as in the realm of production, the development of circulation was integral to the construction of capitalist time. Marx argues that the more production comes to rest on exchange, "the more important do the physical conditions of exchange – the means of communication and transport – become for the costs of circulation."

Consequently, the creation of the "physical conditions of exchange – of the means of communication and transport" lead to the "annihilation of space by time." What did he mean by this? As Le Goff demonstrates, the time of journeying and conducting exchange transactions was an important component of time perceptions from the early days of capitalism, when merchants discovered "the price of time in the course of his exploration of space. For him, the important duration was the length of a trip." David Harvey notes:

> it took revolutions in the realm of circulation rather than in production (as Thompson tends to imply) to impose the universal sense of abstract and objective time we now so commonly accept as basic to our material existence."

This universal time sense "had everything to do with achieving the necessary coordinations for profitable production and exchange over space." Indeed, time, in part, measured exchange.

In exploring the social construction of time, then, Marx assigns a special consideration to the role of customary laws and legislation in both feudal and capitalist societies in defining and regulating labour time. He traces the significant shifts in the way time was defined through this means as capitalism developed, and the changes in labour practices that accompanied them. Marx shows how, in capitalist society, state legislation becomes a tool of both the bourgeois and working classes, and a site of class struggle over the definition and control of time, while the state comes to define, and, in a sense, embody capitalist time. However, Marx demonstrates that time is not only manifested at this level, but also through people's experience of time on an everyday level and in the discourses about time that they construct. How he does so is the subject of the following section.

**The construction of time through experience and discourse**
It is clear reading *Capital* that Marx was acutely aware of many of the issues concerning the appropriation, control and definition of time in capitalist society and the particular experiences of time to which this, in turn, gave rise. Indeed, he used his source material, mainly in the form of economic works and government documents, to great effect, by frequently citing authors who represented the views of either the bourgeoisie or the working class, and highlighting the contrasts between them. In so doing, he showed that both classes held very different attitudes, and constructed very different “discourses”, about the right to appropriate and control time, which, in turn, meant that the members of both classes experienced time in very different ways.119

Marx’s concern with the experience and discourse of time is evident in his citation of authors who represent bourgeois attitudes to time, including the claim of the capitalist to the right to appropriate all the worker’s time. In a humorous, but biting passage, Marx shows the way in which ideas concerning the origin of surplus-value reflected this bourgeois attitude to time - along with the religious connotations:

> This primitive accumulation plays approximately the same role in political economy as original sin does in theology. Adam bit the apple, and thereupon sin fell on the human race. Its origin is supposed to be explained when it is told as an anecdote about the past. Long, long ago there were two sorts of people; one, the diligent, intelligent and above all frugal élite; the other, lazy rascals, spending their substance, and more, in riotous living. The legend of theological original sin tells us certainly how man came to be condemned to eat his bread in the sweat of his brow; but the history of economic original sin reveals to us that there are people to whom this is by no means essential. Never mind! Thus it came to pass that the former sort accumulated wealth, and the latter sort finally had nothing to sell except their own skins. And from this original sin dates the poverty of the great majority who, despite all their labour, have up to now nothing to sell but themselves, and the wealth of the few that increases constantly, although they have long ceased to work. Such insipid childishness is every day preached to us in the defence of property.120

Marx notes many examples of “such insipid childishness.” He cites, for example, the eighteenth century writer Bernard de Mandeville who articulated an argument for low wages and a surplus working population. Mandeville writes, for instance, that while the poor ought to be kept from starving:
so they should receive nothing worth saving.... The only thing then that can render the labouring man industrious is a moderate quantity of money for as too little will, according as his temper is, either dispirit him or make him desperate, so too much will make him insolent and lazy.... [It] is requisite that great numbers of them should be ignorant as well as poor; knowledge both enlarges and multiplies our desires, and the fewer things a man wishes for, the more easily his necessities may be supplied.\textsuperscript{121}

However, Marx reserves the accolade of “the most ferocious of the accusers of the workers”\textsuperscript{122} for the anonymous author of An Essay on Trade and Commerce, whom he cites most frequently as an illustration of the bourgeois attitude toward time. This anonymous author takes a typically condescending attitude toward the working class, writing that: “Temperate living and constant employment is the direct road, for the poor, to rational happiness ... as to riches and strength for the state.”\textsuperscript{123} Recognizing the variable nature of the working day,\textsuperscript{124} the anonymous author argues for a longer working period, given that the workers are “naturally inclined to ease and indolence,” in that they do not labour “above four days a week, unless provisions happen to be very dear.” Even this leaves them with enough money to “live idle with the rest of the week.”\textsuperscript{125} Such a policy relies on a surplus population, a point, Marx suggests, that the author grasps with his “usual unerring bourgeois instinct,” by writing about striking workers in the following way:

Whenever from an extraordinary demand for manufactures, labour grows scarce, the labourers feel their own consequence, and will make their masters feel it likewise - it is amazing; but so depraved are the dispositions of these people, that in such cases a set of workmen have combined to distress the employer by idling a whole day together.\textsuperscript{126}

The logical and morally correct conclusion, continues the anonymous author, is to lower wages: “the cure will not be perfect, till our manufacturing poor are contented to labour six days for the same sum which they now earn in four days.”\textsuperscript{127}

In the nineteenth century, Marx notes, such points of view continued. For example, in an argument that Marx shows to be “all bosh,”\textsuperscript{128} the prominent “marginalist” economist Nassau Senior put forward his famous “last-hour” thesis, arguing that, as factory owners made their profit in the last hour of the working day, shortening the working day would prevent any profit from being realized. Marx also attacked another prominent author of the time, and proponent of longer working hours for
children, Dr. Andrew Ure. Marx noted that for Ure, if the children “are turned to an hour sooner into the heartless and frivolous outer world they will be deprived, owing to idleness and vice, of all hope of salvation for their souls.”

Marx also describes how the bourgeois attitude to time found expression, during the nineteenth century, through other arguments such as the “abstinence” theory, which proposed that surplus-value originated, and capital accumulated, out of the ability of the members of the capitalist class to resist the temptation to consume it in luxuries for the enjoyment of leisure. He notes that the abstinence theory appears to have been first coined by Senior, who writes: “I substitute ... for the word capital, considered as an instrument of production, the word abstinence.... The more society progresses, the more abstinence is required.” Marx describes Senior’s argument as an “unparalleled example of the ‘discoveries’ of vulgar economics.” He also classifies Molinari as a vulgar economist for euphemizing when Molinari writes of the:

• deprivation the capitalist imposes on himself by lending ... his instruments of production to the workers, instead of devoting their value to his own consumption, by transforming them into objects of utility or pleasure.

His sarcasm in fine form, Marx writes:

• how the capitalist class can perform the latter feat [to accumulate and not spend] is a secret which vulgar economics have so far obstinately refused to divulge. Enough that the world continues to live solely through the self-chastisement of this modern penitent of Vishnu, the capitalist.

Marx illustrates clearly that the bourgeoisie’s attitude toward the value of their own time, which saw it as inherently greater than, and qualitatively different to, that of the workers, included the idea that they somehow deserved, or had rights to, that time. He notes, moreover, that this sense of right was due to an inherently moral superiority, which corresponded with the widespread recognition that the workers expended their time so that the capitalist class could exist. For example, Marx cites Henri Storch, who writes of the working class as useful in performing:

• the most wearisome, the vilest, the most disgusting functions, which, in a word, takes on its shoulders all that is disagreeable and servile in life, and procures thus for other classes leisure, serenity of mind and conventional ... dignity of character.
Much of the literature cited by Marx indicates a general acceptance of the class system, an interest in its origins, and a widespread agreement that its existence is due to high levels of productivity. While there seems to have been a widespread recognition of the necessity to appropriate working class time, the capitalist class nonetheless found the pejoratives they directed toward the working class, such as "idleness", turned against themselves. Sismondi, for example, notes that:

Exertion today is separated from its recompense, it is not the same man that first works, and then reposes; but it is because the one works that the other rests.... The indefinite multiplication of the productive powers of labour can have no other result than the increase of luxury and enjoyment on the part of the idle rich.

From the early stages of capitalism, workers attacked the assumption that the bourgeoisie had unlimited rights to worker's time. Marx perceives clearly that the conflict was largely over the rightful length of the working day. Dissociated from the natural parameters that defined it, he argues, the definition of the working day had changed dramatically from the "natural day of 12 hours." The possible physical and social boundaries, Marx suggests, are of "a very elastic nature," creating working days of many different lengths. "But what is a working day?", Marx asks. "At all events, it is less than a natural day. How much less?"

According to Marx, as a result of an "avalanche of violent and unmeasured encroachments," the capitalist class had broken down "every boundary set by morality and nature, age and sex, day and night." In this context, he describes the capitalists as "vampire-like," that live the more, the more labour they suck. Capital sees that the worker is "nothing more than personified labour-time," and the rightful length of the working day to be:

the full 24 hours, with the deduction of the few hours of rest without which labour-power is absolutely incapable of renewing its services. Hence it is self-evident that the worker is nothing other than labour-power for the duration of his whole life, and that therefore all his disposable time is by nature and by right labour-time, to be devoted to the self-valorization of capital.
He suggests that capital does not see that time for education, intellectual
development, the fulfilment of social functions, and even rest, is necessary for the
worker. In so doing, Marx suggests, capital:

oversteps not only the moral but even the merely physical limits of the
working day. It usurps the time for growth, development and healthy
maintenance of the body. It steals the time required for the consumption of
fresh air and sunlight.... It is not the normal maintenance of labour-power
which determines the limits of the working day here, but rather the greatest
possible daily expenditure of labour-power, no matter how diseased,
compulsory, and painful it may be, which determines the limits of the
worker’s period of rest. Capital asks no questions about the length of life of
labour-power. What interests it is purely and simply the maximum of labour-
power that can be set in motion in a working day.¹⁴⁵

Marx notes that, on the other hand, the worker, in arguing for a limitation to the
working day, maintains that he must be able to reproduce his commodity every day,
in order to “work tomorrow with the same normal amount of strength, health and
freshness as today” and that an unlimited extension of the working day prevents this.
According to Marx, the capitalist, by imposing excessive hours of work, uses up a
quantity of labour-power greater than the worker can restore. For example, he pays
“for one day’s labour,” while using “three days of it.”¹⁴⁶

Marx goes on to argue that the consequence of determining the limits of the working
day by the greatest possible daily expenditure of labour-power is the deterioration of
human labour-power itself. He suggests that capitalist production not only robs
labour-power “of its normal moral and physical conditions of development and
activity” but also produces “the premature exhaustion and death of this labour-power
itself.”¹⁴⁷ In short, Marx contends, capitalism extends the worker’s production-time
at the expense of shortening the worker’s life.

Marx provides many examples that document the horrific experience of many
workers. For example, The Daily Telegraph reported in 1860:

Mr. Broughton Charlton, county magistrate [of Nottingham] ... declared ...
that there was an amount of privation and suffering among that portion of the
population connected with the lace trade, unknown in other parts of the
kingdom, indeed, in the civilised world.... Children of nine or ten years are
dragged from their squalid beds at two, three, or four o’clock in the morning
and compelled to work for a bare subsistence until ten, eleven, or twelve at
night, their limbs wearing away, their frames dwindling, their faces whitening, and their humanity absolutely sinking into a stone-like torpor, utterly horrible to contemplate.... The system, as the Rev. Montagu Valpy describes it, is one of unmitigated slavery, socially, physically, morally, and spiritually.... What can be thought of a town which holds a public meeting to petition that the period of labour for men shall be diminished to eighteen hours a day?.... We declaim against the Virginian and Carolinian cotton-planters. Is their black-market, their lash, and their barter of human flesh more detestable than this slow sacrifice of humanity which takes place in order that veils and collars may be fabricated for the benefit of capitalists? 148

Marx understood then, that the experience of time of the worker was of an entirely different nature and quality to that experienced by the bourgeoisie. Moreover, he was acutely aware that, in gaining time at the expense of the working class, the bourgeoisie acquired a life-time of leisure, comfort and well-being, while the working class experienced a shortened life-time of physical and mental suffering. He notes how the bourgeoisie implemented this situation by instituting labour practices and technological apparatus that enforced a time discipline upon workers, reinforcing it with a “discourse” based on economic theory and moral justification. Marx demonstrates that, to a large extent, the bourgeoisie compelled the working class to submit to this situation, but that, in turn, the workers defied the time discipline imposed on them in a number of ways. Indeed, together with their supporters like Marx, they created their own discourse that, to a significant extent, countered that of the bourgeoisie.

Conclusion

In examining the social construction of time, there are two points that have been noted. First, the shift in time measurement brought about by the development of the mechanical clock was accompanied by a significant change in labour practices associated with the rise of capitalism. Secondly, the importance of the clock is evident in terms of not just the production of absolute surplus-value through the regulation of wage labour, but also the production of relative surplus-value in the development of the means of production and the standardization of time.
In this context, time was manifested through the technological means of measuring time, through cultural forms such as legislation, work and social practices, as well as through people’s experience of time and the discourses about time that they constructed. In this way, Marx understood the social construction of time, as he expressed it in *Capital*, to be related to the development of capitalism.

By examining Marx’s ideas concerning the social, cultural and historical forms in which time was manifested, especially both the continuities and discontinuities in the construction of time over the shift from feudalism to capitalism, it is possible to demonstrate how the commonalities between the two types of society highlighted the transhistorical aspects of time, on the one hand, and the differences underlining the historically specific aspects of time, on the other. In this way it can be demonstrated that the construction of time occurs through social, cultural and economic forms in all societies, although the particular forms in which it is expressed differs.

In the case of the transhistorical aspects of time, both feudal and capitalist societies constructed time based on human activity in general, and productive labour in particular. Indeed, it can be seen that how both societies perceived and understood time was integrally related to their labour practices, insofar as time measured, and structured, activity in both feudal and capitalist societies. Furthermore, both societies held religious and moral attitudes to labour time, and in both social forms there existed class-based assumptions about the dominant class’s inherent “right” to appropriate the labour time of the subordinate class, as well as resistance to those rights by the subordinate class. Indeed, both feudal and capitalist societies produced a surplus from time spent in labour, and were characterized by one group or class appropriating that surplus by controlling the time of another group or class through social customs and laws.

The historically specific aspects of the social construction of time can be seen in the changes in methods of time measurement due the advent and spread of the mechanical clock and the associated rise of capitalism which created significant changes in the particular social and cultural forms through which time was expressed. For example, feudal and capitalist societies perceived a different relationship
between time and labour, in that the former measured time in relation to activities connected to natural rhythms, while the latter measured time in relation to more mechanized activities in the manufacturing workshop or factory, where wage labour prevailed. Again, these societies experienced time very differently in that people in feudal societies were less attentive to the passage of time and of having to make productive use of time, while people in capitalist societies came to internalize a particular time consciousness, of time as ever-present and to be used productively.

Certainly Marx stressed the historically specific aspects of time by contrasting the feudal laws and codes which defined and regulated labour time in terms of relative time and space, with that of capitalist society, where the state defined and regulated the hours of the working day in terms of absolute time. In so doing, he recognized that the production of a surplus differed in both societies, in that peasants in feudal societies produced a surplus by working the lord’s land which was spatially separate from their necessary labour, while workers in capitalist society spent their surplus labour time intermingled with their necessary labour time.

In relation to the extent to which human agency or deterministic forces constitute the processes underlying the construction of time, both aspects can be seen to be integral to it. For example, the role of human agency is evident in the way members of the bourgeois and working classes, through both their productive and leisure activities, structured time. In particular, the rising bourgeoisie had the power to influence the state to not only introduce working hours legislation, but to lower wages in order to enforce longer working hours, while the working class, in turn, successfully engaged in class struggle to the extent that it resulted in the state introducing legislation to limit the working day. Moreover, the experience of time was an important constituent of its construction, and the worker’s experience was entirely different than that of the bourgeoisie, a situation that gave rise to different, competing discourses (moral and economic) about time.

The deterministic forces that underlie the construction of time can be seen, in a broad sense, in the way that capitalism’s driving need to regulate labour and increase productivity was a determining factor in the shaping of the particular social and
cultural constructions of time that occurred with the development of capitalist society. More specifically, although class conflict played an important role in the working hours legislation of the nineteenth century, an element of necessity was also at work in this process, as the deterioration of the working class through excessive working hours was potentially a threat to the existence of the capitalist system itself. Deterministic elements are also evident in how structures such as legislation and “discourses” were defining of time, functioning somewhat independently of the individuals whose actions gave rise to them.

Thus, the needs of capital underline the social construction of time in capitalist society, and the predominance of absolute time and its embodiment in the state, which acts in capital’s interests, reflects capital’s abstract and deterministic nature. Yet, labour plays a vital role in the construction of historical time as is evident in the way in which the bourgeoisie appropriated working class time and instilled particular labour practices that extracted the greatest productivity through “time discipline”.

In the case of the relationship between absolute and relative time, time changed fundamentally from being understood predominantly as relative to largely being seen as absolute. Feudal societies understood time in reference to particular, local contexts associated with events and processes, while capitalist society understood time as objective, universal and independent of the material world. This change was reflected in the way that time was manifested through labour practices, human experience, cultural forms and discourse. For example, the implementation of wage labour saw the working day redefined to standard, invariable units of measurement, while the state became a universalizing institution that, in many ways, embodied the new universal time with the capacity to implement it through its legislative powers.

However, while absolute time provided the predominant framework of time in capitalist society, relative time was also expressed in the fragmentation of time that occurred when the working hours legislation was introduced, as is evident in the irregularity and discontinuity of labour practices that resulted, and in the different, co-existing temporalities that emerged from the universalization of time. Multiple temporalities, a feature of relative time, was also present in that very different, often
competing, experiences and discourses about time co-existed within the same overriding and universal temporal structure.

Clearly, then, the social and cultural forms of time, expressed through legislation and other discursive forms and material practices, constitute the structural elements of historical time, which co-exist and interact in a complex manner. In capitalist society, these multiple times are contained within an overriding, universal structure of time created by the predominance of absolute time, while in pre-capitalist societies, no such overriding temporal structure necessarily exists. Nonetheless, the existence of continuities between feudal and capitalist societies, which have their basis in the relationship between time and human activity, demonstrate that the history of human society gives rise to historical time as a complex whole. While this chapter has emphasized the role of human agency in underpinning the construction of historical time, the following chapter considers more closely how deterministic forces shape its nature.
Endnotes

3 ibid., p. 107. The earliest sundials were T-squares, which cast a shadow along a graduated, marked stem. Arab mathematicians and astronomers developed a much more refined version of the sundial during the Middle Ages.
5 ibid., p. 83.
7 ibid.
9 Whitrow, Time in History, p. 28.
10 A Hellenistic geared mechanism has survived from the first century BC which “appears to have included the means of determining the positions of the sun and moon in the zodiac, and it involved an assembly of wheels with fixed gear-ratios for the mechanization of the Metonic cycle, in which 19 solar years correspond to 235 lunar months. According to our present knowledge, this machine was the nearest the artificers of antiquity came to inventing a truly mechanical clock.” (Ibid., p. 99).
Moreover, a “practical link has been revealed between the Hellenistic traditions of mathematical gearing and the medieval Islamic.” (Ibid., p. 101.)
11 Ibid., p. 101.
13 Whitrow, Time in History, pp. 104-105.
14 See Landes, Revolution in Time, p. 62; Thrift, “The Making of a Capitalist Time Consciousness”, p. 108. It was the church’s concern with time measurement - mainly due to the contribution of Bede - that time and the calendar was one of the few aspects of medieval science that moved ahead in the medieval period. This progress reflects, in large part, the “church’s continuing concern to solve and systematize the dating of Easter and the other so-called movable feasts,” dates which “were established in accordance with the lunar as well as the solar calendar.” Bede made his greatest contribution in this area in the eighth century; “the rapid diffusion of his work on the continent testifies to its superiority and interest.” Certain monasteries became centres of training and calculation, “producing a substantial literature on the subject.” (Landes, Revolution in Time, pp. 63-64).
15 Whitrow, Time in History, p. 102.
16 Ibid., p. 105.
17 Ibid., p. 110.
21 Whitrow, Time in History, pp. 158-165.
23 Marx argues that, although it is not a fundamental feature of all societies, most societies produce a surplus. Wherever a part of society, he suggests, “possesses the monopoly of the means of production, the worker, free or unfree, must add to the labour-time necessary for his own maintenance an extra quantity of labour-time in order to produce the means of subsistence for the owner of the means of production.” K. Marx, Capital: A Critique of Political Economy, Volume 1, trans. by B. Fowkes, (London: Penguin Classics, 1990), p. 344. He disputes Proudhon’s claim that “all labour must leave a surplus.” (Ibid., p. 650, fn. 9) See Appendix entries 102, 117. For Marx’s citations of support concerning the production of surplus value in other economic formation, see Appendix entries 27, 42, 97. Marx sees the production of surplus-value as originating in agriculture; all labour is originally agricultural in that it was first directed “towards the appropriation and production of food.” The production of surplus-value is only possible if men are “capable of producing more means of
subsistence in a working day, and thus in the narrowest sense more agricultural products, than each worker needs for his own reproduction.” K. Marx, *Capital: A Critique of Political Economy, Volume 3*, trans. by D. Fernbach, (London: Penguin Classics, 1991), p. 921. Thus, the amount of surplus time available to a particular society is dependent on various conditions. First, the level of social productivity, and the particular material needs of that society; it needs the “application of an amount of labour-time that does not swallow up the entire working day.” (*Ibid.*, p. 770). Second, natural conditions play an important role in that certain natural conditions lend themselves to the creation of surplus labour-time. In capitalism, temperate conditions, the availability of a variety of natural products, a large degree of soil differentiation and a naturally changing environment, are all conditions conducive to the development of a division of labour and which were the natural basis for the development of capitalism. (*Capital, Volume 1*, p. 649.) For Marx’s citation of support concerning the conditions necessary for the development of capitalism see Appendix entries 50 and 93.


27 Le Goff, “Labor Time in the ‘Crisis’ of the Fourteenth Century”, p. 44.


49 Le Goff, “Merchant’s Time and Church’s Time in the Middle Ages”, in *Time, Work, and Culture in the Middle Ages*, pp. 29-30.


51 Whitrow, *Time in History*, p. 110.


39 Thomas, “Work and Leisure in Pre-Industrial Society”, p. 61
41 Ibid., p. 117.
42 Ibid., p. 114.
45 Adam, Time in Social Theory, p. 111.
47 Landes, Revolution in Time, p. 74.
48 Adam, Time in Social Theory, p. 111.
49 Nguyen, “The Spatialization of Metric Time”, p. 36. While Japy’s factory demonstrates the extent to which the division of labour in the horological industry was already much advanced, it “was not until the mass production of watches and clocks was undertaken in the United States in the early 1800s that an entirely new concept of industrial production became evident.” (Ibid., p. 37) “The technologies of machine manufacture which made possible the mass production of inexpensive clocks and watches from standardized and interchangeable parts brought with them a reconceptualization of the labour process itself. It is not an insignificant fact that Henry Ford himself was once a watchmaker; in the early 1880s he had conceived of the mass production of watches along a conveyor belt...[which] served as a model for the automobile industry in France.” (Ibid.)
52 Marx, Capital, Volume 1, p. 347.
53 Ibid. See Appendix entry 108.
54 Ibid., p. 348.
55 Ibid., p. 164, footnote 28. Marx is citing from Maurer. (See Appendix entry 86).
56 Marx, Capital, Volume 3, p. 929.
57 Ibid., p. 930.
58 Ibid., p. 931.
59 Ibid.
60 Ibid.
61 During the second half of the fourteenth century, the bailiff/serf “is replaced by a farmer, whom the landlord provides with seed, cattle and farm implements. The farmer’s condition is not very different from that of the peasant, but he exploits more wage-labour.” In England, this form was quickly replaced by the “farmer properly so-called, who valorises his own capital by employing wage-labourers, and pays a part of the surplus product, in money or in kind, to the landlord as ground rent.” Marx, Capital: Volume 1, p. 905. See Appendix entry 23 for Marx’s citation concerning the capitalist’s employment of wage labour.
62 Ibid., pp. 915-916. Marx is referring here to “the colonies, the national debt, the modern tax system, and the system of protection” as being embraced by “moments of primitive accumulation.” (Ibid., p. 915).
63 See Marx’s description of the legislation of Henry VIII, Edward VI, Elizabeth and James I, Capital, Volume 1, pp. 897-898.
64 Ibid., p. 896.
65 Ibid., p. 899.
66 Ibid., pp. 877-885, 910-913.
67 Ibid., pp. 383-384. See also pp. 900-903.
68 Marx, Capital, Volume 1, p. 385. See Appendix entries 100 and 145 for Marx’s citations that support this point.
69 Ibid. Marx cites many authors concerning the bourgeoisie’s extraction of the maximum labour time. See, for example, Appendix entries 81, 173, 183.
70 Ibid., p. 390.
71 Ibid., pp. 412-413.
72 Ibid., p. 412.
73 See Appendix entries 153, 156, 159, 168, 178, 185, 191 for Marx’s citations that support this point.
96 Ibid., p. 394.
97 Ibid., pp. 394-395.
99 Cross, A Quest for Time, p. 21.
100 Ibid., pp. 21-22.
102 Ibid., p. 348. See Appendix entries 29, 80, 88 for Marx’s citation of support for this point.
103 Ibid., pp. 398-404.
106 Ibid., p. 526.
107 Ibid., p. 532.
108 Ibid., p. 533.
109 Ibid., p. 607. See Appendix entry 157 for Marx’s citations that support this point.
110 Ibid., p. 532.
111 Ibid., p. 608. See Appendix entry 24, 158, for Marx’s citations that support this point.
112 Ibid., p. 609. See Appendix entry 159, 160 for Marx’s citations that support this point.
113 Marx cites the Reports of Inspectors of Factories to support this point: “Without any doubt, the shortening of the hours of labour... gave the impulse to these improvements.” Capital: Volume I, p. 540, footnote 91. Listed in Appendix entry 181. See also Appendix entries 174 and 175 for Marx’s citation of support for this point.
114 Ibid., p. 534. For Marx’s citations concerning the effect of the introduction of working hours legislation, particularly that of increasing the productivity of labour, see Appendix entries 155, 170, 172, 195, 198.
116 Le Goff, “Merchant’s Time and Church’s Time in the Middle Ages”, p. 36. The organization of commercial networks meant that “time became an object of measurement. The duration of a sea voyage or of a journey by land from one place to another, the problem of prices which rose or fell in the course of a commercial transaction (the more so as the circuit became increasingly complex, affecting profits).... The enlargement of the monetary sphere required a more adequate measurement of time.” (Ibid., p. 35). “For the merchant, the technological environment superimposed a new and measurable time, in other words, an oriented and predictable time, on that of the natural environment, which was a time both eternally renewed and perpetually unpredictable.” (Ibid.)
118 Ibid., p. 173.
119 M.W. Steinberg presents an interesting discussion on the role of language in the formation of classes as a crucial mediating force. In drawing on postmodern social theory and historiography, as well as the writings of E.P. Thompson, he shows how class struggle occurs within hegemonic and counter-hegemonic discursive formations. M.W. Steinberg, “‘A Way of Struggle’: Reformations and Affirmations of E.P. Thompson’s Class Analysis in the Light of Postmodern Theories of Language”, British Journal of Sociology, vol. 48, (1997), pp. 471-492.
122 Marx, Capital: Volume I, p. 386, footnote 89. Listed in Appendix entry 5.
123 Anon., cited by Marx in Capital: Volume I, p. 765, footnote 3. Listed in Appendix entry 5. Marx reinterprets this as “the longest possible working days and the smallest possible amount of the means of subsistence” at the benefit of “the landowners, capitalist, and their political dignitaries and agents.” (Ibid.) See also Appendix entry 4, and the defence of the worker by Postlethwaite, Appendix entry 101.
Ibid., p. 387, footnote 91. Listed in Appendix entry 5.
Ibid., p. 789, footnote 17. Listed in Appendix entry 3.
Ibid., p. 387, footnote 91. Listed in Appendix entry 5.
Ibid., p. 337, footnote 11. Listed in Appendix entry 141.
See Appendix entries 33, 37, 39, 118 for Marx’s citations on the issue of ‘abstinence’.
See for example, Marx’s citations of John Bellers (Appendix entry 25), Richard Jones, (Appendix entry 63), George Ramsey (Appendix entry 105), Percy Ravenstone (Appendix entry 107).
Ibid., p. 341.
Ibid., p. 342.
Ibid., p. 390.
Ibid., p. 342.
Ibid., pp. 352-353.
Ibid., p. 375.
Ibid., p. 375-376.
Ibid., p. 343.
Ibid., p. 376, footnote 73.
Cited by Marx, Capital, Volume I, pp. 353-354. See Appendix entry 161. Marx cites many sources concerning the effects of long working hours on the workers, see, for example, his citation of Engels, in Appendix entries 47 and 48.
Chapter Six
The Nature of Historical Time in Capitalism

_Labor is the living, form-giving fire: it is the transitoriness of things, their temporality, as their formation by living time._ Karl Marx, *Grundrisse*

Introduction

In his introduction to the Penguin edition of *Capital: Volume Two*, Ernest Mandel stresses the “importance of the ‘time factor’ in Marx’s analysis of the capitalist mode of production.”¹ He goes on to suggest that it “would be a fruitful task for Marxist scholars to deepen our understanding of the role and function of this ‘time dimension’ in Marx’s *Capital*.”²

For time appears there as the measure of production, value and surplus-value (labour time); as the nexus connecting production, circulation and reproduction of commodities and capital (cycles of turnover and reproduction of capital); as the medium of the laws of motion of capital (trade cycles, cycles of class struggle, long-term historical cycles); and as the very essence of man (leisure time, life-span, creative time, time of social intercourse).³

The aim of this chapter is to take up Mandel’s suggestion and investigate Marx’s concept of time as expressed through the three volumes of *Capital*. As we saw in Chapter Four, Moishe Postone has analyzed this subject in relation to Marx’s ideas in the *Grundrisse*, and, in so doing, has identified some important elements of capitalist time. However, in other respects, as has been noted, his analysis is limited, in that it fails to acknowledge certain complexities evident in Marx’s concept of time.

Thus, while Postone is rightly concerned with Marx’s ideas of the nature of capitalist time as an historically specific construct, he does not accept that the model of time that Marx presents as constitutive of capitalist society can also be used to understand time in non-capitalist societies, through a consideration of the transhistorical aspects of historical time that are evident. Again, in emphasizing the more deterministic forces which underpin the construction of time, Postone fails to recognize the significant role of human agency in the production of value, and hence historical time. Clearly, there are deterministic forces inherent in the movement of capital, that
have a “purpose” which determines capitalism’s dynamic, directional nature, and that, as capitalism develops, tend to become more dominant at the expense of human agency. However, while such forces shape historical time, human agency through the vehicle of the bourgeois also significantly affects the nature of time by injecting capital into the process and developing a credit system, as do the workers through their time spent in labour.

In emphasizing the dialectical nature of historical time in capitalism, Postone does not elaborate on the nature of this contradictory process, other than to acknowledge the co-existence of two opposed concepts of time whose contradictory relationship creates a form of historical time that is unitary, directional and dynamic in nature. Yet Marx understands time to be a complex, contradictory temporal process through the movement of capital, which creates multiple levels of time that merge and interact together in a fluid manner to create an integrated “whole” in constant flux. In short, historical time is not just a single form of concrete time, as Postone argues, but is made up of many co-existing times, all of which emanate in different ways and on different levels and all of which need to be understood as parts of a “whole” that is constituted through the functioning of absolute time.

Similarly, the discontinuity and continuity, which are also contradictory features that find expression through capitalist historical time, characterize the overall production process. Disruptions caused by “unproductive” production and circulation time create discontinuity, while the imperative to produce surplus-value drives capitalism to reduce unproductive time, and hence impose continuity. Ironically, however, the means by which capitalism achieves continuity - largely through the development of commercial capital and the credit system - creates the conditions by which discontinuity in the overall process occurs as economic cycles and crises.

Yet this process is not merely cyclical, endlessly repeated without change or direction. On the contrary, it is characterized by the revolutionizing imperative of capitalist development that ensures the nature of the overall process is constantly changing, a process that is most evident in the changes in the organic composition of capital and the tendency of the rate of profit to decline. The most significant change,
in this respect, is the way that relative time becomes increasingly significant as a constitutive feature of historical time as the production of relative surplus-value increases, while the role of absolute time changes as a result of a decrease in the role of the production of absolute surplus-value. It is this question of absolute and relative time in capitalist production that is addressed in the section that follows.

Absolute and relative time in capitalist production

Marx sees time as embodied in value, through the process of human productive activity. In particular, he sees it as manifested through the production of goods, created for their use-value, or their ability to meet particular needs. Marx argues that, in capitalism, which is characterized by the production and exchange of commodities through the employment of wage-labour, the process of the production of exchange-value embodies time on a variety of levels, including that of the commodity itself, the particular commodity of wage labour, and the methods of producing surplus-value.

On the level of the commodity, Marx perceives that time is manifested in a contradictory way in that two types of time - relative time and absolute time - inhere in the commodity form, in its use-value and exchange-value respectively. On the one hand, relative time is manifested in the commodity’s use-value in the sense that the commodity, as an individual, particular, item, has its own “time”, or its own life-span, through which it expresses its specific usefulness. On the other hand, absolute time is manifested in the commodity’s exchange-value, as it measures the quantity of labour contained within the commodity, for, according to Marx, this “quantity is measured by its duration, and the labour-time is itself measured on the particular scale of hours, days etc.” Marx encapsulates the idea that absolute time is manifested in the commodity by referring to quantities of products as “definite quantities of labour, definite masses of crystallized labour-time. They are now simply the material shape taken by a given number of hours or days of social labour.” He also refers to commodities as “definite quantities of congealed labour-time.”
Marx shows the embodiment of relative and absolute time in the commodity form to be evident in the particular commodity of labour-power, where workers sell a portion of their time. He notes that the commodification of labour-power results in the worker selling a part of his or her time on the market, and that what distinguishes capitalism from other modes of production that circulate money and commodities is the way in which employers buy labour-power and workers sell it. According to Marx, capital arises "only when the owner of the means of production and subsistence finds the free worker available, on the market, as the seller of his own labour-power." Moreover, the possessor of labour-power sells his commodity to the buyer for a limited time only. If he were to:

sell it in a lump, once and for all, he would be selling himself, converting himself from a free man into a slave, from an owner of a commodity into a commodity. He must constantly treat his labour-power as his own property, his own commodity, and he can do this only by placing it at the disposal of the buyer, i.e. handing it over to the buyer for him to consume, for a definite period of time, temporarily. In this way he manages both to alienate... his labour-power and to avoid renouncing his rights of ownership over it.  

Marx suggests that, at the conclusion of the contract between the buyer and seller of labour-power, the commodity does not pass straight away into the hands of the buyer. While its exchange-value is already determined before the contract is made, its use-value consists in the subsequent exercise of that power: "The alienation ... of labour-power and its real manifestation..., i.e. the period of its existence as a use-value, do not coincide in time." Indeed, Marx notes that it is the custom in capitalism not to:

pay for labour-power until it has been exercised for the period fixed by the contract, for example, at the end of each week. In all cases, therefore, the worker advances the use-value of his labour-power to the capitalist. He lets the buyer consume it before he receives payment of the price. Everywhere the worker allows credit to the capitalist.  

Marx implies that relative time is manifested through "concrete useful labour" that reflects the use-value aspect of labour-power, and that also describes a form of creative time, which is a qualitative process by which the worker expends time in producing a particular use-value. He demonstrates that the production of use-value has its own temporal process, or its own "time" of production that is unique to that particular activity.
Similarly, Marx sees that absolute time is manifested through “abstract human labour” which creates exchange-value, and which describes a quantitative process, as simply temporal duration. He argues that the “congealed” time that represents the commodity’s exchange-value is not the actual amount of time spent in producing a particular commodity, but the time that is necessary on average, or, “socially necessary labour time”. Marx defines socially necessary labour time as that which is “required to produce any use-value under the conditions of production normal for a given society and with the average degree of skill and intensity of labour prevalent in that society.”

He maintains that the way in which exchange-value represents absolute time gives all commodities a universal element, abstracted from particularity. This is implicit, he suggests, in the way that the “value of a commodity is related to the value of any other commodity as the labour-time necessary for the production of the one is related to the labour-time necessary for the production of the other.”

Marx argues that, just as value embodies or congeals time, so too does surplus-value, which arises out of the ability of labour to create value over and above its own value. He suggests that the value produced in surplus labour time, which is that portion of the working day in which the worker is producing value over and above the value represented in his wage, represents the value of his own labour-power.

Marx then goes on to explain that the wage represents the magnitude of the exchange-value of labour-power, which, like any other commodity, is measured by the time required to produce it. He argues, then, that the labour time required for its own production and reproduction determines the value of labour-power; that is, the labour time socially necessary to produce the means of subsistence for the worker and his or her family. Thus, Marx shows the production of labour-power to consist in the individual’s reproduction of himself, that is, his own maintenance, for which: he requires a certain quantity of the means of subsistence. Therefore the labour-time necessary for the production of labour-power is the same as that necessary for the production of those means of subsistence; in other words, the value of labour-power is the value of the means of subsistence necessary for the maintenance of its owner.
During the activity of labour, Marx asserts, a quantity of "human muscle, nerve, brain, etc." is expended, and must be replaced: "Since more is expended, more must be received." Thus, Marx suggests, the means of subsistence of the worker must be "sufficient to maintain him in his normal state as a working individual," including the "means necessary for the worker's replacements, i.e. his children, in order that this race of peculiar commodity-owners may perpetuate its presence on the market." He concludes from this that the value of labour-power, therefore, is the value of a definite quantity of the means of subsistence that varies with changes in the variations in the labour time required to produce the means of subsistence.

Marx contends that the use-value of labour-power - that is, its potential to create value over and above its own value - enables it to produce surplus-value, which the buyer of labour-power appropriates. He makes a distinction between the time taken by the worker to reproduce his means of subsistence, and the time actually expended by the worker during a day's work. For example, Marx points out that the:

daily cost of maintaining labour-power and its daily expenditure in work, are two totally different things. The former determines the exchange-value of the labour-power, the latter its use-value. The fact that half a day's labour is necessary to keep the worker alive during 24 hours does not in any way prevent him from working a whole day.

Marx then goes on to explain that "necessary labour time" is that part of the process in which the worker produces the value of his labour-power, or the value of his means of subsistence. It will vary in proportion to the labour time required on average, under given social conditions, to produce them. Surplus labour time, on the other hand, is that part of the working day in which the workers' labour is no longer necessary labour, and in which they create surplus-value. Marx conceives surplus-value as a "congealed quantity of surplus labour-time,... as it is for a proper comprehension of value in general to conceive it as merely a congealed quantity of so many hours of labour."

According to Marx, the wage represents the value of the worker's labour, which he produces during necessary labour time. He suggests, however, that the wage form
makes all labour appear as paid labour, thus disguising the fact that surplus labour is unpaid and uncompensated. For example, the:

value of 3 shillings, which represents the paid portion of the working day, i.e. 6 hours of labour, appears as the value or price of the whole working day of 12 hours, which thus includes 6 hours which have not been paid for. The wage-form thus extinguishes every trace of the division of the working day into necessary labour and surplus labour, into paid labour and unpaid labour. All labour appears as paid labour.21

Marx distinguishes wage labour from other forms of labour on this basis. He argues that, under the corvée system, for example, the labour performed by the serf for himself, and that performed compulsorily for the lord, are “demarcated very clearly both in space and time.”22 In a slave system, all the slave’s labour appears as unpaid labour, even though the slave spends part of the working day working for himself alone, replacing the value of his own means of subsistence.23

Time can also be seen in the context of surplus-value, which Marx identifies in two forms, “absolute surplus-value” and “relative surplus-value”. As he notes, a different method produces each form of surplus-value, and a different concept of time underpins each method. Absolute time emanates from the production of absolute surplus-value, while relative time emanates from the production of relative surplus-value.

Marx argues that the increase of the length of the labour process, by an extension of the working day in absolute terms, expresses absolute time. He writes that the “prolongation of the working day beyond the point at which the worker would have produced an exact equivalent for the value of his labour-power, and the appropriation of that surplus labour by capital,” creates absolute surplus-value.24 As he also notes, a longer working day lengthens surplus labour time, which increases time spent in labour in an absolute sense. In this context, he outlines how attempts to lengthen the working day were acute in the seventeenth and eighteenth centuries, and occurred concurrently with the spread of a time discipline associated with the careful regulation of time spent in labour. Moreover, he shows how use of the clock, which was an instrument that quantified time, aided this process. Above all, he
demonstrates how time, as it emanates in this way, expresses the characteristics of continuity, linearity and constancy.

In contrast, Marx also points out how relative time emanates through the process by which technological innovation increases the productivity of labour. He argues that increased intensity and productivity of labour produce relative surplus-value, the production of which “completely revolutionizes the technical processes of labour and the groupings into which society is divided.” Marx contends that increased productivity through the revolutionization of technology results in the curtailing of necessary labour time, which, in effect, lengthens surplus labour time. In other words, he sees that innovations alter the labour process in such a way as to shorten the labour time socially necessary for the production of a commodity. Thus, Marx suggests, the:

> technical and social conditions of the process and consequently the mode of production itself must be revolutionized before the productivity of labour can be increased. Then, with the increase in the productivity of labour, the value of labour-power will fall, and the portion of the working day necessary for the reproduction of that value will be shortened.

Marx maintains that the increase in productivity that results from improved methods of production “creates in equal periods of time greater values than average social labour of the same kind” although the capitalist nevertheless continues to pay the same wage as the daily value of labour-power. He contends that, as the worker now needs to work for fewer hours to reproduce this value, he increases his surplus labour, and the surplus-value it creates: “Hence the capitalist who applies the improved method of production appropriates and devotes to surplus labour a greater portion of the working day than the other capitalists in the same business.”

However, Marx notes, as soon as the new method of production is generalized, this extra surplus-value vanishes:

> for then the difference between the individual value of the cheapened commodity and its social value vanishes. The law of the determination of value by labour-time makes itself felt to the individual capitalist who applies the new method of production by compelling him to sell his goods under their social value; this same law, acting as a coercive law of competition, forces his competitors to adopt the new method.
In Part 4 of *Capital*, Marx goes into much detail about how labour time is shortened through co-operation, manufacturing and large-scale machinery. Marx suggests that co-operation is an inherent characteristic of capitalism, where the combined working day produces "a far greater quantity of use-values than an equal sum of isolated working days, and consequently diminishes the labour-time necessary for the production of a given effect." He describes four ways in which simple forms of co-operation can increase productivity and reduce labour-time: by heightening the mechanical force of labour; by increasing the productive power of the individual; by performing different operations simultaneously as part of a larger process; and by setting large masses of labour to work. In so doing, he demonstrates how particular features of time are determined by the nature of the production process.

For example, Marx shows the way in which relative time is constructed through the introduction of the division of labour, which accompanies a shift in the way of thinking about time. As he points out, time becomes divisible into even, measurable segments, fragmented and multiplied for the purposes of closing up the gaps, or discontinuities, in the working day. Indeed, just as people can divide time, so, too, can they partition the process involved in producing a commodity. The division of labour breaks down the labour process into different operations, each of which require "unequal lengths of time, and therefore, in equal lengths of time, yield unequal quantities of the specialized products." In this way, Marx argues, the careful measurement of time introduces a "continuity, a uniformity, a regularity, an order, and even an intensity of labour, quite different from that found in an independent handicraft or even in simple co-operation."

Marx contends that, as a consequence of the stages of the production process becoming simultaneous, productivity is increased and hence, time saved, by reducing the time taken to make transitions between operations: "The time taken in passing from one stage to another is shortened, and so is the labour by means of which these transitions are made." In the case of the individual craftworker, various partial operations in the production of an article require him to "at one time change his place, at another time his tools." Marx suggests that this:
transition from one operation to another interrupts the flow of his labour and creates gaps in his working day, so to speak. These close up when he is tied to the same operation the whole day long; they vanish in the same proportion as the changes in his work diminish.... The extra expenditure of power required by every transition from rest to motion is compensated for by prolonging the duration of the normal speed of work, when once acquired.  

Marx also notes that productivity is increased in that the collective worker, "formed from the combination of the many specialized workers," performs each step of the process with a different set of hands: "The different stages of the process, previously successive in time, have become simultaneous and contiguous in space. Hence a greater quantity of finished commodities is produced within the same period." For instance, he notes that a worker under division of labour "takes less time in doing it than the craftsman who performs a whole series of operations in succession" and that "in comparison with the independent handicraft, more is produced in less time, or in other words the productivity of labour is increased."  

Marx argues that attempts to reduce production time evident in manufacturing, particularly through the division of labour, received an impetus during the nineteenth century with the rapid development of the speed of large-scale machinery. Hence, he sees that, in contrast to absolute time, which emanates from the production process at an even and continuous rate, relative time emanates at an uneven rate. Indeed, relative time, which is characterized by multiplicity and fragmentation, can accelerate and slow down according to changes in productivity.  

According to Marx, then, time, as it emanates from the production of commodities through the wage labour form is contradictory in that the process in which the worker participates is characterized not only by continuity, uniformity, regularity, and order but also by a fragmentation, multiplication and discontinuity. He understands this contradiction in terms of the necessary co-existence and interdependence of absolute and relative time as they are manifested in the commodity production process.  

The integral way in which, according to Marx, absolute and relative surplus-values are related indicates the relationship between absolute and relative time. Marx suggests that the process that constitutes the production of absolute surplus-value
forms the general foundation of the capitalist system, and the starting-point for the production of relative surplus-value. Relative surplus-value:

presupposes that the working day is already divided into two parts, necessary labour and surplus labour. In order to prolong the surplus labour, the necessary labour is shortened by methods for producing the equivalent of the wage of labour in a shorter time.38

Moreover, methods of producing relative surplus-value "are, at the same time, methods of producing absolute surplus-value." Marx argues that a characteristic product of large-scale industry, which is an integral part of the production of relative surplus-value, was the unrestricted prolongation of the working day.39 Furthermore, he suggests, relative surplus-value "requires the absolute prolongation of the working day beyond the labour-time necessary to the existence of the worker himself,"40 and is therefore absolute. Conversely, Marx maintains that absolute surplus-value requires a development of the productivity of labour that will allow a restriction of the necessary labour time to a portion of the working day, and is therefore relative.

The evident interdependence between the two forms of surplus-value prompts Marx’s observation that the “distinction between absolute and relative surplus-value appears to be illusory.”41 However, Marx goes on to suggest, the distinction between the two forms of surplus-value becomes clear when considering the movement of surplus-value:

Once the capitalist mode of production has become the established and universal mode of production, the difference between absolute and relative surplus-value makes itself felt whenever there is a question of raising the rate of surplus-value 42

If the productivity and intensity of labour is a given, he notes, only a lengthening of the working day can raise the rate of surplus-value. If, however, the length of the working day is a given, changing the components of the working day of necessary labour and surplus labour by altering the productivity or intensity of labour, will raise the rate of surplus-value.43

Marx demonstrates that the interaction of absolute and relative time, reflecting changes in the various methods of production of surplus-value, means that the temporal process itself changes as a whole, giving it a directional nature. Moreover,
he shows that the co-existence of two opposed concepts of time also underlines its contradictory nature. On the one hand, time as absolute, evenly divisible, where each segment of time is equal to another, embodies a quantitative form of time. On the other hand, relative time is constituted by qualitatively different parts of time. Some parts, for example, can be “denser” than others in relation to the amount of value that workers can produce in that time. In short, time in this context has an exponential quality that gives the process as a whole an inherent dynamism and direction.\textsuperscript{44}

\textbf{Time through the movement of ‘many capitals’}

What is the nature of time underlying the process of the emanation of absolute and relative time through capitalist production? Answering this question requires a consideration of the reproduction and circulation of capital, a subject that Marx addresses in detail in \textit{Capital: Volume Two}.\textsuperscript{45} He sees that accumulated surplus-value, or capital, embodies time, and thus the movement of capital - its expansion and self-valorization whereby capital creates itself - describes the movement of time. Capital, Marx suggests, can only “be grasped as movement, and not as a static thing.”\textsuperscript{46}

Marx argues that, in this sense, capital is a cyclical process in “constant flux” and “incessant renewal”, a process that is continuous, and that periodically repeats the same phases:

\begin{quote}
A society can no more cease to produce than it can cease to consume. When viewed, therefore, as a connected whole, and in the constant flux of its incessant renewal, every social process of production is at the same time a process of reproduction.\textsuperscript{47}
\end{quote}

According to Marx, the production process begins with the purchase of labour-power for a fixed period and is “constantly repeated” when this period ends, or “when a definite period of production, such as a week or a month, has elapsed.”\textsuperscript{48} The continuity of the process means that the starting point becomes the “result” that is “constantly renewed and perpetuated.”\textsuperscript{49} Marx also describes this process as one of expansion and contraction that he likens to the cyclical movement of the planets:

just as the heavenly bodies always repeat a certain movement, once they have been flung into it, so also does social production, once it has been flung into
this movement of alternate expansion and contraction. Effects become causes
in their turn, and the various vicissitudes of the whole process, which always
reproduces its own conditions, take on the form of periodicity.\textsuperscript{50}

However, he points out that capital is not merely a repetitive process but preserves
and increases itself as it moves through different phases and assumes different forms.
According to Marx, capital, as self-valorizing value, is a “movement, a circulatory
process through different stages, which itself in turn includes three different forms of
the circulatory process.”\textsuperscript{51} Thus, he sees it as a creative process, where capital
creates itself out of itself.

Marx maintains that capital describes the movement of time, where time expands and
contracts, and manifests in different forms of capital, each form of which has its own
cyclical temporality and where each plays a part in the complex temporal process of
the movement of the whole. He sees time, then, as not purely cyclical, but spiralled.
He refers, for example, to accumulation as “the gradual increase of capital by
reproduction as it passes from the circular to the spiral form.”\textsuperscript{52}

Marx describes the process whereby time manifests itself as different forms of capital
through “turnover time”, which he defines as “the period of time that elapses from
the moment that the capital value is advanced in a particular form until the return of
the capital value in process in the same form.”\textsuperscript{53} He sees that, through turnover time,
time manifests itself in different value forms successively - as productive capital to
commodity capital, commodity capital to money capital and from money capital back
to productive capital. According to Marx, all “portions of the capital go through the
circuit in succession, and, at any one time, they find themselves in various stages of
it.”\textsuperscript{54}

Marx argues that one of the central requirements of the valorization process is that
capital must return to its original form. “When the entire capital value that the
individual capitalist invests in one branch of production or other has described its
cyclical movement,” he suggests, “it exists once again in its original form and can
then repeat the same process.”\textsuperscript{55} Marx maintains that, if the value is to be
perpetuated and valorized as capital value, this repetition must occur, and thus, the capital's overall turnover time:

measures the interval between one cyclical period of the total capital value and the next; the periodicity in the capital's life-process, or, if you like, the time required for the renewal and repetition of the valorization and production process of the same capital value.  

Marx notes that while some economists distinguish different forms of the circuit and consider them in connection with the turnover of capital, they overlook the important point that capital must return to its original form. In contrast, he describes a process whereby the capital advanced moves through the various stages of the circuit, which constitutes its turnover period, and returns to its starting point enriched with surplus-value. Once this period has elapsed, the circuit is at an end, "and the same capital value can begin the same circuit afresh, and thus also valorize itself afresh, and again produce surplus-value."  

Marx suggests that the process presents itself as a succession of phases, each of which involves the transition of the capital into a new phase that is determined by its abandonment of the previous one. In this way, every particular circuit, which has one of the functional forms of the capital as its starting-point and point of return, creates a discontinuity owing to the circuit of capital being a:

constant process of interruption; one stage is left behind, the next stage embarked upon; one form is cast aside, and the capital exists in another; each of these stages not only conditions the other, but at the same time excludes it.  

However, Marx notes that the simultaneity of production and circulation time achieves continuity, and describes the three circuits of capital at the same time: "[I]ndustrial capital, as the whole of these parts, exists simultaneously in its various phases and functions, and thus describes all three circuits at once." He argues that, while the three circuits express the continuity of the process, the total process is a unity of these three circuits, so that each circuit "conditions the continuity of the overall process; the circular course of one functional form determines that of the others." According to Marx, then, as a whole, capital is simultaneously present, and spatially co-existent, in its various phases, although each part is constantly
passing from one functional form into another, and thus functions in all of them in turn. In other words, he sees that the multiple nature of time endows it with continuity.

Marx describes the process of change of forms as fluid, where a complex, organic process sees each form interrelated:

The forms are therefore fluid forms, and their simultaneity is mediated by their succession. Each form both follows and precedes the others, so that the return of one part of the capital to one form is determined by the return of another part to another form. Each part continuously describes its own course, but it is always another part of capital that finds itself in this form, and these particular circuits simply constitute simultaneous and successive moments of the overall process.⁶³

Marx’s organic concept of time is evident in his discussion of fixed and circulating capital, in which he shows, in more detail, the way that productive capital transforms value. Marx demonstrates this to be a complex process where different types of capital (fixed or circulating), while productive, are transformed in different ways, or, at least, in different time frames.

Marx makes a distinction between fixed and circulating capital based on the way that they transfer value. He argues that fixed capital is that which is contained in the means of production, and as such it transfers value gradually over its whole life span. According to Marx, when the means of production has “lived out its time”, it ceases to be a bearer of value. In contrast, circulating capital, which buys labour power and raw materials, transfers value all at once within the time that it takes to produce the product. Thus, he suggests that fixed and circulating capital have very different turnover times, with several - sometimes many - turnovers of circulating capital occurring within a single turnover of fixed capital.⁶⁴

Again, Marx demonstrates that it is then possible to see within fixed capital itself, further differentiation in time, maintaining that elements of fixed capital have “differing life-spans and hence different turnover times.”⁶⁵ For example, when considering replacement, or repairs he writes that, in the railway:

the rails, sleepers, earthworks, station buildings, bridges, tunnels, locomotives and carriages all function for different periods and have different reproduction
times, and so the capital advanced in them has different turnover times. The buildings, platforms, water tanks, viaducts, tunnels, cuttings and embankments, in short, all those things which on the English railways are called 'works of art', do not need to be renewed for a whole series of years. The things that wear out most quickly are the permanent way and the rolling stock.\textsuperscript{66}

Marx argues that even each part of the machine has its own life-span, and when repairs are conducted, the life-span becomes a more complex thing, impossible to tell where repairs begin and replacement ends.\textsuperscript{67} Thus, he suggests, the slow movement of fixed capital as it transfers its value to the commodity, consists of many movements - in fact, as many movements as there are different elements making up the fixed capital. According to Marx, these movements become more complex in that the renewal of the elements of fixed capital may be whole or partial, and occur at different times. Thus, while some elements of fixed capital have an average life-span, other elements, including the different components of the same machine, “permit periodic or partial renewal.” Again, Marx shows the situation to become more complex with the difficulty of distinguishing between maintenance, repairs, and replacement. Thus, Marx describes a process where many times co-exist within a unitary time, where multiple times interact and interconnect together as fluid forms, merging and blending with each other and then separating. It is difficult to tell where one time ends and another begins, or where one fuses into another.

In describing time in this way, Marx acknowledges the important contribution of the Physiocrats to ideas about the reproduction and circulation of capital. According to Marx, the Physiocrats were the first economists to address the cyclical movement of capital, primarily in the area of agriculture, where they made the correct distinction between fixed and circulating capital as being due to the:

\textit{different ways in which their value is circulated together with the value of the product, and the different ways in which they are replaced or reproduced, the value of one being completely replaced each year, that of the other bit by bit over a longer period.}\textsuperscript{68}

Consequently, Marx points out that the Physiocrats also recognized the distinction between annual and decennial turnover times.\textsuperscript{69}
However, within a broader critique of the mechanistic nature of the Enlightenment understanding of time, Marx notes, among other things, the organic process of capitalist production. Indeed, while he is indebted to the ideas of the Physiocrats, he nonetheless critiques them as he does Ricardo’s equation of the constant / variable capital distinction with the fixed / circulating capital distinction. In emphasizing how Ricardo wrongly asserts that the length of time that capital remains in its various forms determines whether capital is “fixed” or “circulating”, Marx points out that it “is in no way simply this physical property of durability which leads them to function as fixed capital.” He argues that, in making a distinction between the capitals laid out on labour and the means of production “simply with respect to the different periods of time during which the given value of both is transferred to the product,” Ricardo overlooks the different roles that both forms of capital play in the production of value. Marx sees, then, that with Ricardo, who understands time as absolute - as a quantitative measure of duration - time determines the nature of capital, rather than capital determining the nature of time.

In contrast, Marx understands time as relative, as qualitatively different depending on whether it emanates from fixed or circulating capital. Yet, the difference between Marx and the Enlightenment thinkers is not as clear as his statements suggest. While his distinction between fixed and circulating capital is qualitative as opposed to quantitative, and describes the complex interrelationships between the “times” of different elements of fixed capital, it is nonetheless based on duration, which is the same criticism he levels at Ricardo. For Marx, one is a gradual transfer of value, while the other is rapid. Moreover, while he critiques the mechanistic understanding of discrete cycles, aspects of his own ideas reflect this notion. For example, he talks about the successive stages of the turnover cycle of capital operating simultaneously to create continuity, which is reminiscent of the Physiocrats idea of discrete cycles. His ideas in this respect show the extent to which Enlightenment thought influenced Marx, although he does then go on to describe a more fluid, organic process.

In describing the organic nature of capital as it circulates and reproduces itself through the process of the production of surplus-value, Marx describes the nature of historical time as it emanates from this movement. Indeed, he demonstrates that
historical time is manifested in capital, which has both conceptual and material forms, and that it is made up of a complex interaction of multiple, co-existing, semi-autonomous cycles. Marx highlights the contradictory nature of historical time by showing how these cycles, which express different forms and types of capital with their own time-frames or rhythms, nonetheless give rise to a continuity in the historical process in their interconnectedness. In this way, Marx shows historical time as a whole to form the shape of a spiral, as it is forward moving, and hence directional and changing.

Changes in the historical constitution of time

In *Capital*, Marx argues that through the imperative of the capitalist process to produce surplus-value - not as a means to an end, but as an end in itself - capitalism strives to impose a continuous temporality on what is essentially a discontinuous process. He suggests that capitalism does so by removing or reducing unproductive time from the production and circulation processes, which together make up the overall turnover time of capital. By highlighting the various ways in which this process occurs, Marx shows historical time in capitalism to have an inherently contradictory nature in which, ironically, the drive to impose continuity results in discontinuity in the process as a whole, thus creating a particular dynamic whereby the nature of historical time changes in some fundamental ways.

Marx begins his analysis of this phenomenon by demonstrating that productive time, which is that time of the labour process that involves the expenditure of labour, and which is consequently the basis of the production of value, is also the basis of the constitution of historical time. According to Marx, two things need to be understood here. First, there are many production processes in which workers only labour for a part of the production time. Secondly, the entire time for which capital exists in the production process is not necessarily “working time”. Interruptions occur in the labour process, conditioned by the nature of the product and its production:

during which the object of labour is subjected to natural processes of shorter or longer duration, and has to undergo physical, chemical or physiological changes while the labour process is either completely or partially suspended.
He notes that this is particularly evident in the processes that involve natural products, such as animal husbandry, crop growing, or wine making, where natural rhythms govern temporality. Moreover, Marx suggests that, in many industries, such as pottery and bleaching, the product must be exposed to certain conditions in order to change its chemical properties. One example Marx provides is the American manufacture of shoe lasts, where the wood must dry out for up to eighteen months to prevent warping.  

In these cases, only occasional additional labour is required for the large part of the production time. During these intervals, the means of production do not function to absorb labour, and hence there is no valorization of the productive capital during that part of production time that is in excess of working time. Thus:

It is clear that the nearer production time and working time approach to equality, the greater the productivity and valorization of a given productive capital in a given space of time. The tendency of capitalist production is therefore to shorten as much as possible the excess of production time over working time.  

Marx describes the way in which intervention in production techniques alter the temporal processes that inhere in production. The tendency of capitalist production, he notes, is “to shorten as much as possible the excess of production time over working time” so that, for example, developing breeding or reproduction techniques that artificially speed up the process, and thus reduce unproductive time, alter such processes.  

One example Marx uses to illustrate this is the selective breeding of the “New Leicesters”, a sheep with reduced bone structure, which allows a one-year old sheep to be fattened and fully grown within two years, as opposed to the usual four or five years.  

In the same way, he notes how, in situations where the working period only forms a part of the production period such as in cold climates where agricultural labour does not occur in winter, cottage industries become integrated with other agricultural processes, where differential times meld together to achieve a continuity of productive time.  

Marx argues that reducing circulation time, which is unproductive time in the sense that it does not produce value, also achieves continuity, as the circulation process,
while necessary for the realization of value, does not actually produce value. Indeed, he notes that, while capital is in the circulation sphere as money or commodity capital, it does not function as productive capital. As such, circulation time interrupts the production of value:

The expansion and contraction of the circulation time hence acts as a negative limit on the contraction or expansion of the production time, or of the scale on which a capital of a given magnitude can function. The more that the circulation metamorphoses of capital are only ideal, i.e. the closer the circulation time comes to zero, the more the capital functions, and the greater is its productivity and self-valorization.  

Thus, Marx notes that intermediary agents, who “shorten the buying and selling time for many producers,” also shorten circulation time and, as such, “should be considered as a machine that reduces the expenditure of useless energy, or helps to set free production time.”

According to Marx, while circulation time does not create value, it helps realize it through the development of the means of transport and communication, where:

the speed of movement in space is accelerated, and spatial distance is thus shortened in time. In addition to this, the mass of means of communication develops, so that for instance many ships depart for the same port at the same time, several trains run between the same two points along different railways, and, above all, freight ships leave Liverpool for New York, for example, on different successive days of the week, and goods trains run at different hours of the day from Manchester to London.

However, Marx notes that paradoxically, the contradiction of time is expressed in how, while capitalism strives for continuity, displaying features of absolute time, it creates features of relative time. For instance, he argues that, as time accelerates through the speeding up of machines and communications, it creates multiple, simultaneous times, causing discontinuity and fragmentation in the production process by creating irregular working hours, and enabling last minute orders. Moreover, as Marx notes, it creates discontinuity in the form of business cycles and broader economic crises.

For Marx, the role of commercial capital is an important factor in resolving this contradictory process in that it removes discontinuities and interruptions to create a
continuity and overall unity to the process. He argues that commercial capital, which circulates "in order to keep the continuity of the reproduction process going," has its own "specific movement" that consists of two simultaneous movements; money transformed into commodities, and commodities transformed back into money.\textsuperscript{83} Marx maintains that introducing improved methods of production and circulation injects capital - which is embodied time - into the production process and that, as such, there is a sense in which value-laden time, as capital, is replacing value-free or unproductive time. According to Marx, commercial capital can do this because it has an "autonomy" and an "independent life" and is thus able to burst through "all the temporal spatial and personal barriers imposed by the direct exchange of products," by being invested where required to "mediate the turnovers of very different productive capitals at the same time or in succession."\textsuperscript{84}

In this context, Marx argues that the development of a credit system is an integral part of this process of enabling capital to be used to produce surplus-value. He suggests that time accumulates as capital, which investors can then borrow and repay with interest when the capital has realized surplus-value:

\begin{quote}
It is clear that, with the more frequent realization of surplus-value and the rising scale on which it is produced, a growth occurs in the proportion in which new money capital or money as capital is placed on the money market, and at least a large part of this is absorbed again from the money market for the expansion of production.\textsuperscript{85}
\end{quote}

Marx reiterates this point by describing how shortening turnover time requires capital investment.\textsuperscript{86}

Marx argues that the inevitable result of the capitalist process, the accumulation of capital, allows for the credit system to develop in that capital becomes available as a commodity itself, not only for the owner of money but also for others, as interest-bearing capital. He contends that it is lent for a certain interval, temporarily, on the condition that it is, "first, returned to its starting-point after a definite period of time, and second, is returned as realized capital, so that it has realized its use-value of producing surplus-value."\textsuperscript{87} Marx maintains that the entire form of the movement attributable to interest-bearing capital is the "giving-out or lending of money for a
certain time, and the repayment of this with interest (surplus-value).” He notes that the two acts are “separated by a longer or shorter interval, during which the real reproduction movement of the capital takes place,” beyond the transactions between lenders and borrowers.  

Marx shows the way in which the development of the credit system - an inevitable outcome of the accumulation of capital - contributes to the existence of contradictions which express themselves in the system as economic cycles and crises so that, during periods of prosperity, “when the reproduction process exhibits a great acceleration and energy,” the capital involved in the expenditure of revenue undergoes an absolute expansion. There is full employment, “capitalists revenues grow significantly,” and both prices and consumption rise. However, he notes that this period of expansion is at the same time “a period of easy and elastic credit” and that credit regulates the velocity of circulation of capital transfers between capitalists, resulting in a relative decline in the “amount of the circulating medium required to settle payments and make cash purchases.” In other words, Marx argues, the capital used in the “transfer of capital” is relatively contracted. A larger mass of payments is settled without any intervention of money, and “there is a quicker movement of the same quantities of money, as both means of purchase and payment.”

Marx also notes that, in periods of crisis, the opposite is the case. The expenditure of revenue contracts, prices and wages fall, the number of employed workers shrinks, and turnover declines. As a result, he argues, the amount of currency required declines. Yet, the stagnation in the reproduction process causes a decline in credit, and, as such, the “need for monetary accommodation grows.”

Thus, Marx demonstrates that while credit enables expansion through a speeding up of the productive process, it also contributes to its fluctuations and eventual crisis, allowing an acceleration “of the individual phases of circulation or commodity metamorphosis, then an acceleration of the metamorphosis of capital and hence an acceleration of the reproduction process in general.” He argues that a reciprocal relationship exists whereby “the development of the production process expands credit, while credit in turn leads to an expansion of industrial and commercial
operations."\textsuperscript{93} According to Marx, as long as the reproduction process remains fluid and continuous, "so that returns remain assured, this credit persists and extends, and its extension is based on the extension of the reproduction process itself."\textsuperscript{94}

In noting the effects of credit on capitalist expansion, Marx shows how capital, as embodied time, also manifests the contradictory nature of time, finding expression in the system overall. He argues that credit allows expansion and "acceleration" of the process, which in turn allows the expansion of credit that then becomes indispensable for large-scale production for distant markets, where it "grows in volume with the growing value of production and grows in duration with the increasing distance of the markets."\textsuperscript{95} According to Marx, the more the markets expand and are further removed from the point of production, thus prolonging credit, the more the speculative element comes to dominate transactions. Hence, the longer bills run for, "the greater the possibility that returns may be diminished or delayed as a result of a fall in price or an excess of supply on the market." In other words, he notes that the more that speculation on a rise or fall in commodity prices inspires the original transaction, the less certain are the returns.\textsuperscript{96} "As soon as any stagnation occurs", Marx goes on to argue, "as a result of delayed returns, overstocked markets or fallen prices, there is a surplus of industrial capital, but in a form in which it cannot accomplish its function."\textsuperscript{97} He suggests that stagnation causes a disturbance or a fragmentation where:

> The chain of payment obligations at specific dates is broken in a hundred places, and this is still further intensified by an accompanying breakdown of the credit system, which had developed alongside capital. All this therefore leads to violent and acute crises, sudden forcible devaluations, an actual stagnation and disruption in the reproduction process, and hence to an actual decline in reproduction.\textsuperscript{98}

Thus, Marx shows the contradictory way in which the credit system:

accelerates the material development of the productive forces and the reaction of the world market, which it is the historical task of the capitalist mode of production to bring to a certain level of development, as material foundations for the new form of production. At the same time, credit accelerates the violent outbreaks of this contradiction, crises, and with these the elements of dissolution of the old mode of production.\textsuperscript{99}
Marx also describes the contradiction of time in relation to the tendency of the rate of profit to decline, a tendency that is inherently contradictory, ultimately leading to the demise of capitalism. He demonstrates how the two opposing tendencies that affect the rate of profit reveal this contradiction. On the one hand there is an increase in the production of absolute surplus-value, which raises the rate of profit. On the other, there is an increase in the production of relative surplus-value, which lowers the rate of profit. According to Marx, this situation arises because the rate of profit is dependent on the proportion between variable and constant capital.

These tendencies, Marx suggests, can be seen in terms of the organic composition of capital, which refers to the ratio between variable capital (spent on labour) and constant capital (spent on raw materials and means of production), the technical conditions of which at any particular stage of the development of productivity determine this ratio:

A certain quantity of labour-power, represented by a certain number of workers, is required to produce a certain volume of products in a day, for example, and this involves putting a certain mass of means of production in motion and consuming them productively - machines, raw materials etc.\textsuperscript{100}

In this way then, he notes that the two opposing tendencies operate to affect the rate of profit, which is:

calculated on the total capital applied, but for a specific period of time, in practice a year. The proportion between the surplus-value or profit made and realized in a year and the total capital, calculated as a percentage, is the rate of profit.\textsuperscript{101}

According to Marx, owing to fluctuations in productivity (after all, the process as a whole is discontinuous in its nature), rates of profit also differ. Indeed, fluctuations in the rate of profit inevitably occur, reflecting variations in productivity that, as Marx notes, "is far from uniform in the various branches of industry"\textsuperscript{102} and often takes place in opposite directions. "We thus have a contrary movement in these different spheres: progress here, regression there."\textsuperscript{103} He argues that if, in different spheres of production, the turnover times of the capitals invested, or, the "value relations between the organic components of these capitals," differ, it follows that the
"rates of profit in different spheres of production that exist simultaneously alongside one another will differ."

Yet, these fluctuations balance out to produce a tendency. Indeed, in describing a similar process to the continuity achieved by simultaneous forms of capital co-existing, Marx shows how fluctuations have a "multilateral character and differential duration," so their simultaneous co-existence balances out the discontinuities. He notes that a change in the general rate of profit is the "final outcome of a whole series of protracted oscillations which require a good deal of time before they are consolidated and balanced out." Marx argues that the "movement of one sphere of production will cancel out the movement of another, the forces mutually counteract and paralyze each other." This process is:

slow, and the suddenness, multilateral character and differential duration of fluctuations in the particular spheres of production lead to a situation in which they partly compensate for one another in their temporal succession, so that a fall in price succeeds a rise, and vice versa, and they therefore remain local, i.e. confined to the particular sphere of production concerned. The various local fluctuations, in other words, reciprocally neutralize one another. Changes take place within each particular sphere of production, departures from the general profit rate, which on the one hand balance each other out over a certain period of time and hence do not react back on the general rate, while on the other hand they do not react back on it because they are cancelled out by other simultaneous local fluctuations.... Within each sphere there is room for shorter or longer periods in which the profit rate in this sphere fluctuates, before this fluctuation, a rise or fall, is consolidated for a sufficient time to affect the general rate of profit and thus to have more than a local significance.

Marx argues that competition also plays a role in equalizing profit rates between the different spheres of production to produce an average rate of profit. By continually transferring capital from one sphere to another, where profit temporarily stands above the average:

[t]his uninterrupted emigration and immigration of capitals that takes place between various spheres of production produces rising and falling movements in the profit rate which more or less balance one another out and thus tend to reduce the profit rate everywhere to the same common and general level.

Marx suggests that one of the outcomes of the different "contending agencies" functioning "simultaneously in opposition to one another" is economic crisis:
These various influences sometimes tend to exhibit themselves side by side, spatially; at other times one after the other, temporally; and at certain points the conflict of contending agencies breaks through in crises. Crises are never more than momentary, violent solutions for the existing contradictions, violent eruptions that re-establish the disturbed balance for the time being.\(^{109}\)

Such contradictions, according to Marx, are evident in the way that the tendency is toward "an absolute development of productive forces irrespective of value and the surplus-value this contains," while on the other hand "its purpose is to maintain the existing capital value and to valorize it to the utmost extent possible."\(^{110}\) Thus, he sees that the "true barrier to capitalist development is capital itself" because the valorization of capital is the "motive and purpose of production."\(^{111}\) Marx maintains that the means of production are not "simply means for a steadily expanding pattern of life for the society of the producers."\(^{112}\)

According to Marx, the tendency for the rate of profit to decline, which is a "self-evident necessity,"\(^{113}\) is inherent in the relative decline in the ratio of variable to constant capital. The proportion of capital being invested in relative surplus-value production is growing, while the proportion being invested in labour is correspondingly shrinking. He argues that this involves a relative decline in the ratio of variable capital to constant capital, which means that:

the same quantity of labour-power that is made available by a variable capital of a given value, as a result of the specific methods of production that develop within capitalist production, sets in motion, works up, and productively consumes, within the same period, an ever-growing mass of means of labour, machinery and fixed capital of all kinds, and raw and ancillary materials - in other words, the same number of workers operate with a constant capital of ever-growing scale.\(^{114}\)

Marx suggests that this process indicates that the relationship between absolute and relative time changes in response to, or concurrently with, changes in the methods of production of surplus-value. In this way, while the emanation of relative time is growing in significance in terms of its contribution to the nature of capitalist time, absolute time is becoming less significant, or anachronistic.

In Marx's vision of a future society, absolute time is virtually redundant - although still necessary. Indeed, he foresees a society that is governed, not by the goal of
creating surplus-value but by “the development of human powers as an end in itself.”115 He notes that:

though social production remains, the determination of value still prevails in the sense that the regulation of labour-time and the distribution of social labour among various production groups becomes more essential than ever, as well as the keeping of accounts on this.116

However, Marx notes that producing time free from necessary labour would primarily concern such a society, creating the “true realm of freedom.” He suggests that:

The real wealth of society and the possibility of a constant expansion of its reproduction process does not depend on the length of surplus labour but rather on its productivity and on the more or less plentiful conditions of production in which it is performed. The realm of freedom really begins only where labour determined by necessity and external expediency ends; it lies by its very nature beyond the sphere of material production proper.117

According to Marx, because capitalism relies on the creation of surplus-value, the realization of the possibility of reducing the working day to its minimum duration – that is, the length of necessary labour time - will occur only through its abolition. However, even in that case, he points out, necessary labour time would inevitably increase. First, the conditions of the worker would improve and his aspirations subsequently increase; second, extra labour time would be necessary for the formation of a “social fund for reserve and accumulation.”118 Thus, in the new mode of production that Marx visualizes, surplus labour time, “as labour beyond the extent of given needs,” would be a necessity. Society requires “insurance against accidents and for the progressive extension of the production process that is needed to keep pace with the development of needs and the progress of population.”119

Insofar as a form of relative time would characterize the time of freedom, as expressed through the free expression of individuals pursuing creative activity, the development of capitalism makes this possible. Indeed, given the widespread recognition in Marx’s time that increased productivity enables the capitalist class to gain the time to “manage” their capital and enjoy significant amounts of leisure time, Marx noted that advanced technological development contained the potential to free all people from the necessity of unsatisfying labour. Thus, while capitalism
"squanders human beings, living labour, more readily than does any other mode of production, squandering not only flesh and blood, but nerves and brains as well."

Marx argues that it is nonetheless through this "tremendous waste of individual development" that humanity in general develops toward the "conscious reconstruction of human society." According to Marx, in extorting surplus labour "in a manner and in conditions that are more advantageous to social relations and to the creation of elements for a new and higher form than was the case under the earlier forms of slavery, serfdom, etc.," capitalism leads to a stage where, on the one hand:

compulsion and the monopolization of social development (with its material and intellectual advantages) by one section of society at the expense of another disappears; on the other hand it creates the material means and the nucleus for relations that permit this surplus labour to be combined, in a higher form of society, with a greater reduction of the overall time devoted to material labour.

Significantly, Marx's comments about time in future society identify aspects of time that transcend the historical specificities of capitalist society, pointing to the idea that in a future, non-capitalist, society, time would emanate in a different manner. However, just as he said little about time in pre-capitalist societies, so too does he say little about time in a future society beyond capitalism. Nonetheless, in drawing our attention to these issues, he highlights the historical specificity of capitalist historical time, and, in so doing, expresses a profound and complex understanding of the changing nature of historical time in capitalism, the implications of which will be discussed in the concluding section.
Conclusion

Throughout the three volumes of Capital, Marx provides an in-depth understanding of the concept of time. In particular, he recognizes that time is, in part, a socially constructed concept that, in the case of capitalism, emanates out of the process that defines productive activity. While his ideas in this respect have provided a basis for many historical studies into the social and cultural construction of time, there has been little consideration of its implications for the writing of history itself or, in other words, for the question of historical time. This chapter concludes by considering some of these implications.

Marx shows, in the context of capitalist society, that time has a particular nature, one that reflects the specific material conditions of that stage of history. In so doing, he demonstrates how absolute and relative time emanate, and co-exist, in a dialectical, contradictory manner that endows time with a singularity and universality. This makes it “historical time” in the sense that capitalist time defines and shapes the historical process as a whole. Historical time, as it emanates from capitalism, has a central feature that describes “modern” historical time - that is, an inherent contradiction.

In highlighting the contradictory nature of time Marx underlines the paradox at the heart of modern historical time, a paradox that can best be understood in an organic sense. In this way, he shows how the organic idea of time contains the idea of the “whole” and the “parts”, both of which we can understand in temporal terms as containing both singular and multiple times.

The “singular” aspect of time arises out of the nature of the goal of capitalism, which is to accumulate capital or surplus-value through the process of commodity production. The logic underpinning this goal governs the temporal nature of capitalist society as a whole. The role of absolute time in this process is crucial in imposing a universal nature on time. Absolute time accumulates as capital, and its injection into the production process to influence temporal rhythms imposes a universal framework, subsuming the multiple times within it. The whole shapes, and
to a large extent, determines, these multiple times. The logic of capital
determines the direction and nature of the historical process as a whole, its inherent
contradictions creating broader economic crises that give the process as a whole a
spiral form. Thus, capitalist society has a "life of its own", with its own internal laws
of development, emerging and developing according to its own internal logic.

The characteristic of temporal contradiction expressed in these ways are constant or
permanent features of capitalist time which is, in itself, a constantly changing idea,
reflecting changes in the material conditions of production. In this sense, then,
insofar as the nature of the relationship between absolute and relative time emanates
from the capitalist production process, that relationship continues to change. In so
doing, of course, it causes changes in the nature of historical time. We can best
understand the changing nature of historical time by considering the relationship
between the two meanings of historical time.

At one level, historical time is the time that emanates from actual, material, historical
events and processes. At a second level, it is a concept of time that a society, or more
particularly, the historian, holds, and uses, to understand the past. This distinction
reflects the two meanings of history - as event and as representation, a distinction
that, as Chapter One discussed, writers first articulated in the late eighteenth century.
Marx's ideas about time provide a basis on which we can understand the integral
relationship between these two aspects of historical time. The shifts in historical
events and processes mean that historical time, as it emanates from them, also
changes. How concepts of historical time held by capitalist society are subject to
change reflect this.

The scope of Marx's historical study ranges from the breakdown of feudalism,
throughout the gradual development of capitalism from the fourteenth to the
nineteenth centuries. The shift he points to in the changes in methods of production
reflects changes in the way societies have understood historical time. This is
particularly evident in the shift in the thinking about historical time that accompanied
changes in production methods between the seventeenth and nineteenth centuries.
During the seventeenth and eighteenth centuries, when the manufacturing industry emerged and expanded, the predominant means of the production of surplus-value was through an extension of the working day. The concept of absolute time underpinned the explanation of this process. Indeed, Enlightenment historical thought was informed by the idea that time was absolute, and that society’s development reflected this by progressing in a straight-line direction.

By the end of the eighteenth century, however, as a result of the advent of large-scale manufacturing and the development of the factory system, the increasingly predominant means of surplus-value production was through technological advances that heightened productivity. It was a process that was accentuated by the legislation introduced to prescribe the working day, which effectively limited the amount of absolute surplus-value that workers could produce, leading to a compensatory emphasis being given to the production of relative surplus-value. A change in the realm of historical thinking about time accompanied this shift, as is evident in the way that the notion of relative time underlines the major schools of historical thought of the nineteenth century such as Romantic Idealism and Historicism. Yet, historical time was not totally relativized. While these schools of thought recognized multiple and discontinuous times, they still saw time as contained within an overriding “whole”, with historical time being seen as something existing “in and of itself”.

A similar relationship between methods of producing surplus-value and concepts of historical time can be seen in relation to historical thinking in the twentieth century, when the increasing fragmentation and discontinuity of production processes that characterizes “post-Fordist” production, and the increasing acceleration of time through the use of electronic technologies, have all impacted on the production of relative surplus-value, and consequently, the manifestation of relative time. As a result of this development, there has been a growing trend toward emphasizing the relative aspects of time over the absolute aspects in historical thought, as seen, in particular, through the development of structuralist and post-structuralist thought. Indeed, Marx’s ideas concerning the tendency of the rate of profit to decline support this trend, which points to absolute time becoming increasingly redundant, although vital to the maintenance of the capitalist system.
However, to posit a totally relativized view of historical time, as post-structuralism does, is to ignore the continued universalizing role that absolute time continues to play as an integral part of capitalist time. Absolute time continues to be the means whereby capitalist society is bound together, making it a “whole”. In fact, while it is possible to reject particular notions of historical time which absolute time supports, such as the “grand narrative”, it is not possible to ignore the material nature of absolute time as it is manifested in the economic, cultural and social structures of capitalist society. Certainly, it is difficult to accept the conclusion of “post-Marxists” who reject those elements of Marx’s thought that point to a universal, continuous and evolutionary notion of historical time.

Marx has demonstrated, in ways that are difficult to refute, that our ideas about historical time are a product of the material conditions of our society. Indeed, from the standpoint of the late twentieth century, society and (some) histories inevitably impose a universal framework on the past. When they do this without a consciousness of doing so, out of a presumption that it is a universally applicable understanding of time, they lose much historical understanding. However, when they question these presumptions, and recognize them, not as a universal “truth” but as a constructed concept, they open up new ways of thinking about historical time. The challenge to assumptions about historical time that postmodern theory presents is useful in stretching the possibilities of thinking about historical time. Indeed, it enables historians to redefine the meaning or understanding of historical time.

Postmodernism offers a way in which the idea of time can be explored as a socially constructed concept. Its emphasis on “discourse” as the activity that underlines the production of time resembles Marx’s emphasis on “capital” - which, like discourse, can be understood as “representation” - as the basis of historical time. Understanding postmodernism within a Marxist framework, that is, as a phenomenon that is a direct reflection of late twentieth century capitalism, enables an understanding of historical time as a changing, constructed, concept. Yet, by itself, such a definition of historical time remains inadequate. It is also necessary to retain the idea of an essentialist or tranhistorical element to historical time, which links the past to the present.
Marx's organicism provides a means by which we can do this. Indeed, the idea that
different "times"- each of which is an emanation of a particular process involving
human activity - interact and interweave together to make up a "whole" time through
which the historical process develops, is useful in understanding the process of
development in any social form of whatever size. What makes up the "whole" is
open to question and to definition. In capitalism the "whole" potentially extends -
and arguably has already done so - to encompass all societies in the world. However,
defining what makes up the whole in relation to non-capitalist social forms is
problematic, and is more usefully seen as parts making up wholes that merge
together. The components of these interacting wholes are continually blending,
shifting and transforming themselves.

Marx's analysis of the nature of the temporal process that the reproduction of capital
expresses describes time in this way. Yet, while such an analysis refers to an
historically specific phenomenon, it also enhances an understanding of how different
times interact together in non-capitalist societies. In short, while the physical
manifestations, or material expressions of time differ from one social form to
another, the underlying process that creates them, are the same.

Thus, although this chapter has been largely concerned with the question of historical
time in capitalism, it has nonetheless addressed the first theme that underlies the
thesis as a whole, the extent to which transhistorical and historically specific
elements underlie the construction of time. In this way, it has demonstrated that
Marx understood the categories of use-value and concrete labour, which are
transhistorical categories underpinned by relative time, to be valid as a means of
understanding historical time in general, but that the particular form of relative time
that is expressed in capitalism, in conjunction with absolute time, is historically
specific. Moreover, although it has primarily addressed the historically specific
nature of historical time in capitalism, this chapter has also pointed to transhistorical
features of time in its consideration of Marx's ideas of time in a future, non-capitalist
society, in which both absolute and relative time play a role. Moreover, it has also
demonstrated that capitalist time, taken as a whole, can also be understood as
containing transhistorical and historically specific elements in that there are constant, as well as changing, features of time within capitalism.

This chapter has also addressed the second theme underlying this thesis, that of the extent to which human agency or deterministic forces influence the construction of historical time. Whereas the previous chapter emphasized the aspects of human agency, this chapter has highlighted Marx's recognition of the significance of deterministic forces in that it has focussed on how the logic of capitalism, in its drive to produce surplus-value, shapes the nature of historical time. However, the chapter has also noted that Marx saw the whole process to be underpinned by human agency, by working class labour and by the actions of the capitalist class, although the overall nature and direction of capitalist historical time, determined by the movement and reproduction of capital, is beyond individual control. Indeed, it has pointed to the possibility that time is becoming more deterministic, as is evident in the trend within capitalist development toward a predominance of relative surplus-value production, and hence the role of technology, above the production of absolute surplus-value, and hence the role of labour.

In relation to the third theme concerning the nature of the relationship between absolute and relative time, the chapter has argued that Marx perceived that both concepts of time co-exist dialectically to produce an historically specific concept of historical time that is characterized as a "whole" with a direction and dynamism. On the one hand, it has shown absolute time to be expressed through the production of value, through the process of abstract labour, and through the methods of the production of absolute surplus-value. Moreover, the chapter has argued that absolute time is also manifested in capitalism's drive to impose a continuity and universality on both individual production processes and the process as a whole. On the other hand, the chapter has shown relative time to be expressed through the production of use-value, through the process of concrete labour, and through the methods of the production of relative surplus-value. Thus, the chapter has argued that relative time is evident in the multiplicity, fragmentation and discontinuity that occur in both individual production processes, and the process as a whole through economic fluctuations and crises. It has suggested that Marx understood the nature of the
relationship between absolute and relative time within the historical time of capitalism to be changing along with changes in the methods of producing surplus-value.

Finally, this chapter has argued that the co-existence of absolute and relative time is a characteristic of the “modern” notion of historical time, with its singular aspect evident in the dominance of absolute time, and its multiple and relative aspects subsumed within it. It has maintained that, while relative time continues to gain in significance and predominance, absolute time nonetheless continues to impose universality on the historical process as a whole. Thus, the chapter has supported a position in relation to historical time which challenges postmodernism’s rejection of absolute time, but which also acknowledges its valuable contribution to an understanding of historical time. The following chapter explores this latter issue more fully.
Endnotes

2 Ibid., p. 20.
3 Ibid.
4 Marx discusses the effect of the life-span of the commodity on circulation: "The very form of existence of commodities, their existence as use-values, sets certain limits to the circulation of the commodity capital C'-M'. If they do not enter into productive or individual consumption within a certain interval of time, according to their particular characteristics, in other words if they are not sold within a definite time, then they get spoiled, and lose, together with their use-value, the property of being bearers of exchange-value." (Capital, Volume 2, pp. 205-206).
6 Ibid., p. 297.
7 Ibid., p. 130. Marx criticizes Smith's endeavour to prove that equal quantities of labour always have the same value. Marx sees that Smith has misunderstood the nature of labour-time as a measure of value by claiming that it acts as an absolute measure, rather than as a relative one. For Marx's citation of Smith, see Appendix entry 130, 131. Marx cites an anonymous author to be "much nearer the mark" than Smith. (Listed in Appendix 13). See Appendix entry 49 for Marx's citation of Engels for support of this point. On Marx's citations of Ricardo concerning the value of labour, see Appendix entries 109, 110, 111.
8 Ibid., p. 274. See Appendix entry 11 for Marx's citation of support concerning the value of labour power.
9 Ibid., p. 271. See Appendix entry 60 for Marx's citation of Hegel for support for this point.
10 Ibid., p. 277.
11 Ibid., p. 278. See Appendix entry 9, 54 for Marx's citations that support this point. Such a system has consequences for the worker. For example, when a capitalist goes bankrupt, the worker will lose the wages he has advanced. See Appendix entry 135, 164, 176, 154 for Marx's citations concerning more long-lasting consequences. For Marx's citations on the question of a labour fund created through the accumulation of capital, see Appendix entries 32, 65, 132.
12 Marx's discussion of concrete and abstract labour can be found in Capital: Volume 1, pp. 136-137.
13 Ibid., p. 130. See Appendix entry 12 for Marx's citation of support for this point.
14 Ibid. For Marx's citation of support concerning the value of money as a commodity, see Appendix entry 98.
15 For Marx's citation of support concerning the origin of surplus value, see Appendix entries 8, 87, 147.
16 Ibid., p. 274.
17 Ibid., pp. 274-275. See Appendix entry 90 for Marx's citation of support for this point.
18 Ibid., p. 275.
19 Ibid., p. 300.
20 Ibid., p. 325. For Marx's citation of support concerning necessary labour time, see Appendix entries 41, 85.
21 Ibid., p. 680.
22 Ibid.
23 Ibid.
24 Ibid., p. 645.
25 Ibid. This is made possible by an increase in the productivity of labour; the "conditions of production of his labour, i.e. his mode of production, and the labour process itself, must be revolutionized." (Ibid., p. 431.) See Appendix entries 53, 128 for Marx's citation of support for this point.
26 Ibid., p. 432. See Appendix entry 34 for Marx's citation of support for this point.
27 Ibid., p. 436.
28 Ibid. See Appendix entry 14 for Marx's citation of support for this point. The idea that capitalism attempts to economize labour-time by increasing its productivity is one that Marx finds much support for. For example, see Appendix entries 26, 64, 133.
29 Ibid., p. 447.


32 *Ibid.* See Appendix entry 17 for Marx’s citation of support for this point.

33 *Ibid.*, p. 463. See Appendix entry 16 for Marx’s citation of support for this point.


35 *Ibid.*, p. 464. See Appendix entry 134 for Marx’s citation of support for this point.

36 *Ibid.*, p. 458. See Appendix entry 15 for Marx’s citation of support for this point.

37 Marx notes that, with the shortening of the working day by law, “capital threw itself with all its might, and will full awareness of the situation, into the production of relative surplus-value, by speeding up the development of the machine system.” (*Capital, Volume I*, p. 534.) Marx extensively discusses the effect of machinery as a means of producing surplus value – both absolute and relative –, and subsequently on the role of time in capitalism. See pp. 492-551. See Appendix entries 122 for Marx’s citation of support for the point that machinery creates a longer working day.


43 In *Capital: Volume I*, Marx discusses extensively the various ways that surplus value is created through an increased productivity and intensity of labour, together with a lengthened working day. His citations in this regard are found in Appendix entries 10, 82, 148, 149, 177. In regards to how low wages increases working hours, see Appendix entries 7, 124, 125, 151, 153, 190, 163, 186, 156, 171. For Marx’s citation of authors who support his argument concerning the effect of piece wages on lengthening hours of work, see Appendix entries 1, 30, 43, 44, 45, 55, 59, 83, 142, 143, 184, 187, 152.

44 This is the essence of Moishe Postone’s argument, outlined and discussed in Chapter 4, in *Time, Labor and Social Domination: A Reinterpretation of Marx’s Critical Theory*, (Cambridge: Cambridge University Press, 1993).


48 *Ibid.*, p. 712. For Marx’s citation of support for this point, see Appendix entry 127.


53 Marx, *Capital: Volume 2*, p. 233. For Marx’s citation of support for this point, see Appendix entry 119.


57 To support this contention he cites two such economists who fail to mention the form of the returns of original outlay; Samuel Philips Newman (Appendix entry 95) and Thomas Chalmers. (Appendix entry 35). However, according to Marx, the Physiocrats Turgot (Appendix entry 140) and Quesnay (Appendix entry 104) correctly perceived that money must return to its point of departure.


65 Ibid., p. 248. See Marx’s citation of support for this point in Appendix entry 71.
66 Ibid., pp. 248-249. For Marx’s citation of support on the ways that the life-span of the means of production is affected, see Appendix entries 150, 72.
67 For Marx’s citation of support for this point, see Appendix entries 73, 74, 62, 67, 196, 197.
68 Ibid., p. 268.
69 Ibid. For Marx’s citation of the Physiocrats on the distinction between fixed and circulating capital, see Appendix entries 46, 78, 103, 139.
70 For example, Marx argues against the existence of discrete cycles when he points out that Müller has a "naive conception of industry and agriculture." Müller writes that "Urban production is tied to a cycle of days, rural production to one of years." (Cited by Marx in Capital, Volume 2, footnote 1, p. 264). Listed in Appendix entry 91.
71 Ibid., p. 302. See Appendix entry 112, 113, 114 for Marx’s citation of Ricardo.
72 Ernest Mandel notes that the distinction is based on duration: “Marx’s important distinction between circulating and fixed capital is based exclusively on the amount of time required for each of these two parts of money capital to revert to its original form.” (E. Mandel, “Introduction” to Capital: Volume 2, p. 19.)
73 Marx, Capital: Volume 2, p. 316. For Marx’s citation of support for his distinction between working time and production time, see Appendix entries 61, 68.
74 Ibid., p. 318.
75 Ibid., pp. 202-203. For Marx’s citation of support concerning the factors which affect turnover time, see Appendix entries 66, 69, 70, 75.
76 Ibid., pp. 312-313.
77 Ibid., p. 315. See Appendix entry 76. For Marx’s citation of support for his noting of the difficulties often associated with this, see Appendix entries 182, 57, 58.
78 Ibid., p. 317. See Appendix entry 167.
79 Ibid., p. 203.
80 Ibid., p. 209. For Marx’s citation of support for the costs involved in circulation, see Appendix entries 38, 52, 96.
81 Ibid., pp. 327-328.
82 Marx, Capital: Volume 1, pp. 607-609. See Appendix entries 24, 157, 158, 159, 160, 188 for Marx’s citation of support for this point.
84 Ibid., p. 420. Marx goes into much detail concerning the amount of money in circulation and its velocity within the process. For his citation of support on this subject, see Appendix entries 18, 19, 20, 77, 99, 120.
85 Ibid., p. 396. For Marx’s citation of support on the subject of credit and interest rates, see Appendix entries 36, 56, 92, 138.
86 See Capital, Volume 2, pp. 311-313, 319-321. Marx provides examples from Lavelaye on crop rotation (Appendix entry 75) and Kirchhof on timber production (Appendix entry 69).
87 Marx, Capital, Volume 3., p. 465.
88 Ibid., p. 469.
89 Ibid., p. 578.
90 Ibid., p. 579.
91 Ibid., p. 580.
92 Ibid., p. 567.
93 Ibid., p. 612.
94 Ibid., p. 614.
95 Ibid., p. 612.
96 Ibid., p. 614.
97 Ibid.
98 Ibid., p. 363.
99 Ibid., p. 572. For Marx’s citations concerning economic crises, see Appendix entries 115, 116, 137.
100 Ibid., p. 244.
101 Ibid., p. 334.
102 Ibid., p. 368.
103 Ibid., p. 369.
104 Ibid., p. 243. For Marx’s citations concerning fluctuations, see Appendix entries 51, 193, 194.
105 Ibid., p. 266.
106 Ibid., pp. 269-270.
107 Ibid., p. 310.
108 Ibid., p. 357.
109 Ibid.
110 Ibid., p. 358.
111 Ibid.
112 Ibid.
113 Ibid., p. 319.
114 Ibid., p. 318.
115 Ibid., p. 959.
116 Ibid., p. 991.
117 Ibid., pp. 958-959.
118 Capital: Volume 1, p. 667.
120 Ibid., p. 182.
121 Ibid., p. 958.
122 Ibid.
Chapter Seven

Marx’s Concept of Time in a Contemporary Context

‘Behold this gateway, dwarf?’, I went on: ‘it has two aspects. Two paths come together here: no one has ever reached their end. This long lane behind us: it goes on for an eternity. And that long lane ahead of us – that is another eternity. They are in opposition to one another, these paths: they abut on one another: and it is here at this gateway that they come together. The name of the gateway is written above it: ‘Momeni’.

‘But if one were to follow them further and ever further and further: do you think, dwarf, that these paths would be in eternal opposition?’

‘Everything straight lies,’ murmured the dwarf disdainfully. ‘All truth is crooked, time itself is a circle.’

Nietzsche Thus Spoke Zarathustra

Introduction

Interpretations of Marx have tended to stereotype his idea of history as mechanistic and lacking in subtlety. In part, such a view became a reference point of attack by postmodernists who depicted Marx’s history as operating within the idea of the “grand narrative” and who consequently questioned its validity for an understanding of contemporary life. Foucault suggested, for example, that “Marxism exists in nineteenth century thought as a fish exists in water; that is, it ceases to breathe anywhere else.”

This chapter disputes such claims by arguing, on the contrary, that Marx’s concept of time is as equally relevant today as it was when Marx formulated it in the nineteenth century. It endeavours to show that the ideas about time that underpin Marx’s economic analysis remain central to an understanding of historical time in present capitalist society. The chapter sustains this position by historicizing postmodern society in a Marxist context with reference to Ernest Mandel’s notion of “long waves”. It notes how Mandel explains global economic developments in the nineteenth and twentieth centuries in terms of Marx’s analysis of the laws of capitalist development, whereby phases of economic growth and decline are characterized by the various technological developments that created them.
It can be further demonstrated by drawing on the ideas of Fredric Jameson and David Harvey, and by arguing that the latest period or phase of economic development, which theorists describe as "postmodern", has led to a particular understanding of time as relative, the characteristics of which include multiplicity and discontinuity. However, the analyses of certain "post-Marxist" theorists like E. Laclau and C. Mouffe, who challenge what they see as the Marxist conception of a singular or unified historical process, operate with what might be seen as a very crude notion of Marx's idea of history. As has been argued in the previous chapter, universalizing concepts are necessary as capitalism imposes a totalizing unity on the historical process. In emphasizing the necessity of addressing postmodern concerns within a Marxist framework, then, it follows that there is a need for an understanding of historical time that incorporates both absolute and relative time.

Can, then, an understanding of the idea of time that Foucault employs in his historical analyses of "discursive formations" assist in interpreting Marx's concept of time in today's "postmodern" context? In answering this question, it is important to note how Foucault challenges the modern concept of historical time, particularly the notion of a continuous, unified historical process as a fundamental "reality", showing it to be merely a constructed idea. It is also important to note how, in rejecting absolute time as a fundamental constituent of historical time that imposes a unity on the historical process, Foucault defines time as relative, and hence discontinuous, fragmentary and occurring on a multiplicity of levels.

Yet, despite Foucault's insistence of the relativity of time, he nonetheless cannot avoid a "totalizing" tendency particularly when he considers the question of the relationship between power and knowledge. While he acknowledges the central importance of forms of economic power, Foucault notes that other relations of power are equally as determining. However, like Marx, he recognizes the role of absolute time as a primary discourse that underpins our disciplinary society, seeing absolute time as creating particular forms of control of the time of individuals. In this way then, Foucault's analysis of the way power relations are integral to the construction and control of time is similar in many ways to Marx's own ideas. Moreover, while he differs in regards the role of human agency underlying the manifestation of time, it
can be argued that Foucault’s notion of power as “activity” implies a role for human agency and that, had he developed it further, he would have come closer to Marx, who saw that creative activity was the basis of the manifestation of time.

In short then, the problem of understanding Marx’s concept of time in a contemporary context can be most effectively addressed through two questions. How does an understanding of Marx’s concept of time provide a context within which the postmodern concept of time can be understood? How can Marx’s concept of time be understood within the postmodern context? What follows is an attempt to provide more detailed answers to these questions.

**Mandel’s long waves of capitalist development**

As Jameson has pointed out, Mandel, a Belgian Marxist political economist, has opened up an effective means by which the specific logic of the cultural production of the current “postmodern”, society can be theorized.⁢⁠ According to Jameson, Mandel argues that in late capitalism:

there have been three fundamental moments in capitalism, each one marking a dialectical expansion over the previous stage. These are market capitalism, the monopoly stage or the stage of imperialism, and our own, wrongly called postindustrial, but what might better be termed multinational, capital.... Mandel’s intervention in the postindustrial debate involves the proposition that late or multinational or consumer capitalism, far from being inconsistent with Marx’s great nineteenth-century analysis, constitutes, on the contrary, the purest form of capital yet to have emerged, a prodigious expansion of capital into hitherto unaccommodated areas. This purer capitalism of our own time thus eliminates the enclaves of precapitalist organization it had hitherto tolerated and exploited in a tributary way.⁴

Mandel has argued convincingly that Marxism is as relevant today as it was in the nineteenth century. In basing his thesis on Marx’s ideas concerning the tendencies of capitalist development, in which the general trend of the declining rate of profit does not signify an uninterrupted linear development, but rather causes an uneven development, Mandel explains the post-war history of the capitalist mode of production by demonstrating, through the thorough use of empirical, statistical data, that the “abstract” laws of motion of capitalist development “remain operative and verifiable in and through the unfolding ‘concrete’ history of contemporary
capitalism. In so doing, he considers the capitalist mode of production to be a "dynamic totality" in which the interplay of all the basic laws of development produces particular outcomes, and he presents a periodization theory of historical time in which the history of capitalist society is viewed in terms of series of "long waves".

Mandel argues that, traditionally, most Marxists and other industrial-cycle theorists have considered the tendencies of capitalist development within two different time frames. First, there is the industrial or business cycle of seven to ten years that "consists of the successive acceleration and deceleration of accumulation." Secondly, there is the overall historical existence of the capitalist mode of production.

However, there remains, he suggests:

a third, intermediary time-span to which hitherto too little attention has been paid: that of the 'long waves' of capitalist development, i.e. the successive periods of quicker and slower growth of the capitalist economy as a whole.

In identifying four long waves (the end of the 18th century to 1847; 1847 to the beginning of the 1890s; the 1890s to the Second World War; and 1940(48) to the present), Mandel subdivides each of these long periods into two phases: economic booms and slumps, each of which together span approximately fifty years. Booms are characterized by an increased rate of profit and accelerated accumulation and growth, which sees technology undergo a revolution. Slumps are characterized by a decline in the rate of profit as the means of production generated from the new technology are generalized through all branches of industry and economy caused by overproduction and as the limitations of markets causes underconsumption. As capital cannot be realized, economic growth decelerates.

Mandel argues that the "long waves" do not operate in a mechanistic fashion. Indeed, in *Long Waves of Capitalist Development*, the book which was based on the Marshall lectures given at Cambridge University in the early 1970s and later revised in 1995, he responds to criticisms that his argument in *Late Capitalism* was economistic and technologically determinist by asserting that, while the internal logic
of the capitalist laws of motion could explain both the cumulative nature of each long
wave and the transition from an expansionist long wave to a stagnating long wave, it
could not explain the upturn from a stagnating long wave to an expansionist long
wave. We can only explain this latter factor, he argues:

if all the concrete forms of capitalist development in a given environment (all
the concrete forms and contradictions of 'many capitals') are brought into
play. And these imply a whole series of noneconomic factors like wars of
conquest, extensions and contractions of the area of capitalist operation,
intercapitalist competition, class struggle, revolutions and counterrevolutions
etc. These radical changes in the overall social and geographic environment
in which the capitalist mode of production operates in turn detonate, so to
speak, radical upheavals in the basic variables of capitalist growth (i.e. they
can lead to upheavals in the average rate of profit).\textsuperscript{10}

The first "long wave", from the end of the 18th century until 1847, is that of the
industrial revolution itself. The "gradual spread of the handicraft-made or
manufacture-made steam engine to all the most important branches of industry and
industrial countries" characterized this first wave.\textsuperscript{11} The first phase of the long wave,
the 1790s to 1825, saw a slow expansion of the industrial proletariat and mass
unemployment, together with a vigorous expansion of the world market, particularly
in South America. It was followed by a slump from 1826 to 1847, in which
competition with pre-capitalist production declined, and the expansion of the world
market decelerated.

The second "long wave" of "market capitalism", lasting from 1848 to the 1890s, was
the product of the first technological revolution; that is, the "generalization of the
machine-made steam engine as the principal motive machine."\textsuperscript{12} It was also
facilitated by the 1848 European revolutions, the discovery of the California
goldfields and a broadening of the world market as areas in Central Europe, the
Middle East, and the Pacific Ocean opened up.\textsuperscript{13} More generally, it was the product
of revolutions in transport and communication such as the steamship, telegraph and
railway, together with revolutions in credit and trade such as joint-stock companies
and department stores, all of which were significant factors in causing a "strong,
sudden and durable increase in the rate of profit."\textsuperscript{14} However, as machine-made
machines became generalized, capital was exported, the price of raw materials fell,
and a relative decline in the world market occurred. At the same time, British workers began a struggle to shorten the normal workday.\textsuperscript{15}

The third long wave of "monopoly" or "imperialist" capitalism, which lasted from the 1890s to the 1940s was, in part, a product of a second technological revolution that was shaped by the "generalized application of electric and combustion engines in all branches of industry."\textsuperscript{16} During this time, imperialist expansion carved up Africa, the Middle East, East Asia and China, causing an increase in capital investments in the colonies and underdeveloped countries, and a generalization of monopolies, which raised the productivity of labour and the rate of surplus-value. In 1914, it moved from a boom phase into a long slump as the outbreak of war disrupted and narrowed world trade.\textsuperscript{17} It was further impeded by the Russian Revolution and an increasing resistance through strong craft unions to attempts by management to impose a direct control over the work process, as seen, for example, in the development of Taylorism.\textsuperscript{18}

The fourth long wave of "multi-national" capitalism was underpinned by a third technological revolution, which began in North America in 1940 and in the other imperialist countries from 1945-48 with the "generalized control of machines by means of electronic apparatuses (as well as by the gradual introduction of nuclear energy)."\textsuperscript{19} Unlike the stimulus for the earlier long waves - social revolution and geographic expansion in the mid-nineteenth century and imperial conquest in the late 19th century - the third technological revolution was triggered by the defeat of the international working class in the 1930s and 40s in the face of fascism, world war 2 and the cold war, a conjuncture of events that "enabled the capitalist class to impose a significant increase in the rate of surplus value."\textsuperscript{20} For Mandel, this strong increase in the rate of profit can be explained in terms of: the decline in the relative prices of raw materials after 1951; the monopoly of access by the US to cheap Middle East oil; revolutions in telecommunications and credit; the creation of an international money market; the rise of multinational corporations; and state-guaranteed investment in the armaments sector.\textsuperscript{21} Mandel then shows how this post-war boom was followed by a long slump beginning in 1967 with: the slow absorption of the "industrial reserve army" in the imperialist countries; the intensification of international competition;
the world currency crisis; a slow-down in the expansion of world trade;\textsuperscript{22} and the unionization of semi-skilled mass production workers which led to the need to whittle away the power of control of union strength.\textsuperscript{23}

As Mandel argues, the long waves are not simply “statistical averages” for given time-spans but “represent historical realities, segments of the overall history of the capitalist mode of production that have definitely distinguishable features.”\textsuperscript{24} He demonstrates how a Marxist explanation interweaves internal economic factors with exogenous “environmental” changes, mediated through sociopolitical developments, thus giving the historical reality an integrated “total” character.\textsuperscript{25} In this way, he describes the correlation between the predominant ideological trends and the general trends of economic development that confirm an historical “totality”. For example, he points out how, in the interwar period, which had a stagnating climate, “there was a general switch to irrationality and mysticism among the intellectuals of many imperialist countries.” This mood contrasted sharply with the “atmosphere of optimistic faith in rationalism, the natural sciences, and human progress that prevailed during the pre-World War 1 period.”\textsuperscript{26} Again, he notes how, in the period between 1948-68 an optimistic atmosphere, faith in the natural sciences and unlimited economic growth and human progress prevailed:

In that atmosphere, forces on the right wing and the extreme right wing were everywhere in retreat at the university level. And a combination of historical factors gave the student generation of the late 1960s an exceptional massive left-wing and pro-Marxist impetus, the like of which had never been encountered in the history of the bourgeois university.\textsuperscript{27}

Mandel then notes how the ideological trends have changed yet again, with the shift to the stagnating long wave that has seen a reversal toward scepticism, irrationality and mysticism, of which the “new philosophers” in France are but an example.\textsuperscript{28}

Without articulating it explicitly, Mandel is describing, in this latter phase, the phenomenon of “postmodernism”, a mode of thought which assumed various forms of expression throughout the twentieth century, but which has become predominant in the past thirty years. More specifically, he is outlining how the ideological and
philosophical determinants of a society are shaped by the prevailing conditions of a particular stage of capitalist development.

**Time in postmodern society**

As Lawrence Cahoone points out, the term “postmodern” has become an increasingly popular label to describe something about the end of the twentieth century, as well as referring to a contemporary intellectual movement. Indeed, as he notes, postmodernism regards “certain important principles, methods, or ideas characteristic of modern Western culture as obsolete or illegitimate” and, as such, is the latest wave in the critique of the Enlightenment.²⁹

The term “postmodern” originated in 1917 when Rudolf Pannwitz used it to describe the “nihilism” of twentieth century western culture. In 1939 the theologian Bernard Iddings Bell employed the term to refer to the failure of secular modernism and a return to religion, while the historian Arnold Toynbee used it to note the rise of mass society after World War I. During the 1950s and 60s it appeared increasingly in literary criticism in relation to the reaction against aesthetic modernism, while in the 1970s it was used in art and architecture in a similar way. By the 1980s postmodernism had come to refer to both French post-structuralist philosophy and a reaction against modern rationalism, utopianism and “foundationalism”. Further, the social sciences adopted it as a new approach to methodology, in which it became linked to the concept of “post-industrialisation”. More generally, postmodernism gained popular attention as a term referring to the style of the whole cultural mood of the 1990s.³⁰ Its commonality, Cahoone suggests, centres on:

- a recognition of pluralism and indeterminacy in the world that modern or modernist thought had evidently sought to disavow, hence a renunciation of intellectual hopes for simplicity, completeness and certainty; a new focus on representation or images or information or cultural signs as occupying a dominant position in social life; and an acceptance of play and fictionalization in cultural fields that had earlier sought a serious, realistic truth.³¹

Most importantly, however, Jameson has shown how, by reference to Mandel’s thesis, postmodernism can be seen as a “cultural dominant”, positioned in the
economic system of "late capitalism". According to Jameson, postmodernism is not merely a:

cultural ideology or fantasy, but has genuine historical (and socio-economic) reality as the third great original expansion of capitalism around the globe (after the earlier expansions of the national market and the older imperialist system, which each had their own cultural specificity and generated new types of space appropriate to their dynamics).  

With postmodernism, Jameson argues, a new kind of depthlessness and superficiality has emerged. The disappearance of the individual subject and the unavailability of the unique and personal style has brought about a new practice - pastiche - whereby producers of culture turn to the past to imitate dead styles, transferring the world into sheer images of itself. Jameson suggests that the new spatial logic of the "simulacrum"- the identical copy for which no original has ever existed - has had a "momentous effect on what used to be historical time." He argues that it is categories of space rather than time that increasingly dominate our daily life and experience and, further, that we lack the perceptual equipment to match the new form of postmodern space which has opened up around us, which is the great global multinational and decentred communicational network in which we find ourselves caught as individual subjects. He describes how we all, in one way or another, dimly feel that not only local forms of cultural resistance but also even overtly political interventions are "all somehow disarmed and reabsorbed by a system of which they themselves might well be considered a part, since they can achieve no distance from it." Thus, postmodernism modifies the past into a vast collection of images, berefting society of historicity. By losing its capacity to retain its own past, society has begun to live in a total present.

Jameson draws on Lacan's theory of schizophrenia to suggest that the experience of time, memory and the persistence of personal identity is an effect of language, and that the postmodern experience of time is similar to that of the schizophrenic. The schizophrenic, Jameson suggests, does not experience temporal continuity, but lives in a series of perpetual presents with which the various moments of his or her past or future have little connection. It is an experience of isolated, disconnected material signifiers that fail to link up in a coherent sequence.
David Harvey has echoed Jameson’s historicization of the cultural phenomenon of postmodernism, describing the “condition of postmodernity” as a result of capitalist development. The shift from modernism to postmodernism, he suggests, is attributable to a crisis in our experience of time and space; two concepts which can be neither understood nor assigned meaning independently of material processes. Each distinctive mode of production or social formation will embody distinctive time and space practices and concepts. Because the processes of social reproduction are always changing, objective qualities and meanings of time and space change also, which, in turn, affects how we interpret and act in respect to the world.\(^{36}\)

Harvey argues that Marx’s basic propositions such as the growth orientated nature of capitalism, the exploitation of living labour in production underlying growth in real values, and the technologically and organizationally dynamic features of capitalism, are as applicable to current forms of production as to earlier forms of production.\(^{37}\) Thus, he suggests that “flexible accumulation” occurred as the result of a response to the problem of overaccumulation, which led to idle productive capacity, surplus money capital and high unemployment. According to Harvey, these were problems produced, as Marx suggested, by the inherent crisis tendencies of capitalism.

Harvey argues that capitalism manages this overaccumulation problem through the devaluation of commodities, macroeconomic control, and through temporal and spatial displacement, the latter process of which occurs through an acceleration in turnover time and geographical expansion. Such a process requires credit and the capacity for “fictitious capital formation.”\(^{38}\) In this context, Harvey suggests that “Fordism” primarily handled the overaccumulation in the post-war boom through temporal displacement by increasing debt, and spatial displacement by establishing new geographical centres of accumulation. By the mid 1970s, however, the long economic slump that accentuated the accumulation problem, gave way to a new regime of capitalist production - flexible accumulation.\(^{39}\)

In this shift from Fordism to flexible accumulation, the uses and meanings of space and time have changed. Harvey suggests that this situation has led to a “space-time
compression” that has had a disorienting and disruptive impact upon political-economic practices, the balance of class power, as well as upon cultural and social life. The transition to flexible accumulation was, Harvey suggests, “in part accomplished through the rapid deployment of new organisational forms and new technologies in production.” He notes that reduction of turnover time was achieved through “vertical disintegration” such as outsourcing and subcontracting and the introduction of “just-in-time” delivery. In exchange and consumption, acceleration in communication and information flow as well as rationalization in distribution has had a similar effect. For example, the mobilization of mass fashion and a shift to the consumption of “services” have reduced the “life-time” of many commodities, thus accelerating the pace of consumption. Harvey argues that the major consequences have been to “accentuate volatility and ephemerality of fashions, products production techniques, labour processes, ideas and ideologies, values and established practices.” He notes that the values and virtues of instantaneity have been emphasized, giving priority to short-term planning over long-term planning. New sign systems and imagery, in advertising, corporations, and governments, have become an important commodity in themselves. This environment, lacking in solidity and permanence, emphasizing ephemerality and fragmentation, Harvey suggests, is one in which deconstruction can flourish, becoming the hallmark of postmodern living.

Postmodern theory encapsulates the features described by Harvey, which characterize late capitalism. According to Cahoone, it stresses five main themes or ideas. First, it criticizes presence or presentation, as opposed to representation and construction, by rejecting the distinction between what is directly given in experience (presence) with its representation in the sphere of linguistic signs and concepts and construction in the products of human invention. Secondly, it criticizes origins as an attempt to “see behind or beyond phenomena to their ultimate foundation” by denying this possibility and regarding “the surface of things, the phenomena, as not requiring a reference to anything deeper or more fundamental.” Thirdly, it criticizes unity, showing that what appears as a single, integral existence or concept is actually plural. Fourthly, it denies the transcendence of norms such as truth, goodness, beauty and rationality, arguing that they are products of, and immanent in, these processes. Finally,
postmodernism offers a critique of phenomena through “constitutive otherness”, which regards what appear to be cultural units as maintained in their apparent unity only “through an active process of exclusion, opposition, and hierarchization”, and which consequently attends to the “apparently excluded or ‘marginalized’ elements of any system or text.”

These ideas have informed the analyses of postmodern Marxists or “post-Marxists” who have attempted to reformulate and interpret Marx’s ideas in response to the changes in social, political and economic conditions. In *Hegemony and Socialist Strategy*, Laclau and Mouffe present such an argument when they describe historical transformations such as the failure of various socialisms, the structural changes that have given rise to “post-industrialism”, and the relative decline of the working class. Barry Smart sums up their argument, where ideas of “universal” subjects, the singularity or “unity” of history, and “society”:

‘as an intelligible structure that could be intellectually mastered on the basis of certain class positions and reconstituted, as a rational, transparent order, through a founding act of a political character” have been dissolved by the emergence of a plurality of social and political movements, and diverse associated forms of struggle. To analyse such contemporary social and political struggles in their specificity it is necessary to abandon the classical Marxist conception of ‘history and society as intelligible totalities constituted around conceptually explicable laws’ and to employ a conception of ‘hegemony’, a conception which introduces both a ‘logic of the social’ and historical contingency into considerations of the political. The objective is to contribute to the development of a ‘new politics for the Left based upon the project of a radical democracy’.

Laclau and Mouffe argue that their project belongs within the history of Marxism, particularly as developed by Gramsci, who submitted the economy to contextual forms of analysis which reveals its articulatory (discursive) nature and who deconstructed the aprioristic and objectivist status of economic categories. As such, “the very dimensioning and functioning of the economic space must also be considered as part of an entire historical construction.” Yet, according to Laclau and Mouffe, Gramsci does not go far enough: there is a residual essentialism in that Gramsci assigns a privileged role to the working class. They argue that the central role given to the economy in Marxism cannot be sustained.
The postmodernist position, including post-Marxism, has come under attack from, among others, Ellen Meiksins Wood, whose argument focusses on postmodernism’s emphatic rejection of “totalizing” knowledge and of “universalistic” values, which include Western concepts of rationality, equality and the Marxist conception of general emancipation, and which consequently imply the impossibility of any emancipatory politics.49 She writes, for example, that “Capitalism as a totalizing system can hardly be said to exist at all in postmodern discourse, so that even the critique of capitalism is precluded.”50 In this way, she suggests that postmodernism’s insistence that it represents a radical rupture in thought stems from an obliviousness to history that precludes it from acknowledging that its critique is nothing new in the history of philosophy. More particularly:

the postmodern sense of epochal novelty depends on ignoring, or denying, one overwhelming historical reality, the ‘totalizing’ unity of capitalism which has bound together all the epochal ruptures of the twentieth century.51

At the same time, Meiksins Wood acknowledges that some postmodernist themes, such as the challenge to traditional notions of progress, the importance of identities other than class such as gender and race, the complexities of human experience in today’s changeable world, the importance of language and cultural politics in a world dominated by symbols, images and “mass communication”, to name but a few, need to be addressed. However, she argues that rather than accept postmodernist assumptions in order to do this, “these developments cry out for a materialist explanation,”52 in that pluralism cannot be sustained without some appeal to universalist, “modernist” and Enlightenment values such as toleration, equality and social justice:

[W]e are living in a historical moment that more than any other demands a universalistic project. This is a historical moment dominated by capitalism, the most universal system the world has ever known - both in the sense that it is global and in the sense that it penetrates every aspect of social life and the natural environment... The social reality of capitalism is ‘totalizing’ in unprecedented ways and degrees. Its logic of commodification, accumulation, profit-maximization, and competition permeates the whole social order; and an understanding of this ‘totalizing’ system requires just the kind of ‘totalizing knowledge’ that Marxism offers and postmodernists reject.53
Mieksins Wood’s acknowledgment of the “totalizing” impact of capitalism is also shared by Harvey, who notes the inherent paradox of the condition of postmodernity: “the result has been the production of fragmentation, insecurity, and ephemeral uneven development within a highly unified global space economy of capital flows.” He argues that capitalism creates a more and more universal sense of historical time:

From 1848 to 1933, and from then until now, the world has experienced an ever-increasing synchronization of its economic activities. Our experiences, our life chances, and even our conceptual understandings increasingly depend upon where we are situated on the logistical growth curves and their periodic interruptions and descents into confusion and crisis. The temporal net of possibilities appears less and less open and more attached to the lawlike behaviour of capitalist development over time.

Jameson also suggests that communication and computer networks configure the whole world system of present-day multinational capitalism. Computer technology offers “some privileged representational shorthand for grasping a network of power and control even more difficult for our minds and imaginations to grasp - namely the whole new decentred global network of the third stage of capital itself.” He argues that postmodernism must be theorized within this “impossible totality of the contemporary world system.”

What are the implications of the postmodern phenomenon and its accompanying theory for historical time? Mandel’s thesis suggests that there is a need to understand historical time in capitalism as a totality or unified process, but one that is changing constantly. Thus, while it is characterized by cyclical movements, time moves in a spiral direction, marked by different phases or periodizations. Further, each of these phases of capitalist development, which are marked by different production methods and characteristics specific to that phase, give rise to different forms of time. This is evident in the phase of “late capitalism”, to use Mandel’s term, or the period of “flexible accumulation”, as Harvey puts it, whose production processes have given rise to a form of time which can accurately be described as “relative”. Thus, capitalist time in today’s “postmodern” society is characterized by a fundamental paradox between the unified, directional time of the process as a whole, made even more apparent within an increasingly global society, and the discontinuous,
fragmented and multiple times that emanate from this system. In short, both absolute and relative time play a significant role in the constitution of historical time today.

Barbara Adam reinforces this point by arguing that relative time is becoming a much more predominant way of perceiving time, and that it is shaped by technological change. Science and technology, she claims, constitute the rationality of contemporary western life, shaping “not just objects and nature but social relations, the rules of knowledge formation and our theories: it infuses our everyday reality and our understanding of it.” She describes contemporary society as characterized by a “collage of multiple times” that arise out of, among other things, the multiple means of transport which cover vastly different distances in the same time, the relativization of day and night with global communication, and the instant feedback and simultaneous expression across vast spaces provided by satellite television, where events in the past, present and future are indiscriminately mixed. According to Adam, at any one moment, multiplicities of times exist.

However, Adam also recognizes the central role of absolute time, arguing that:

while recognition of the complexity of time is important, however, the pervasiveness and significance of clock time should not be minimized: focus on the one should not crowd out recognition and analysis of the other.... [W]e are utilizing the created, mathematical time of clocks, a time that is infinitely divisible, quantifiable and independent from context and content.

Adam goes on to suggest that the social sciences need to utilize models that are appropriate to these shifting conceptions. The predominant metaphor of the industrial age, the heat engine, using principles of thermodynamics and entropy which imply a directionality and irreversibility, needs to be joined by a cybernetic model based on electricity and electronic communication, a model in which systems of information operate according to different principles, principles that are holistic and simultaneous.

Over the course of the twentieth century, communication systems have become increasingly central to the operation of capitalism, and, as such, demand theoretical analysis. As Raymond Williams suggests:
The major modern communications systems are now so evidently key institutions in advanced capitalist societies that they require the same kind of attention, at least initially that is given to the institutions of industrial production and distribution.  

Mark Poster uses the concept “mode of information” to analyse history in terms of variations in the structure of symbolic exchange. He identifies three modes of information (“face-to-face relations”, “print-stage”, “electronic stage”) which are co-terminous, rather than successive. In today’s society, he argues, information is presented as the key to contemporary living, in which forms of information storage and retrieval and methods of preserving and transmitting information profoundly intervene in the network of social relations that constitute a society. Poster notes that, in the twentieth century, new communicational modes and language formations have significantly altered the network of social relations, whereby the subject has become disoriented:

In electronically mediated communications, subjects now float, suspended between points of objectivity, being constituted and reconstituted in different configurations in relation to the discursive arrangement of the occasion.

Some of the consequences of this shift are ominous. Barry Smart points out that while the information society offers the possibility of decentralization as well as an increase in the quantity of information and knowledge which has the potential to enhance democracy, this is offset by a countervailing tendency toward (re)centralization; an increasing privatization and commercialization of social life; a commodification of information and knowledge; and an extension of surveillance and control. These changes have been accompanied by the multinational extension of corporate capitalism operating in an increasingly global labour market, and military and political preoccupations with command and control and national security.

Smart notes how the development of information technology and the growth of interactive communications systems - which are commercially driven - have increased the potential for intensive and extensive forms of surveillance. He argues that the principle objective of this development is to increase institutional, administrative and managerial command and control, and so consequently knowledge
and information are being increasingly commodified. Smart describes how a wide range of commercial and state agencies now collects detailed information on specific aspects of the lives, conduct and interests of individuals:

It seems our fate is not so much to be trapped in the 'iron cage' of rationality feared by Weber as monitored, supervised and ultimately governed by a vast electronic grid or network which has colonised space and time and constituted us as the willing subjects of information. Bentham’s technical programme, embodied in the architectural figure of the Panopticon ... has been realised in electronic form through the development of computer systems. 64

Bentham’s Panopticon was a model for the ideal prison, designed in the nineteenth century. It was circular in design, with the cells around the periphery and central tower from which each of the cells could be seen. Standing out against the light of the windows, each inmate would be clearly visible to a supervisor in the central tower. As Foucault puts it: "They are like so many cages, so many small theatres, in which each actor is alone, perfectly individualized and constantly visible." 65 The major effect of the Panopticon was to "induce in the inmate a state of consciousness and permanent visibility that assures the automatic functioning of power." 66 It was not even necessary that a supervisor be in the central tower: merely the possibility of surveillance caused the prisoners to modify and control their own behaviour.

As is well known, Foucault’s analysis of the Panopticon is a central metaphor for his theorization of power and its relationship to the production of knowledge and "truth". Drawing on this metaphor, Foucault traces the origin of the emergence of the "disciplinary society" back to the mid-seventeenth century, from which time a particular understanding and conception of time was created.

Underpinning Foucault’s model of the functioning of power through society is a particular concept of time that can help clarify Marx’s own concept of time within the postmodern context. Indeed, while certain aspects of Foucault’s ideas about time are in direct opposition to those of Marx, other aspects are strikingly compatible. In an interview Foucault acknowledged his debt to Marx:

I often quote concepts, texts and phrases from Marx, but without feeling obliged to add the authenticating label of a footnote with a laudatory phrase to accompany the quotations ... and because people are incapable of recognising Marx’s text I am thought to be someone who doesn’t quote Marx. When a
physicist writes a work of physics, does he feel it necessary to quote Newton and Einstein? He uses them, but he doesn’t need the quotation marks, the footnote and the eulogistic comment to prove how completely he is being faithful to the master’s thought.  

The ways in which Foucault derives ideas from Marx are subtle, complex and not easily identified. The following section will outline some basic ideas that constitute Foucault’s concept of time, and draw attention to some of the links with Marx’s own ideas about time.

Foucault’s concept of time

Foucault bases his notion of time on a critique of “modern” historical time, which he sees as characterized by continuity as well as by a whole range of associated ideas, including chronological succession, causality, development and evolution which “make it possible to group a succession of dispersed events, to link them to one and the same organizing principle.” The notion of continuous history which he critiques places the subject - as “historical consciousness”- central:

Making historical analysis the discourse of the continuous and making human consciousness the original subject of all historical development and all action are the two sides of the same system of thought. In this system, time is conceived in terms of totalization and revolutions are never more than moments of consciousness.

Foucault suggests that the notions that underpin modern historical thought do not represent a fundamental historical “reality” but are merely constructed concepts, which impose a continuity of time upon historical events and interpret history in terms of the expression of reason or consciousness. He wants to challenge the humanistic outlook that places humans, and hence consciousness, at the centre stage of history, an outlook that leads to the idea that history is progressing as a “whole”. For example, he says:

Our task at the moment is to completely free ourselves from humanism and in that sense our work is political work. Saving man, rediscovering the human element in man, and so on ... that is the aim of all those verbose undertakings, both theoretical and practical, to reconcile, for example, Marx and Teilhard de Chardin.
Foucault critiques the notion of reason as the fundamental constituent of historical time by revealing it as a social and historical construction:

What reason perceives as its necessity or, rather, what different forms of rationality offers as their necessary being, can perfectly well be shown to have a history; and the network of contingencies from which it emerges can be traced... [T]hey reside on a base of human practice and human history - and that since these things have been made, they can be unmade, as long as we know how it was that they were made.\textsuperscript{72}

While Foucault shows the idea of reason as the basis of historical time to emerge around the Renaissance, his most virulent critique is of the historical time that characterizes the “modern age”. He writes “It is a matter of pulling oneself free of that modern age which begins around 1790 to 1810 and goes up to about 1950.”\textsuperscript{73} Foucault sees modern historical time as preoccupied with notions of beginnings and endings, of origins and finitude, arguing that the search for origins is an “attempt to capture the exact essence of things” and the “existence of immobile forms”, where an eternal truth resides.\textsuperscript{74} However, he maintains that it is a false hope, for what lies at the historical beginnings of things is dissension and disparity, “not a timeless and essential secret but the secret they have no essence.”\textsuperscript{75} Foucault suggests that the modern idea of history is “doomed to Time, to its flux and its returns, because it is trapped in the mode of being of History,”\textsuperscript{76} where great hidden forces are “developed on the basis of their primitive and inaccessible nucleus, origin, causality, and history.”\textsuperscript{77} Foucault describes the modern age as obsessed with time, and with the task of contesting the origin of things to give it a foundation:

by rediscovering the mode upon which the possibility of time is constituted - that origin without origin or beginning, on the basis of which everything is able to come into being. Such a task implies the calling into question of everything that pertains to time, everything that has formed within it, everything that resides within its mobile element, in such a way as to make visible that rent, devoid of chronology and history, from which time issued.\textsuperscript{78}

Foucault notes that this involves a focus, not only on origins, but also on endings, as in, for example, the nineteenth century utopia, which is “concerned with the final decline of time rather than with its morning.... Finitude, with its truth, is posited in time; and time is therefore finite.”\textsuperscript{79} He sees that the desire to acquire knowledge arises out of the way in which people are “imbued with finitude.”
Foucault argues that the nineteenth century’s obsession with origin and finitude leads to an existential crisis, in which modern individuals try to define themselves through their historicity, to find an origin that is both “internal and foreign” to them. Thus, Foucault writes, he can “uncover his own beginning only against the background of a life which itself began long before him.” The original in man is that which binds him to “multiple, intersecting, often mutually irreducible chronologies”, which “scatters him through time and pinions him at the centre of the duration of things.”

Foucault suggests that: “Time - the time that he himself is - cuts him off not only from the dawn from which he sprang but also from that other dawn promised him as still to come.” Here, finitude, appears at its most fundamental level: “it is the insurmountable relation of man’s being with time.” Foucault is describing, in his inimitable style, the dilemma of modernity that arises from an awareness of the contradictory nature of time, a contradiction that exists in the relationship between the constantly changing present where we exist, and the eternal, unchanging permanence of the past. Foucault wants to present a way of out of this dilemma by destroying the foundations upon which such an idea exists.

Rejecting notions of continuity, singularity and universality of historical time, Foucault instead recognizes only multiplicity, plurality and discontinuity as features of historical time. Thus, he sees that time is only appearance with no essence whereby the production of knowledges and discourses socially and historically construct time. Foucault demonstrates that each discourse has its own temporality, with its unique rhythms and temporal features, so that multiplicity, plurality and discontinuity characterize time. He argues that there is no one overriding historical time within which these different times co-exist, although the temporal logic that defines the nature of the discourses that constitute it characterizes particular social and cultural formations.

At different stages, Foucault has called these social formations “epistemes”, “archives” and “strategic apparatuses”. He suggests that there is only ever one in a culture at a given moment, and that they define “the conditions of possibility of all knowledge, whether it is the one that is manifested in a theory, or the one silently invested in practice.” Foucault uses the “episteme” in his “archaeological” works
such as *The Birth of the Clinic*, which traces the discourse of medicine, and *The Order of Things*, which focusses on the formation of the study of language (philology), life (biology) and wealth (economics). Foucault shows each of these “knowledges” to have their own particular temporality, whose formations exist independently of each other. In this way, he describes a multiplicity of times co-existing simultaneously, as well as broader discontinuities or epistemological breaks in the transformation of this knowledge formation.

Foucault’s interest in different social formations ranges from classical Greece to modern society. Throughout his extensive *oeuvre*, he looks at the way in which different discourses and knowledge about madness, medicine, punishment, and sexuality, have formed the structures - including structures of time - within which societies function, and to which people are subject. His main interest, however, is the period from the Renaissance to the present, a period during which he identifies two major shifts; first, from the Renaissance to the Classical “episteme” in the seventeenth century; and second, from the Classical to the Modern “episteme” at the end of the eighteenth century. In noting a unique temporality characterizing each episteme, he describes the Classical Age in spatial terms that result in the constructing of tables, according to which time is external to the space in which the discourses appear. By way of contrast, he views time in the Modern Age as an internal principle of necessary development.

Foucault called the historical methodology he used in the 1960s, “archaeology” and that used in the 1970s, “genealogy”, both of which express the idea of relative time; that is, time as multiple and discontinuous. In referring to archaeology, he traces “discursive formations” by defining their elements, boundaries, specific relations and laws, and seeing each as having their own specific time and chronology.\(^{86}\) He suggests, for example, that instead of establishing the chronology of events, processes or phenomena, “one tries to show how it is possible for there to be succession, and at what different levels distinct successions are to be found.”\(^{87}\) For Foucault, the aim of archaeology is not to refer to a “living force of change” and seek its causes, but to define change through an analysis of transformations.\(^{88}\)
Similarly, Foucault sees “genealogy” as incorporated into the rather static, structuralist schema of archaeology, whereby the Nietzschean-derived concept of the “will to knowledge” becomes a force behind the construction of time through the production of discourse, and which, in turn, provides a method of tracing these discursive formations backwards from the present to the past. In so doing, it constructs a “history of the present”:

Genealogy does not pretend to go back in time to restore an unbroken continuity that operates beyond the dispersion of forgotten things; its duty is not to demonstrate that the past actively exists in the present, that it continues secretly to animate the present, having imposed a predetermined form on all its vicissitudes. Genealogy does not resemble the evolution of a species and does not map the destiny of a people. On the contrary, to follow the complex course of descent is to maintain passing events in their proper dispersion....

[1]t is to discover that truth or being does not lie at the roots of what we know and what we are, but the exteriority of accidents.99

While Foucault’s archaeological histories only trace discursive formations, his genealogy, which subsumed archaeology within it, considers the relationship between discursive and “non-discursive” domains. In his genealogical works, he remains committed to discourse, or the “statement”, as the object of history, but sees the statement as an “event” that has a materiality or “residual existence” in memory, manuscripts, books and records. Moreover, he maintains that the statement links “both to the situations that give rise to it, and to the consequences it gives rise to.”90

Foucault’s stated aim is to:

grasp how these statements, as events and in their so peculiar specificity, can be articulated to events that are not discursive in nature, but may be of a technical, practical, economic, social, political or other variety.91

He analyses the set of conditions that govern the appearance of statements, their preservation, and the links between them. “In short”, he writes, “it is a matter of the discourse in the system of its institutionalization.”92

Foucault suggests that, by “manipulating the processing of a series of homogeneous documents relating to a particular object and particular epoch,” historians reveal different “layers” of events that would not have appeared in any other way.93 In this way, history appears “as a tangle of superimposed discontinuities”, which uncover “different types of time spans in history.”94 He demonstrates, for example, the way
in which the event of the statement - through documents - constitutes links with economic events:

There are so-called short cycles: prices rise a little, then, reaching a certain ceiling, they come up against the threshold of consumption and at that moment they go back down a little, then climb again. These are brief cycles that one can isolate without any difficulty. Beneath this short time span, this oscillatory span, as it were, you have more important cycles that last twenty-five to fifty years, and then, farther down, there is what are called, in English, secular ‘trends’ ... which is to say great cycles of expansion or recession that, in general, wherever they have been observed, cover a period of twenty-five to one hundred and twenty years. Then, beneath even these cycles, there is ... large-scale phenomena operative over centuries and centuries: for example, agricultural technology in Europe, the ways of living of European farmers that remained largely unchanged from the end of the sixteenth century to the beginning and, in some places, up to the middle of the nineteenth century - an inertia of the peasantry and of the agricultural economy above which one had the great economic cycles and, with the great cycles, smaller cycles, and finally, at the top, the little price and market fluctuations that can be observed. History, then, is not a single time span [durée]: it is a multiplicity of time spans that entangle and envelop one another.\footnote{93}

In some ways, this passage is reminiscent, not only of Braudel’s levels of time, but of Mandel’s identification of different time-spans in capitalism. However, unlike Mandel, Foucault does not suggest that economic cycles reflect primary forces which determine the historical process as a whole. Rather, he sees that they are simply a form of event and temporality that is as equally significant as any other. Moreover, Foucault stresses the particularity of historical analysis, denying that such cycles point to an overall continuity or directionality to the historical process. In this sense, he clearly differentiates himself from a Marxist idea of historical time.

However, as the previous analysis of Capital in Chapter Six demonstrated, the idea of relative time, which contains the features of multiplicity and discontinuity, is becoming more significant as a constituent of historical time. For Marx, relative time and its accompanying features of multiplicity and discontinuity were central features of historical time as constituted through the reproduction and circulation of capital. In this sense, just as Marx incorporated an understanding of multiple times within a singular time, Foucault’s analysis of multiple time-spans and the particularity of historical analysis can be understood within a broader framework of the “whole”, or a unitary historical time. Indeed, in some respects, even Foucault finds it difficult to
avoid a tendency toward totalization. This tendency is apparent in his notion of the episteme as characterized by an overriding temporal logic, but is even more evident in his analysis of power.

Foucault’s analysis of power arises out of, among other things, the difficulties inherent in his lack of concern with explaining the process by which time emanated from, or was constructed through, the production of discourses. In general, but more particularly in his earlier “structuralist” works such as The Order of Things, description, rather than explanation, primarily concerned him. This enabled him to suggest that large discontinuities or epistemological breaks occurred when one episteme replaced another, without having to explain how such a change occurred. When critics attacked him for this, he endeavoured to develop ideas concerning power and its relationship to knowledge to address the problem of causality and change. In so doing, he demonstrated the way in which the exercise of power constructs time.

In Discipline and Punish, for example, Foucault identifies the emergence of a particular temporal social formation that he describes as a “network of mechanism that would be everywhere and always alert, running through society without interruption in space or time.” Bentham’s nineteenth century model of the Panopticon becomes, for Foucault, a metaphor for this society, as a:

design of subtle coercion for a society to come ... the gradual extension of the mechanisms of discipline throughout the seventeenth and eighteenth centuries, their spread through the whole social body, the formation of what might be called in general the disciplinary society.

He argues that the exercise of power through the construction of particular discursive formations, characterized by a particular temporality, constitutes this “disciplinary society”, whereby these discourses integrally relate to the institutional structures of society. Indeed, he suggests that the “apparatus in its general form is both discursive and non-discursive, its elements being much more heterogeneous [than the specifically discursive apparatus of the episteme].” Foucault argues, then, that power, and hence time, as exercised through the production of “truth” has both a discursive and a material form, a position that links him with Marx, in that Marx also
regards time as manifested in conceptual and material forms, not only on the level of capital and the commodity respectively, but through social discourses and practices.

Foucault's affinity with Marx is also evident in the attention he gives to the way in which institutions and discourses exercise power over the "body". He claims that Marx's texts offer some interesting comments on the body, and that to study the question of the effects of power on the body is actually more materialist than most Marxist studies of power that tend to occlude the body in favour of notions of ideology and consciousness. However, while recognizing that the economic use of the body is a central factor in relations of power, Foucault also recognizes other forms of power:

The political investment of the body is bound up, in accordance with complex reciprocal relations, with its economic use; it is largely as a force of production that the body is invested with relations of power and domination; but, on the other hand, its constitution as labour power is possible only if it is caught up in a system of subjection (in which need is also a political instrument meticulously prepared, calculated and used); the body becomes a useful force only if it is both a productive body and a subjected body.

While Foucault is willing to acknowledge the central and integral role that economic power plays in the constitution of power relations, he is unwilling to accede a priority to economic forms of power, asserting that "power is not primarily the maintenance and reproduction of economic relations, but is above all a relation of force." Foucault identifies three forms of power: domination (ethnic, social and religious); exploitation (separating individuals from what they produce); and subjection (that which ties the individual to himself and submits him to others). He suggests that, while these forms of power often exist together in history, most of the time one of them prevails. For example, in feudal society, struggles against forms of ethnic and social domination were prevalent, while, during the nineteenth century, the struggle against exploitation came to the foreground. Today, Foucault argues, the struggle against the submission of subjectivity is "becoming more and more important even though the struggles against forms of domination and exploitation have not disappeared." Against the objection that economic processes such as forces of production, class struggle and ideological structures create all types of subjection, Foucault argues that:
It is certain that the mechanisms of subjection cannot be studied outside their relation to the mechanism of exploitation and domination. But they do not merely constitute the ‘terminal’ of more fundamental mechanisms. They entertain complex and circular relations with other forms.¹⁰⁴

Nonetheless, he allows that “it effectively remains the case that the relations of power do indeed remain profoundly enmeshed in and with economic relations and participate with them in a common circuit.”¹⁰⁵

Foucault also employs Marx’s economic terminology. For example, he argues that the manifold relations of power that exist in any society produce an “economy of discourses of truth.” Truth cannot be “established, consolidated nor implemented without the production, accumulation, circulation and functioning of a discourse.”¹⁰⁶ Here, Foucault’s description of the functioning of discourse is reminiscent of Marx’s description of the reproduction of capital, and through this process, the movement of time.

Indeed, Foucault sounds much like Marx when Marx demonstrates in Capital that, while time, through the reproduction of capital, is cyclical in the direction of its movement, absolute or linear time is a fundamental constituent. Foucault, too, recognises absolute time as constituting the time of disciplinary power, which he describes as “a linear time whose moments are integrated, one upon another, and which is orientated towards a terminal, stable point.” Moreover, he suggests that “segmentation, seriation, synthesis and totalization” administer time through the “integration of a temporal, unitary, continuous, cumulative dimension in the exercise of controls and the practice of dominations.”¹⁰⁷

In Discipline and Punish, Foucault shows that the exercise of disciplinary power over the body, through various institutional structures, constructs time. Time “penetrates the body and with it all the meticulous controls of power”¹⁰⁸:

it implies an uninterrupted, constant coercion, supervising the processes of the activity rather than its result and it is exercised according to a codification that partitions as closely as possible time, space, movement. These methods, which made possible the meticulous control of the operations of the body, which assured the constant subject of its forces and imposed upon them a relation of docility-utility, might be called ‘disciplines.’¹⁰⁹
Foucault uses Marx’s descriptions of the control of time and space with the development of the division of labour in the manufacturing industries as a point of reference, as is evident in his citations from *Capital in Discipline and Punish.* However, Foucault’s description of these strategies extends beyond the workshop to include an analysis of military and pedagogic organizations. From there, it further extends to the “disciplines” of the human sciences, which Foucault sees as existing as a means of accumulating knowledge about individuals in society and consequently, controlling time.

Foucault argues that timetables achieved the ability to control time in that institutions used them to “establish rhythms, impose particular occupations, regulate the cycles of repetition.” He suggests that it was a model whose use began in the monasteries but soon spread to schools, workshops and hospitals, and which altered and refined time regulation: “one began to count in hours, in minutes, in seconds.” Foucault maintains that, underlying the timetable, was a particular attitude toward the value of time, which considered wasting time as “a moral offence and economic dishonesty.” Discipline posed the principle of an “ever-growing use of time”, of assuring the quality of the time used, and of constituting a “totally useful time.” He notes that:

it is a question of extracting from time, ever more available moments and,
from each moment, ever more useful forces. This means that one must seek
to intensify the use of the slightest moment, as if time, in its very
fragmentation, were inexhaustible or as if, at least by an ever more detailed
internal arrangement, one could tend toward an ideal point at which one
maintained maximum speed and maximum efficiency.

Foucault’s description of the form of time that underpins the disciplinary techniques is similar to the way in which Marx describes the logic underlying capitalism’s drive to maximize the worker’s time. Foucault refers to these techniques as “assuring an accumulation of duration”, as “turning to ever-increasing profit”, and as a “machinery for adding up and capitalizing time.” Moreover, through imposing a disciplinary time:

Temporal dispersal is brought together to produce a profit, thus mastering a duration that would otherwise elude one’s grasp. Power is articulated directly onto time; it assures its control and guarantees its use.
Foucault describes power relations and the structures of time created through the exercise of power as a mechanistic network that together makes up a “whole” that is the state:

It is certain that in contemporary societies the state is not simply one of the forms of specific situations of the exercise of power - even if it is the most important - but that in a certain way all other forms of power relation must refer to it. But this is not because they are derived from it; it is rather because power relations have come more and more under state control (although this state control has not taken the same form in pedagogical, judicial, economic, or family systems).¹¹⁷

Like Marx, Foucault sees that class is central to the formation of the state. He suggests that the domination of groups, castes or classes become a central phenomenon in the history of societies because they:

manifest in a massive and universalising form, at the level of the whole social body, the locking together of power relations with relations of strategy and the results proceeding from their interaction.¹¹⁸

According to Foucault, in the disciplinary society that has characterized the West since the seventeenth century, this dominating group is the bourgeois class.

However, against what he sees as characteristic of most Marxist history, Foucault argues that the bourgeois class as a general phenomenon, or, for that matter, the state as a whole should not be the starting point for analysis. He suggests that the state is “superstructural in relation to a whole series of power networks that invest the body, sexuality, kinship, knowledge, technology and so forth” and that it is this series of “multiple and indefinite power relations”¹¹⁹ that needs to be the focus of historical analysis. According to Foucault, we:

need to see how these mechanisms of power, at a given moment, in a precise conjuncture and by means of a certain number of transformations, have begun to become economically advantageous and politically useful.¹²⁰

Thus, Foucault advocates locating the particular points of time at which particular mechanisms, such as the exclusion of madness or the surveillance of sexuality, began to lend themselves to economic profit. From there, he argues, we can see how “they came to be colonised and maintained by global mechanisms and the entire State
system," and understand "how these mechanisms came to be effectively incorporated into the social whole."\textsuperscript{121}

For example, Foucault suggests, a study of the tactics used by the bourgeoisie between 1825 and 1830 in Northern France reveals the way in which they exercised domination by "fixing the workers in the first heavy industries at their workplaces." These tactics included:

- pressuring people to marry, providing housing, building \textit{cités ouvrières},
- practising that sly system of credit-slavery that Marx talks about, consisting in enforcing advance payment of rents while wages are paid only at the end of the month. Then there are the savings-bank systems, the truck-system with grocers and wine-merchants who act for the bosses, and so on. Around all this there is formed little by little a discourse, the discourse of philanthropy and the moralisation of the working class. Then the experiments become generalised by way of the institutions and societies consciously advocating programmes for the moralisation of the working class.\textsuperscript{122}

Of course, Foucault's own historical studies focus on the discourses of madness, punishment and sexuality rather than labour practices. However, this example serves to illustrate the close connections that Foucault has with Marx. Indeed, Chapter Five discussed how Marx saw class structure and the state as integrally linked, whereby both controlled and defined the worker's time through various cultural and social forms such as economic and moral discourses, and legislation. Foucault, in effect, extends this notion to incorporate other groups in society and their subjection to forms of control over their time, as part of a broader strategy that takes place at a structural level. In this way then, it could be argued that Foucault develops notions that are implicit in Marx's writing, but which remain largely unexamined by him. It could also be argued that Foucault is addressing questions which have come to the fore in late capitalism, but which had yet to reveal themselves when Marx wrote.\textsuperscript{123}

However, Foucault and Marx differ in one crucial respect. Whereas for Marx, the subject, or human agency - as well as structural elements - is a fundamental aspect of the forces underlying the construction of societal time, for Foucault, there is no historical subject. For example, following on from the above illustration of how bourgeois tactics were used to moralize the working class, he suggests that, while the logic and aims of these general apparatuses of power are clear and decipherable, they
are nonetheless “anonymous” and “mute”. In short, it is a strategy without a subject. “You get a coherent, rational strategy,” Foucault suggests, “but one for which it is no longer possible to identify a person who conceived it.” He notes that:

the moralisation of the working class ... was accomplished, because it met the urgent need to master a vagabond, floating labour force. So the objective existed and the strategy was developed, with ever-growing coherence, but without it being necessary to attribute it to a subject which makes the law.

Thus, Foucault portrays a society in which individuals are passive recipients of the exercise of power, “docile bodies” who are powerless to effect any change against anonymous forces. However, Foucault finds this position to be problematic, as on the one hand he denied agency, but on the other he posed a definition of power in which he implies the role of agency. For example, he refers to power in terms of activity or action:

Power exists only when it is put into action ... In effect what defines a relationship of power is that it is a mode of action which does not act directly and immediately on others. Instead it acts upon their actions: an action upon an action, on existing actions or on those which may arise in the present or the future.

He does, moreover, formulate the idea of resistance and struggle against different forms of domination, exploitation and subjection. Admitting that struggle necessarily involves subjects, and that the problem is “preoccupying” him, he suggests that:

There aren’t immediately given subjects of the struggle, one the proletariat, the other the bourgeoisie. Who fights against whom? We all fight each other. And there is always within each of us something that fights something else.

Foucault nonetheless does not deal with this question in any depth, and it remains undeveloped. Consequently, it is an area that commentators identify as problematic and unresolved in Foucault’s work.

However, it is also the area which, were it developed more fully, would provide a closer connection to Marx. They both share the notion that the basis of time is in activity. For Foucault, time is constructed through the activity that constitutes relations of power, which integrally relates to the production of knowledge, whereas
for Marx, it is activity primarily directed toward production of material products. Where Foucault’s idea of activity is potentially broad, encompassing all forms of activity, Marxists often interpret Marx’s concept of activity more narrowly, as simply labouring activity. However, a reading of Marx that emphasizes the ontological ground of all human activity as the basis of the constitution of time could extend the notion of activity to include, as Foucault does, all forms of activity. This would lead to the idea that, while economic activity may be the basic driving force behind the emanation of time, all activity actually creates time. As Abdul Janmohamed argues:

Labor must be understood in its broader implications, not just as activity that transforms ‘nature’ for human consumption but also as activity that consequently (trans)forms all aspects of human society. ‘Labor’ is often interpreted exclusively to designate either the category of the proletariat, which is then designated as the privileged agent of historical change, or the activity that transforms nature, which is then defined as qualitatively different from other kinds of activity. But it can be argued that for Marx ‘labor’ includes all ‘activity’ that ‘produces’ material and cultural components that constitute society.¹³⁰

Foucault also offers a different perspective on the notion of activity in his earliest works on madness. At this point in his career, he had not entirely shaken off some Marxist and existentialist influences relating to the ontological notion of experience. These influences are particularly evident in an early, little known book, Mental Illness and Psychology, in which, influenced by the Heideggerian psychiatrist Binswanger, Foucault explores the idea that there was an underlying reality to madness. He writes, for example, that one “must regard these various aspects of mental illness as ontological forms. In fact, it is only in history that one can discover the sole concrete a priori from which mental illness draws.”¹³¹ Consequently, Foucault acknowledges the validity or reality of the experience of madness, such as that of the schizophrenic:

the fragmented world that he describes accords with his dispersed consciousness, the time without future or past in which he lives reflects his inability to project himself into a future or recognize himself in a past; but this chaos finds its point of coherence in the patient’s personal structure, which guarantees the experienced unity of his consciousness and horizon.¹³²
Foucault goes on to suggest that mental illness or madness is an expression of alienated activity, and, consequently, is materially and historically determined. He suggests that:

when man remains alienated from what takes place in his language, when he cannot recognize any human, living signification in the productions of his activity, when economic and social determinations place constraints upon him and he is unable to feel at home in this world, he lives in a culture that makes a pathological form like schizophrenia possible ... not because its events render it inhuman and abstract, but because our culture reads the world in such a way that man himself cannot recognize himself in it. Only the real conflict of the conditions of existence may serve as a structural model for the paradoxes of the schizophrenic world.\textsuperscript{133}

Foucault does not suggest that madness is only present under certain historical conditions, but that a particular form, or - to use the concepts that Foucault employs in \textit{Madness and Civilisation} - a way of "constructing" madness, is specific to Western society from the Renaissance to the present. Significantly, Foucault's periodization is similar to Marx's, in that this is the period that Marx also identifies as the point where alienated activity, as wage labour, emerges. Foucault even suggests that it is "mercantile liberty", or, in other words, the free reign of capitalism, that "ceaselessly alienates him from his essence and his world."\textsuperscript{134} Before the Renaissance, Foucault argues, madness represented a certain form of wisdom that spoke of eternal truths that existed beyond time. He notes, however, that during the Renaissance, and particularly from the seventeenth century on, madness became defined as absence, or the "empty negativity of Reason" and it is this form of madness that creates mental alienation.

Foucault's aim in \textit{Madness and Civilisation} is to restore madness to its disalienated form, or its original language.\textsuperscript{135} In so doing, he facilitates the expression of its temporality. Foucault argues that Nietzsche represents this temporality, by expressing a form of madness "that links and divides time, that twists the world into the ring of a single night."\textsuperscript{136} This form of madness expresses itself through the work of art that "engages within itself the world's time, masters it, and leads it."\textsuperscript{137} Indeed, madness "is contemporary with the work of art, since it inaugurates the time of its truth."\textsuperscript{138} For Foucault, this form of time expresses a more authentic or true time, one that forms the basis of reality. Of course, he soon came to repudiate the idea of
an ontological basis to time, resolving to merely describe discursive structures,\textsuperscript{139} and even commented later that he regretted giving “Nietzsche that ambiguous, utterly privileged metahistorical status I had the weakness to give him.”\textsuperscript{140}

However, it is through looking at these early explorations of madness that we can usefully, although tentatively, make further links between Foucault and Marx. Undoubtedly, Marx sees that human reason lies at the heart of historical time in that human creative activity, involving consciousness or reason interacting with the objective, material world, is the basis of time. Although this position distinguishes him from Foucault, Marx also recognizes that alienated productive activity contains an irrational element, which forms the basis of the contradictions of capitalist society.

Marx locates his notion of irrationality in the anonymous forces of capitalism, which operate independently of reason and which should ultimately bring about the destruction of capitalism. He sees that in capitalist, or modern, society this takes a particular, “alienated” form in that irrationality expresses itself in a particular way at an historical level as the logic of capital becomes expansive and pervasive. Marx’s description of the fragmentation of time that occurs as a result of capitalism’s drive to increase the level of surplus-value is similar to Foucault’s description of schizophrenic time. Is history showing more and more signs of irrationality being expressed? As Foucault suggested:

\begin{quote}
A rationality existed, and it was a form par excellence of Reason itself, but a certain number of social conditions (capitalism, or rather, the shift from one form of capitalism to another) precipitated this rationality into a crisis, that is, a forgetting of reason, a fall into irrationalism.\textsuperscript{141}
\end{quote}

This argument is sustainable when we consider the compounding human misery that has resulted throughout the twentieth century from the prevalence of a logic operating independently of concerns for human well-being. Indeed, the Enlightenment faith in the progress of human reason seems misplaced today. Arguably, the structural elements of history are coming to play an increasingly important role, while that of human agency is declining. Our ability, as individual subjects, to effect change seems to be diminishing as we become increasingly subject to the irrational forces of
capitalist development. This, of course, was the particular interest of the Frankfurt School, a Marxist group with whom Foucault recognized his affinity.

In a 1983 interview that dealt with his intellectual heritage, Foucault suggested that both the Frankfurt school, through critical theory, and French philosophy, through the history of science, pursued one of the major questions of modern philosophy - the history of rationality - which asked:

What is this moment when reason accedes to autonomy? What is the meaning of a history of reason, and what value can be ascribed to the ascendance of reason in the modern world, through these three great forms: scientific thought, technical apparatus, and political organization?  142

He goes on to point out, however, that the two paths of thought did not cross:

Critical Theory was hardly known in France, and the Frankfurt School was practically unheard of. This, by the way, raises a minor historical problem that fascinates me, and I have not been able to resolve it at all. It is common knowledge that many representatives of the Frankfurt School came to Paris in 1935, seeking refuge, and left very hastily, sickened presumably – some even said as much – but saddened anyhow not to have found more of an echo. Then came 1940, but they had already left for England and the U.S. where they were actually much better received. The understanding that might have been established between the Frankfurt School and French philosophical thought – by way of the history of science and, therefore, the question of the history of rationality – never occurred. And when I was a student, I can assure you that I never once heard the name of the Frankfurt School mentioned by any of my professors.  143

Foucault goes on to suggest that:

Now, obviously, if I had been familiar with the Frankfurt School, if I had been aware of it at the time, I would not have said a number of stupid things that I did say, and I would have avoided many of the detours I made while trying to pursue my own humble path - when, meanwhile, avenues had been opened up by the Frankfurt School. It is a strange case of non-penetration between two very similar types of thinking which is explained, perhaps, by that very similarity. Nothing hides the fact of a problem in common better than two similar ways of approaching it.  144

These comments suggest that Foucault acknowledged his proximity to Marxist thought on the question of rationality, a situation that potentially can enhance a deeper understanding of this question should the two paths of Foucauldian and Marxist thought intersect more closely together.
For example, Foucault's work raises the possibility of understanding the creative act, on an individual level, as also involving an element of unreason, or, - to use a less pejorative term - "intuition". Invoking Nietzsche and other "mad" artists, he suggests that the creative act contains a form of truth. In so doing, he raises the question of whether an ontological basis for time, that includes the idea of unreason or intuition, is possible. Perhaps a fruitful task for analysis would be to investigate more closely the idea that the process of human activity that lies at the heart of the manifestation of time involves both reason and unreason.

Foucault ended the possibility of such a project early in his writing career, opting instead for a more pessimistic position in which the human subject is largely irrelevant. However, others like Ernst Bloch have provided different possibilities for an understanding of the inherent creative human act that involves a sense of hope in the future through expressing our intuition and imagination. Indeed, Bloch opens a way in which we can understand the role of the human subject in history that gives it agency, and, through the act and expression of imagination, the ability to create change and bring about a better future.
Conclusion

Foucault suggests that his project was all about a philosophical attitude of critique that “is at one and the same time the historical analysis of the limits that are imposed on us and an experiment with the possibility of going beyond them.”

He succeeds in this by extending the boundaries of thought about historical time. In so doing, he opens up possibilities for developing Marx’s concept of time in the contemporary context.

Marx expressed a profound and complex understanding of time in his economic writings concerning the capitalist production process. He saw that, in part, time is a constructed concept whose nature is determined by the particular historical conditions that give rise to it and that, as such, time is continually changing in its nature. As Mandel’s thesis demonstrates, Marx understood that, while time as it emanates from capitalism has its own unique features, this in itself changes according to shifts in production and exchange processes. For Marx, relative time was becoming increasingly significant in the production process as capitalism developed, and consequently in the constitution of historical time. In this sense, Marx provided a way in which postmodern theory, which employs a concept of relative time, can be understood in relation to historical time.

Moreover, while Marx largely focussed his analysis of time on the area of economics, and as such, located the basis of the constituency of historical time in the economic relations and forces of production and exchange, he nonetheless considered that cultural, social and political factors, which extend beyond the economic realm, contribute significantly to the nature of historical time. In this regard, he has provided starting points for others like Foucault to expand the parameters of his understanding of time.

Indeed, Foucault opens up a means to understand historical time as a social construction that institutes a form of power and domination that, in turn, exercises control on many different groups in society. In fact, as has been noted, there are
important links between Marx’s and Foucault’s concepts of time which suggest that, in some important respects, Foucault broadens the implications of Marx’s concept of time. Examining these links highlights ways that such a notion of historical time can be understood in the contemporary context.

Among other things, both Marx and Foucault understood time to be a constructed concept that was created through the production of capital or surplus-value (for Marx), and discourse (for Foucault), with their non-discursive or material counterparts in the form of social and institutional practices. Again, both Marx and Foucault understood absolute time, as a social construction, to exert a totalizing power over modern society and in so doing, to provide a means for the exercise of power and control over time.

Thus, the relationship between their ideas concerning the historical specificity and transhistoricity of time is closer than at first appears, in that Foucault, like Marx, sees both elements as constituting historical time. Foucault, albeit in a different way to Marx, and perhaps even to a greater extent by denying even capitalist time the attributes of a “whole”, supports the notion of the historical specificity of time by arguing that time is solely a social construct and thus specific to the time and place in which it was created. Yet, he also provides a means to understand the transhistoricity of time. Ironically, his denial of the historical specificity of capitalist time as a whole has resulted in him developing a transhistorical historical methodology - and hence a transhistorical understanding of how time is constructed - in that it can be applied to understanding any social form. Moreover, his concept of power and its implications for time are also applicable to capitalist or non-capitalist societies alike, although the forms of discourse and practice in which power is expressed changes.

Similarly, Foucault understands the functioning of power, and hence time, in much the same way as Marx does, whereby the disciplinary techniques he describes that are used to control time operate in a similar way as Marx’s description of capitalist logic. Moreover, like Marx, Foucault understands these discursive and material techniques to be manifested in the “state”, which, in turn, is constituted by class. His tendency to emphasize structures at the expense of human agency as, for example, in the
attention given to the role of objective and technological temporal forms that exert a form of control in contemporary society, echoes Marx's anticipation of the increasing prevalence of deterministic forces in the development of capitalist society. Again linking him to Marx, Foucault's analysis of power implies human activity and acknowledges class as an important factor in historical analysis, however, in rendering history without a subject, his understanding of the role of human agency remains an undeveloped, although potential, possibility.

Finally, in terms of time, the relationship between Marx's and Foucault's position is also apparent. Reflecting Marxist ideas about "late capitalism" and the particular characteristics of its production and circulation methods, Foucault focusses on the situation whereby relative time has become predominant in contemporary society. Unlike Marx however, Foucault dismisses absolute time as no longer relevant to the question of historical time. Yet, in rejecting the notion of absolute time insofar as it gives rise to linear, objective, universal historical time, and in acknowledging only the role of relative time, he does recognize that absolute time is an influential social construction that is able to exercise disciplinary power on society as a whole through the discursive and institutional structures in which it is manifested.

Arguably, then, by historicizing postmodernism as coinciding with the emergence of a particular stage of capitalist development, late capitalism, it is possible to locate the material forces which have given rise to this body of thought. It is also possible, in this context, to demonstrate how Marx is central to understanding the underlying logic of postmodernism, in general, and Foucault, in particular, by reference to historically specific time, determinism and irrationality in terms of change, and the idea of relative time. Equally, it is possible to demonstrate how postmodernism, by virtue of its ahistorical position, is unable to embrace, or indeed even recognize, the centrality of transtemporality, reason and absolute time in understanding the concept of historical time.
Endnotes


6 *Ibid.*, p. 39. The history of capitalism, and of its inner regularities and unfolding contradictions are explained and understood as an interplay of six variables, which include: "the organic composition of capital in general and in the most important departments in particular (which also includes, among other things, the volume of capital and its distribution between the departments); distribution of constant capital between fixed and circulating capital...; the development of the rate of surplus value; the development of the rate of accumulation (the relation between productive surplus-value and surplus-value which it unproductively consumes); the development of the turnover-time of capital; and the relations of exchange between the two Departments (which are mainly but not exclusively a function of the given organic composition of capital in these Departments)." (*Ibid*)
9 Mandel, *Late Capitalism*, p. 121.
11 Mandel, *Late Capitalism*, p. 120.
16 Mandel, *Late Capitalism*, pp. 120-121.
19 Mandel, *Late Capitalism*, p. 121.
22 Mandel, *Late Capitalism*, p. 132.
28 *Ibid.*, p. 102. This trend is also reflected in economic doctrine. Throughout the period of accelerated economic growth of 1948-68 the prevailing credo was one of "growth optimism", "guaranteed full employment" and "technological rationality". However, through the depressive long wave since that time, there has been a turn from the Keynesian priority of full employment to the monetarist priority of fighting inflation and the appearance of prophets of doom and of "zero growth." (*Ibid.*, p. 98.)
37 Ibid., p. 180.
38 Ibid., p. 182.
39 Ibid., p. 185.
40 Ibid., p. 284.
41 Ibid., p. 285.
42 Ibid., pp. 287-291.
43 Cahuone, "Introduction", p. 15.
44 Ibid.
48 Smart, *Modern Conditions, Postmodern Controversies*, pp. 211,214.
50 Ibid., p. 7.
51 Ibid.
52 Ibid., p. 11.
53 Ibid., p. 13.
54 Harvey, *The Condition of Postmodernity*, p. 296.
56 Jameson, "Postmodernism, or, the Cultural Logic of Late Capitalism", pp. 79-80.
57 Ibid., p. 80.
59 Ibid., p. 179.
60 Ibid., p. 185. The computer model which Adam points to can be understood as a cybernetic system, a term first used by Norbert Weiner to describe a complex of ideas about the study of messages and language as a means of controlling machinery and society. Society, Weiner argues, can only be understood through a study of the messages and communication facilities that belong to it; communication and control belong to the essence of humans' inner life. He claims that the physical functioning of the living individual and the operation of computers are precisely parallel in their analogous attempts to control entropy through feedback. Weiner notes that a cybernetic machine is a self-regulating mechanism that operates by a feedback system to regulate its own functioning, to process information and execute actions; in other words, it has the ability to respond to information provided by the system itself, and forms networks of non-linear event chains where a single change can have unpredictable effects throughout the system. N. Wiener, *The Human Use of Human Beings: Cybernetics and Society*, 2nd ed., (London: Eyre & Spottiswoode, 1954). For a discussion of the way time operates in such a system, see L. Strate, "Cybertime", in L. Strate, R. Jacobson and S.B. Gibson (eds), *Communication and Cyberspace: Social Interaction in an Electronic Environment*, (Cresskill: Hampton Press, 1996), pp. 351-377.
62 M. Poster, *The Mode of Information: Poststructuralism and Social Context*, (Cambridge: Polity Press, 1990), p. 11. Poster argues that post-structuralist theory - in seeing that subjects are constituted in acts and structures of communication - offers a way to investigate the way changes in communication patterns involve changes in the subject. He maintains that, with electronic communication, the representational character of language is replaced by the self-referentiality of language, where language represents itself: "In each case, the language in question is constituted as an intelligible field with a unique pattern of wrapping, whose power derives not so much from representing something else but from its internal, linguistic structure." (Ibid., p. 13.)
63 Smart, *Modern Conditions, Postmodern Controversies*, p. 52.
64 Ibid., pp. 58-59.

68 The links between Foucault and Marx are dealt with in David Macey’s biography of Foucault. According to Macey, Foucault encountered the ideas of Marx as a student in the late 1940s, and in 1950 joined the pro-Soviet Communist Party (PCF), although he quickly became disaffected and left the party in 1953. His writings of the 1950s, although reflecting an interest in Marxism, were clearly overshadowed by his interest in Heidegger, and by the 1960s, he was clearly on a trajectory that was taking him away from, and, in fact, into direct confrontation with Marxism – at least the humanist Hegelian-Marxism of Jean-Paul Sartre and the orthodox Marxism of the PCF. Sartre publicly criticized Les Mots et les choses, which was published in 1966, saying that its point was to “construct a new ideology, the last rampart the bourgeoisie can erect against Marx” (cited by Macey, The Lives of Michel Foucault, p. 175), while the PCF criticized the book for embodying an “ideology of despair.” (Ibid., p. 177.) However, the structuralist Marxist Louis Althusser was an important influence on the development of Foucault’s ideas, and during the 1970s, when Foucault became involved in political activities and began to investigate the question of power, his hostility to Marxism softened. A sign of this was his stated interest in “working class consciousness” and an intention to write an “historical chronicle” of “working class and proletarian memory.” (Ibid., pp. 316-318.) As Mark Poster suggests, at this time “Foucault came to grips with issues that were central to Western Marxism and... the positions he took, while in some cases resembling those of Western Marxists, generally went beyond their positions toward a new formulation of critical theory. In short, Foucault both came to terms with the problematic of Western Marxism and carried it to a new level.” (Poster, Foucault, Marxism and History, p. 7). Abdul Janmohamed also suggests that “What Foucault retains, but never adequately acknowledges, are some of the powerful methodological tools and procedures of Husserl and Marx. That is, Foucault’s historical method is profoundly phenomenological at some level, and his theory of analytics of power are profoundly Marxist in some ways.” (A. Janmohamed, “Refiguring Values, Power, Knowledge; or Foucault’s Disavowal of Marx”, in B. Magnus and S. Cullenberg (eds), Whither Marxism: A Global Crisis in International Perspectives, [New York: Routledge, 1995], p. 33). However, Foucault’s “disavowal of Marx is too strong to permit a more deliberate open synthesis. Foucault’s anxiety is an unfortunate one, for if he had not felt the need to disavow Marx, then he could have developed a more systematic political ‘economy of power relations’, the need for which he acknowledged toward the end of his life.” (Ibid., p. 34.) It seems that the public perception of the antinomy between Foucault and Marx was propagated by Foucault himself in an attempt to carve out his own role as an intellectual in a Marxist-dominated intellectual environment. For example, Foucault made some notorious statements in the late 70s such as: “Don’t talk to me about Marx any more. I never want to hear of that gentleman again,... For my part, I’m completely through with Marx.” (Cited by Macey, The Lives of Michel Foucault, p. 348). Such comments, however, bely the similarities in their thinking.


70 Ibid., p. 12.

71 M. Foucault, in an 1966 interview following the publication of The Order of Things, cited by Macey, The Lives of Michel Foucault, p. 171.


75 Ibid.


77 Ibid., pp. 251-252.

78 Ibid., p. 332.

79 Ibid., pp. 262-263.

80 Ibid., p. 329.

81 Ibid., p. 330.

82 Ibid., pp. 331-332.
83 Ibid., pp. 334-335.
84 For a good discussion of this, see M.S. Roth, “Foucault’s ‘history of the present’”, History and Theory, vol. 20, (1981), pp. 32-46.
85 Ibid., p. 55.
86 Foucault, The Archaeology of Knowledge, pp. 7-8. Foucault argues that archaeology does not “suspend time” or deny history, in order to reveal a simultaneous network, but tries to show the relationships between the branches of the network, some of which are temporally neutral, some of which imply a particular temporal direction. (Ibid., pp. 168-169.)
87 Ibid., p. 169.
88 Ibid., pp. 172-173. It suspends the “empty category of change in order to reveal transformations at different levels” with the aim of opening up history to a different form of temporality, one that does hold the promise of a new beginning. (Ibid., pp. 200, 203.)
91 Ibid.
92 Ibid., p. 309.
94 Ibid., p. 429.
95 Ibid., pp. 429-430.
97 Ibid.
103 Ibid., p. 213.
104 Ibid.
105 Foucault, “Two Lectures”, p. 89.
106 Ibid.
110 Ibid., 1987 ed., pp. 163-164. Foucault also notes that there “are some very remarkable [passages which treat spatial aspects]... Everything he [Marx] wrote on the army and its role in the development of political power, for instance. There is some very important material there that has been left practically fallow for the sake of endless commentaries on surplus value.” M. Foucault, “Questions on Geography”, in C. Gordon (ed.), Power/Knowledge, p. 77.
112 Ibid., p. 150.
113 Ibid.
114 Ibid., p. 154.
115 Ibid., p. 157.
116 Ibid., p. 160.
117 Foucault, “The Subject and Power”, p. 224. Foucault also writes: “I don’t claim that the State apparatus is unimportant, but it seems to me that among all the conditions for avoiding a repetition of the Soviet experience and presenting the revolutionary process from running into the ground, one of the first things that has to be understood is that power isn’t localised in the State apparatus and that nothing in society will be changed if the mechanisms of power that function outside, below and alongside the State apparatuses, on a much more minute and everyday level, are not also changed.” Foucault, “Body/Power”, p. 60.

Ibid.


Foucault's attention to the functioning of "knowledge" is relevant in the context of the contemporary "high-tech" society in which information is increasingly being commoditized. This area is potentially a fruitful one in which Marxist scholars can explore the production of knowledge. The "information age, far from transcending the historic conflict between capital and its labouring subjects, constitutes the latest battleground in their encounter." N. Dyer-Witheford, cited by J.W. Chesebro, "Review Essay of N. Dyer-Witheford's 'Cyber-Marx: Cycles and Circuits of Struggle in High-Technology'", Critical Studies in Communication, vol. 17, (2000), p. 233.


Ibid., p. 204.

Foucault, "The Subject and Power", pp. 219-220.

See, in general, Foucault's "The Subject and Power".


See, for example, Poster, Foucault, Marxism and History, pp. 147-148, and JannMohamed, "Refiguring Values, Power, Knowledge; or Foucault's Disavowal of Marx", pp. 38-40.

JannMohamed, "Refiguring Values, Power, Knowledge; or Foucault's Disavowal of Marx", p. 36.


Ibid., p. 28.

Ibid., p. 84.


Foucault states this aim in Mental Illness and Psychology, p. 76: "One day an attempt must be made to study madness as an overall structure - madness freed and disalienated, restored in some sense to its original language."

Foucault, Madness and Civilisation, p. 281.

Ibid., p. 288.

Ibid., pp. 288-299.

Foucault writes: "Is it not possible to make a structural analysis of discourses that would evade the fate of commentary by supposing no remainder, nothing in excess of what has been said, but only the fact of its historical appearance?" M. Foucault, The Birth of the Clinic: An Archaeology of Medical Perception, trans. by A.M. Sheridan Smith, (New York: Pantheon Books, 1973), p. xvii.

Foucault, 'On the Ways of Writing History', p. 294. However, elements of it remained. In The Order of Things, for example, Foucault credits Nietzsche with signing the death knell of modern thought. Nietzsche "took the end of the time and transformed it into the death of God and the odyssey of the last man... [H]e took up once again the great continuous chain of history, but in order to end it round into the infinity of the eternal return." Through Nietzsche, we "see the emergence of what may perhaps be the space of contemporary thought." Foucault, The Order of Things, p. 263.

Foucault, "Structuralism and Post-structuralism", p. 443.

Ibid., p. 439.

Ibid., p. 440.

Ibid., pp. 440-441.

See the comments concerning Bloch in Chapter 3 of this thesis, p. 106. .

Conclusion

*Like as the waves make towards the pebbled shore,*
*So do our minutes hasten to their end.*

William Shakespeare, *Sonnet 60*

The nature of historical time, that is, the time through which the events and processes of history occur, is a central question in the philosophy of history. Although varying widely, concepts of historical time are found in every culture and society, and share in common an awareness of temporal contradiction, a paradox inherent in the relationship between past, present and future that is expressed as a tension between eternity and time, permanence and change. The modern, western European concept of historical time had a particular way of understanding the nature of this contradiction, an understanding which reflected, to a great extent, the material conditions under which that concept was formed. Developing concurrently with the capitalist economic system, it represented a new way of perceiving time that shaped and defined the western historical experience.

The notion of modern historical time, which has continuities with earlier Greek and Christian traditions, began to emerge as a distinct concept in the late thirteenth century, along with the mathematical concept of absolute time, which saw time existing independently of events and processes. Gradually an understanding of history as a “whole”, as existing “in and of itself”, developed, a concept that was first articulated explicitly in the eighteenth century. This view subsequently underpinned positivist views of history in which historical time was seen as unilinear and represented in the universal chronological time-line. It was also the basis of Romantic Idealist views of history, which saw time as relative, internal to many different types of events and processes, occurring on multiple levels, and discontinuous and non-linear in its movement. The contradiction of modern historical time was further understood in the varied movement of historicism, which recognized both subjectivity and objectivity, historical context and universal “truth”, relative and absolute time, in its view of the relationship between past and present.

The postmodern concept of time is a significant, recent manifestation of notions about temporal contradiction, and can be seen as both a continuation of, and
departure from, the idea of modern historical time. Postmodernists oppose the binary relationship between absolute and relative time, emphasizing the latter at the expense of the former. While in some respects their emphasis on the relativity of time is useful and necessary, their rejection of certain aspects of time associated with its absolute nature is problematic.

An examination of Marx's ideas about time provides a better understanding of the nature of modern historical time and its relationship to postmodern time. Indeed, Marx's contribution to the development of historical thought over the past century has been very influential to the extent that many of his ideas, such as recognition of the fundamental role of material economic structures and class activity in the historical process, are now underlying assumptions in historical research. Unfortunately, the understanding of time which underlies Marx's ideas about history is not as well appreciated or acknowledged; he is often portrayed positivistically by a certain group of "orthodox Marxists," as holding to a view of historical time as unilinear and progressing in the direction of a straight line through various successive "stages" of development toward a "timeless" utopia. Accordingly, the postmodernist critique of modern historical time is, at the same time, a critique of this common "orthodox" perception of Marx's ideas. Yet, as this thesis argues, Marx's concept of time encapsulates, in a more profound way than any other thinker before or since, the complex and contradictory nature of modern historical time. In the same way, it greatly enhances an understanding of the nature of historical time in the contemporary, "postmodern" context.

Within the development of Marxist thought itself, the postmodern critique of Marx's concept of time has been influential. The intersection of Marxism and postmodernism resulted in the movement of "post-Marxism," a Marxist school of thought which was influenced by Althusser's structuralism and the Frankfurt school's critical theory. In challenging the idea of Marxist historical time as a linear, evolutionary process, the post-Marxists analyzed society synchronically and in terms of multiple temporalities. In so doing, they attempted to limit Marx's ideas to an historically specific theory that was relevant and applicable to capitalist society only.
Broadly, the post-Marxist critique of interpretations of Marx’s concept of time is two-pronged. On the one hand, it criticizes positivist orthodox views of historical time, which emphasize absolute time over relative time, and which see time and history as a linear succession of events. On the other hand, it rejects certain Hegelian interpretations of Marx that stress the organic development of the “whole” of human history, and the notion that history has a telos. Some elements of their critique are useful in highlighting aspects of time that are often overlooked, such as multiplicity, simultaneity, and discontinuity as constituents of historical time, and the role of structures in constructing time. However, a major problem remains: how can Marx’s ideas be used to explain change in non-capitalist and capitalist societies and the transition from one social form to another?

Certainly, the positivist, orthodox view of time is insufficient. Not only is it too deterministic, but it does not accurately reflect Marx’s understanding of the nature of time. Equally, however, with their emphasis on structure at the expense of human agency, post-Marxist views are also inadequate as a theoretical basis for explaining historical change. Moishe Postone’s approach, which is to understand Marx’s ideas as an epistemology that is historically specific to capitalist society, suffers from similar problems. Indeed, as this thesis argues, it is the Hegelian-Aristotelian and ontologically based interpretations of Marx that provide a more promising means of understanding change and a more precise depiction of Marx’s ideas concerning time.

At the centre of the Hegelian/Aristotelian interpretation of Marx’s concept of time is an ontology of labour which suggests that human productive activity is the process by which time is manifested in the material world. While the essence of time is its emanation through creative activity, the form that time assumes reflects the material conditions of the particular society in which it is manifested. Thus, the way human activity underlies the construction of time is a transhistorical feature, while the forms of time that, in turn, structure that activity are historically specific.

While understanding the ontological nature of historical time is a concern of the philosopher of history, comprehending the forms of time – the nature of their material manifestation – is a task for the historian. Historical research into the early modern period during the transition from feudalism to capitalism has shown different
social forms in pre-capitalism existing simultaneously and developing in a non-linear and discontinuous manner, although gradually converging within the overriding, universal time of capitalism. These findings are compatible with an approach which examines the way time is socially and culturally constructed, and which consequently discerns the specific temporal logics that underlie a particular social form. The starting point for Marxist historians in this regard is the notion of "surplus extraction".

Using the concept of "mode of surplus extraction", historians can examine social forms in terms of the ways in which one group or class appropriates, distributes and controls the time of another group or class in order to produce a surplus, and how, in so doing, they exercise power and domination. A number of Marxist historians have moved in this direction in their investigation of the way people's consciousness and experience of time changed with the development and spread of the mechanical clock, a process that was concurrent with the rise of the bourgeois and working classes and the growth of capitalist society including the development of wage labour, manufacturing production methods and circulation and trade processes. Relatedly, some of the "western Marxists" have been concerned with the experience of the "everyday" in modern capitalist society, seeking to understand how the way we exist and act in the context of society's temporal structures, including how we write our history, has the capacity to shape time.

Three questions emerge from these various Marxist viewpoints and interpretations. First, to what extent is time tranhistorical or historically specific? Secondly, does human agency or deterministic forces underlie the construction of time? Thirdly, what is the nature of the relationship between absolute and relative time? A close examination of Capital reveals that Marx recognized that all of these elements play an important part in the complex constitution of historical time.

In relation to the first question, Marx understood time to contain both tranhistorical and historically specific elements. He developed his ideas concerning the tranhistorical aspects of time in his early writings, which expressed the idea that time in all societies emanated through human productive activity, and that it materialized in the use-value of created objects. Marx saw the historically specific
aspect of time to be evident in the way time was manifested in different forms which reflected changing material conditions. In particular, he was interested in the forms of time that were constructed in capitalist society, and that were manifested in the exchange-value and use-value of commodities and in the different methods of producing absolute and relative surplus-value. He saw that the nature of capitalist time gave rise to a complex process that was a whole, or totality, with a dynamism and direction.

Marx explored the second question as to whether human agency or deterministic forces underlined the construction of time in the context of his life as a political activist, which was based on a fundamental belief in the capacity of people to effect change but which was also pervaded at times by a sense of the inevitability of the historical process. In Capital, Marx examined the social and cultural construction of time and, in so doing, considered the forces that underpinned this process. He understood capitalist logic to have a temporal life of its own that was expressed through the production of commodities and the circulation and reproduction of capital. Thus, an abstract and deterministic "force" underpinned the structural elements of society such as state institutions, daily work practices, and production systems. However, Marx also saw that people's activity was fundamental to the constitution of time, as it was in the labour of workers that the source, or essence, of time lay: in short, it is class activity that constructs, or shapes time. For example, Marx showed the two elements of human agency and structural forces to operate in conjunction with one another in the formation of laws concerning working hours, a legislative discourse that defined and controlled time. Here, on the one hand, the state, as a structural institution, constructed and implemented the legislation which, in turn, defined and controlled time, while, on the other hand, class struggle played a key role in instigating and formulating the legislation, and hence in shaping the nature of time.

The third question concerning the relationship between absolute and relative time is closely related to the first two questions. Marx saw absolute time, not as representing an eternal, invariable "truth" as the Enlightenment thinkers did, but as a constructed concept that emerged at a specific time and that co-existed with prevailing notions of relative time. He understood that relative time, which
characterized feudal society, was subsumed by absolute time as capitalism, along with the mechanical clock, emerged. Marx showed, then, that the notion of a unilinear historical time that imposes a “whole” is historically specific, and is characterized by absolute and relative time co-existing, emanating through the two value forms of the commodity and the different methods of producing surplus-value. While absolute time, as a measure of labour time, underpins the process as a whole, relative time is manifested in the movement of different forms of capital, both between and within different production processes, where different levels of time merge and interact within the whole. Capitalism as a totality, in its drive to produce surplus-value expresses the features of both absolute and relative time, as seen, for example, in the contradictory way it seeks to impose continuity, but, in so doing, causes discontinuity and fragmentation as a result of economic crises.

How, then, should Marx’s ideas about time be understood today? Material conditions have changed significantly since Marx wrote in the nineteenth century, yet his theories have shown the ability to explain developments beyond his own time. Indeed, Marx’s ideas can be understood in the context of the changes in capitalism that have occurred over the previous century, including the latest, “postmodern” phase of development, which is characterized by fragmentation in production processes, a predominance of communicational, electronic technologies and the commoditization of information. These aspects of capitalist development give rise to an historical time in which the features of relativity - the “hallmark” of postmodern time - are increasingly being expressed. There are many elements in Marx’s concept of time that point to the significance of relative time including multiplicity, discontinuity, and the idea that relative time is becoming more predominant.

The question of how Marx’s ideas can transcend their time and place to reflect current concerns and developments has underpinned the aim of this thesis, which has been to assess the validity of Marx’s ideas for historical interpretation today. It is a question that contains an inherent dilemma. Marx himself advocated the notion that ideas reflect the material conditions under which they were produced. Thus, bringing Marx’s ideas about time into the contemporary context necessarily means changing them while, at the same time, retaining those elements that remain applicable and valid as a means of understanding, not just the different phases of
capitalist development, but also non-capitalist societies — either in the knowable past or the imagined future.

Attempting to answer this question has led to a consideration of Foucault’s concept of time, an exercise which, at first glance, may seem curious given that the differences between Foucault and Marx are more obvious than the similarities. For example, whereas Foucault’s subject matter is the functioning of structures of knowledge and discourse in constructing the “other”, Marx is concerned with the historical agency of classes and the role of economic, material conditions. Again, while Foucault rejects the notion of an underlying meaning to history, and thus opposes the notion of history as a “whole” and its underpinning by absolute time, this element remains central to Marx’s idea of time. However, a closer examination suggests that the two thinkers are not as opposed to one another as it initially appears.

Foucault extends Marx’s own logic in three ways. Firstly, his subject matter of the “other” - of the criminal, insane or sexually deviant - presents a challenge to the dominant twentieth century historical discourse in much the same way as Marx’s subject matter – the working class – challenged nineteenth century “bourgeois” history. Secondly, Foucault’s notion of the “episteme”, the system of rules under which discourse and knowledge is produced, and which gives modern society, in particular, its overall “disciplinary” temporal structure, is similar to Marx’s idea that modes of production or surplus extraction give rise to different temporal logics and that the temporal logic of capitalism produces a “whole” that is embodied in the state. Moreover, just as Foucault’s historically specific epistememes contain multiple levels, each with their own temporality, so too, does Marx see time operating differentially within a particular, historically specific, temporal logic. Thirdly, although Foucault downplays the subject of agency, it remains an undeveloped potential in his concept of power, to which the notion of activity is central. This aspect, together with its transhistoricity (in that it can be applied to an examination of any society), links him to Marx, as does his concern with the way structural and technological “apparatuses” construct, control and define time. Again, Foucault’s notion of language or discourse and its role in the historical construction of time is similar to Marx’s ideas concerning the role of the abstract concept of capital, which
describes the movement of time. In this regard, as information fast becomes the most important commodity in capitalist society, and as electronic technologies increasingly define and shape time, understanding the processes underlying the production of knowledge and information is both relevant and necessary.

The areas in which Foucault's ideas intersect with those of Marx have been presented, in this thesis, as starting points for further research into an understanding of historical time that is adequate to the challenges facing the discipline of history in the early twenty-first century. While the directions such research could take is yet to be explicated, what is certain is that the process of understanding the nature of historical time will continue to unfold, for some time to come, within the context of the "modern dilemma": that is, the problem presented by the awareness that historical time is perpetually changing in its nature and yet carries within it some timeless truths.
Appendix

Marx's Citations Concerning Time in *Capital*

This appendix contains the material used in a content analysis, which was based on the methodology outlined by T.F Carney in *Content Analysis: A Technique for Systematic Inference From Communications* (London: Batsford Ltd, 1972). The content analyzed was Marx's citation of authors in support of his arguments concerning time as evident in the three volumes of *Capital: A Critique of Political Economy*.

The Appendix contains Marx's citations of authors who make statements both in concordance with his ideas, and in contradistinction to them, and thus gives an insight into his method of critique. The majority of the citations listed (that is, entries 1 - 150) represent Marx's citation of his secondary sources, which were mostly texts of political economy written by a diverse range of eighteenth and nineteenth century European authors. Marx's citation of primary sources in relation to the subject of time, found mainly in Parliamentary Reports and referring, in large part, to labour-time, were too numerous and of the same nature to warrant individual entries. Instead, Appendix entries 151-198 are a representative selection of the range of issues Marx referred to using these primary sources.

Utilising the methodology of content analysis has enabled me to systematically locate Marx's ideas about time, and gain insight into where they derived from, how he critiqued them and where he subsequently departed from them to formulate his own ideas. These insights, in general, form the basis of the thesis as a whole, and more particularly, the arguments in Chapters Five and Six, arguments which are substantiated, not only by direct citations from *Capital*, but also by references to the relevant Appendix entries in the endnotes, should the reader wish to follow up a particular point.
<table>
<thead>
<tr>
<th>No.</th>
<th>Author cited</th>
<th>Work cited</th>
<th>Location</th>
<th>Citation in Capital</th>
<th>Contribution to Marx’s understanding of time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Anonymous</td>
<td><em>A Defence of the Landowners and Farmers of Great Britain</em> (London, 1814)</td>
<td>vol. 1 fn. 14 p. 698</td>
<td>“By far the greater part of agricultural operations is done by people, who are hired for the day or on piece-work. Their weekly wages are about 12 shillings, and although it may be assumed that a man earns on piece-work under the greater stimulus to labour, 1 shilling, or perhaps 2 shillings more than on weekly wages, yet it is found, on calculating his total income, that his loss of employment, during the year, outweighs this gain.”</td>
<td>Anon. author provides support for Marx’s point that piece wages, which become prominent in manufacturing, results in longer and more intense hours of work, but yields no benefits for the agricultural proletariat.</td>
</tr>
<tr>
<td>2</td>
<td>Anonymous</td>
<td><em>An Essay on Trade and Commerce, By the Author of 'Considerations on Taxes'</em> (London, 1770)</td>
<td>vol. 1 fn. 3 p. 765</td>
<td>“Temperate living and constant employment is the direct road, for the poor, to rational happiness” (by which the author means the longest possible working days and the smallest possible amount of the means of subsistence) “and to riches and strength for the state” (namely for the landowners, capitalists, and their political dignitaries and agents).”</td>
<td>Anon. author provides an example of an argument justifying the perpetuation of the existence of an impoverished working class through the extraction of maximum labour time for minimum wages.</td>
</tr>
<tr>
<td>3</td>
<td>Anonymous</td>
<td><em>An Essay on Trade and Commerce, By the Author of 'Considerations on Taxes'</em> (London, 1770)</td>
<td>vol. 1 fn. 17 p. 789</td>
<td>“The author of the Essay on Trade and Commerce grasps the effect of a relative surplus population on the employed workers with his usual unerring bourgeois instinct. “Another cause of idleness in this kingdom is the want of a sufficient number of labouring hands ... Whenever from an extraordinary demand for manufactures, labour grows scarce, the labourers feel their own consequence, and will make their masters feel it likewise - it is amazing; but so depraved are the dispositions of these people, that is such cases a set of workmen have combined to distress the employer by idling a whole day together!” Those fellows were actually asking for a wage-increase!”</td>
<td>Marx cites the anon. author to illustrate bourgeois arguments for the necessity of a surplus population to enable the extraction of maximum labour-time; it is required due to fluctuations in the demand for labour.</td>
</tr>
<tr>
<td>4</td>
<td>Anonymous</td>
<td><em>An Essay on Trade and Commerce, By the Author of 'Considerations on Taxes'</em> (London, 1770)</td>
<td>vol. 1 fn. 4 p. 342</td>
<td>“An hour’s labour lost in a day is a prodigious injury to a commercial State ... There is a very great consumption of luxuries among the labouring poor of this kingdom: particularly among the manufacturing populace, by which they also consume their time, the most fatal of consumptions.”</td>
<td>Marx uses this excerpt to illustrate the capitalist’s attitude to the workers time in their arguments for their “right” to extract the maximum length of the working day from the worker.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>5</td>
<td>Anonymous</td>
<td><em>An Essay on Trade and Commerce, By the Author of 'Considerations on Taxes'</em> (London, 1770)</td>
<td>vol. 1 fn. 91 p. 387</td>
<td>“If the making of every seventh day an holiday is supposed to be of divine institution, as it implies the appropriating the other six days to labour” (he means capital, as we shall soon see) “surely it will not be thought cruel to enforce it... That mankind in general, are naturally inclined to ease and indolence, we fatally experience to be true, from the conduct of our manufacturing populace, who do not labour, upon an average, above four days in a week, unless provisions happen to be very dear.... [the worker] who labours four days, has a surplus of money to live idle with the rest of the week ....I hope I have said enough to make it appear that the moderate labour of six days in a week is no slavery... The cure will not be perfect, till our manufacturing poor are contented to labour six days for the same sum which they now earn in four days.”</td>
<td>The anon. author, “the most veracious of the accusers of the workers” as Marx describes him, provides him with an example of eighteenth arguments for longer working hours, and illustrates capitalist attitudes to the workers time.</td>
</tr>
<tr>
<td>6</td>
<td>Anonymous</td>
<td><em>An Essay on Trade and Commerce, By the Author of 'Considerations on Taxes'</em> (London, 1770)</td>
<td>vol. 1 fn. 1 p. 341</td>
<td>“A day’s labour is vague, it may be long or short.”</td>
<td>Anon. author provides support for Marx’s point that the length of the working day is variable, defined by physical and moral limits.</td>
</tr>
<tr>
<td>7</td>
<td>Anonymous</td>
<td><em>An Essay on Trade and Commerce, By the Author of 'Considerations on Taxes'</em> (London, 1770)</td>
<td>vol. 1 fn. 4 p. 685</td>
<td>“It is the quantity of labour and not the price of it” (he means by this the nominal daily or weekly wage) “that is determined by the price of provisions and other necessaries: reduce the price of necessaries very low, and of course you reduce the quantity of labour in proportion. Master-manufacturers know that there are various ways of raising and falling the price of labour, besides that of altering its nominal amount.”</td>
<td>Although he puts it “in a confused way”, the anon. author perceives that the price of labour can be lowered without a change in the nominal wage.</td>
</tr>
<tr>
<td>8</td>
<td>Anonymous</td>
<td><em>An Essay on the Political Economy of Nations</em> (London, 1821)</td>
<td>vol. 1 fn. 3 p. 422</td>
<td>“The Labour, that is the economic time, of society, is a given portion, say ten hours a day of a million people, or ten million hours ... Capital has its boundary of increase. This boundary may, at any given period, be attained in the actual extent of economic time employed.”</td>
<td>Anon. author provides support for Marx’s point that the amount of surplus value produced is determined by the size of the population; all the labour set in motion in a day can be seen as a “single working day”</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time with fixed limits; absolute surplus value can only be increased by either increasing the population, or the length of the working day.</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>9</td>
<td>Anonymous</td>
<td><em>An Inquiry into Those Principles, Respecting the Nature of Demand and the Necessity of Consumption, Lately Advocated by Mr. Malthus</em>, (London, 1821)</td>
<td>vol.1 fn. 12 p. 278</td>
<td>“All labour is paid after it has ceased.”</td>
<td>Anon. author provides support for the point that the worker advances use-value of labour / credit to capitalist, as the wage is not paid until after the labour has been performed.</td>
</tr>
<tr>
<td>10</td>
<td>Anonymous</td>
<td><em>Essays on Political Economy: In Which are Illustrated the Principal Causes of the Present National Distress; with Appropriate Remedies</em> (London, 1830)</td>
<td>vol.1 fn. 8 p. 666</td>
<td>“A principal cause of the increase of capital, during the war, proceeded from the greater exertions, and perhaps the greater privations of the labouring classes, the most numerous in every society. More women and children were compelled by necessitous circumstances to enter upon laborious occupations, and former workmen, from the same cause, obliged to devote a greater portion of their time to increase production”.</td>
<td>Anon. author provides Marx with support for the fact that between 1799-1815, an increase in the prices of the means of subsistence led in England to a nominal rise in wages, although there was a fall in real wages, as expressed in the quantity of the means of subsistence they would purchase. These simultaneous variations resulted in an increase in surplus value, (due to an increase in hours and intensity of work), as well as increased pauperization of the working class.</td>
</tr>
<tr>
<td>11</td>
<td>Anonymous</td>
<td><em>Observations on Certain Verbal Disputes in Political Economy, Particularly Relating to Value</em> (London, 1821)</td>
<td>vol. 1 fn. 2 p. 675</td>
<td>“If you call labour a commodity, it is not like a commodity which is first produced in order to exchange, and then brought to market where it must exchange with other commodities according to the respective quantities of each which there may be in the market at the time; labour is created the moment it is brought to market; nay, it is brought to market before it is created.”</td>
<td>Anon. author provides support for Marx’s distinction between labour and labour-power, which is necessary to determine value of labour-power. Labour as a commodity is sold - as labour-power - before the buyer realises its value.</td>
</tr>
<tr>
<td>12</td>
<td>Anonymous</td>
<td><em>Some Thoughts on the Interest of Money in General, and Particularly in the Publick Funds</em> (London, n.d)</td>
<td>vol. 1 fn. 9 p. 129</td>
<td>“The value of them” (the necessaries of life), “when they are exchanged the one for another, is regulated by the quantity of labour necessarily required, and commonly taken in producing them”.</td>
<td>Anon. author provides support for the idea that the magnitude of the value of a commodity is the labour-time socially necessary for its production, or, “socially necessary labour-time.”</td>
</tr>
<tr>
<td>13</td>
<td>Anonymous</td>
<td><em>Some Thoughts on the</em></td>
<td>vol.1</td>
<td>“One man has employed himself a week in providing this</td>
<td>Anon. author, who is “much nearer the mark”</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>14</td>
<td>Anonymous</td>
<td><em>The Advantages of the East-India Trade to England</em> (London, 1720)</td>
<td>vol. 1 fn. 5 &lt;br&gt; p. 436</td>
<td>“If my neighbour by doing much with little labour, can sell cheap, I must contrive to sell as cheap as he. So that every art, trade, or engine, doing work with labour of fewer hands, and consequently cheaper, begets in others a kind of necessity and emulation, either of using the same art, trade, or engine, or of inventing something like it, that every man may be upon the spare, that no man may be able to undersell his neighbour”</td>
<td>Anon. author supports Marx’s point that competition forces new methods of production to be created; an advantage is gained by the capitalist who appropriates the new methods by producing more surplus value before the new mode becomes generalised.</td>
</tr>
<tr>
<td>15</td>
<td>Anonymous</td>
<td><em>The Advantages of the East-India Trade to England</em> (London, 1720)</td>
<td>vol. 1 fn. 2 &lt;br&gt; p. 458</td>
<td>“The more any manufacture of much variety shall be distributed and assigned to different artists, the same must needs be better done and with greater expedition, with less loss of time and labour”</td>
<td>Anon. author provides support for Marx’s point that specialised workers performing the same operation are more productive than the craftsman who performs a whole series of operations in succession</td>
</tr>
<tr>
<td>16</td>
<td>Anonymous</td>
<td><em>The Advantages of the East-India Trade to England</em> (London, 1720)</td>
<td>vol. 1 fn. 9 &lt;br&gt; p. 463</td>
<td>“In so close a cohabitation of the people, the carriage must needs be less.”</td>
<td>Anon. author provides support for Marx’s point that manufacturing (step by step through a series of processes) reduces the spaces between phases of production, thus shortening the time taken in making these transitions.</td>
</tr>
<tr>
<td>17</td>
<td>Anonymous</td>
<td><em>The Advantages of the East-India Trade to England</em> (London, 1720)</td>
<td>vol. 1 fn. 12 &lt;br&gt; p. 465</td>
<td>“The more variety of artists to every manufacture ... the great the order and regularity of every work, the same must needs be done in less time, the labour must be less.”</td>
<td>Anon. author provides support for Marx’s point that time is saved by increasing productivity through division of labour by increasing the continuity, regularity, order and intensity of labour.</td>
</tr>
<tr>
<td>18</td>
<td>Anonymous</td>
<td><em>The Currency Theory Reviewed: A Letter to the</em></td>
<td>vol. 3 p. 533</td>
<td>“It is unquestionably true that the £1,000 which you deposit at A today may be reissued tomorrow, and form a Marx includes this excerpt to support his discussion on the amount of money required</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx’s understanding of time for circulation</td>
</tr>
<tr>
<td>-----</td>
<td>--------------</td>
<td>------------</td>
<td>----------</td>
<td>---------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>19</td>
<td>Anonymous</td>
<td><em>The Currency Theory Reviewed: A Letter to the Scotch People. By a Banker In England</em> (Edinburgh, 1845)</td>
<td>vol 3 fn. 85 p. 566</td>
<td>“The average of notes in circulation during the year was, in 1812, 106,538,000 francs; in 1818, 101,205,000 francs; whereas the movement of currency, or the annual aggregate of disbursements and receipts upon all accounts, was, in 1812, 2,837,712,000 francs, in 1818, 9,665,030,000 francs. The activity of the currency in France, therefore, during the year 1818, as compared with its activity in 1812, was in the proportion of three to one. The great regulator of the velocity of circulation is credit ... This explains, why a severe pressure upon the money-market is generally coincident with a full circulation.”</td>
<td>Anon. author provides Marx with support for the point that the velocity of the circulation of money affects the amount of money in circulation</td>
</tr>
<tr>
<td>20</td>
<td>Anonymous</td>
<td><em>The Currency Theory Reviewed: A Letter to the Scotch People. By a Banker In England</em> (Edinburgh, 1845)</td>
<td>vol. 1 fn. 53 p. 237</td>
<td>“The amount of purchases or contracts entered upon during the course of any given day, will not affect the quantity of money afloat on that particular day, but, in the vast majority of cases, will resolve themselves into</td>
<td>Anon. author provides support for the point that the quantity of money in circulation does not correspond with mass of commodities in circulation</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>21</td>
<td>Arbuthnot, John</td>
<td><em>An Inquiry into the Connection between the Present Price of Provisions, and the Size of Farms. With remarks on Population as Affected Thereby. To Which are Added, Proposals for Preventing Future Scarcity. By a Farmer</em> (London, 1773)</td>
<td>vol. 1 fn. 6 p. 444</td>
<td>“There is also” (when the same number of men are employed by one farmer on 300 acres, instead of by ten farmers with 30 acres apiece) “an advantage in the proportion of servants, which will not so easily be understood but by practical men; for it is natural to say, as 1 is to 4, so are 3 to 12: but this will not hold good in practice; for in harvest time and many other operations which require that kind of despatch by the throwing many hands together, the work is better and more expeditiously done: I. i. in harvest, 2 drivers, 2 loaders, 2 pitchers, 2 rakers, and the rest at the rick, or in the barn, will despatch double the work that the same number of hands would do if divided into different gangs on different farms.”</td>
<td>Arbuthnot provides support for the point that co-operation increases productivity, and stimulates the efficiency of the individual worker through rivalry.</td>
</tr>
<tr>
<td>22</td>
<td>Arbuthnot, John</td>
<td><em>An Inquiry into the Connection between the Present Price of Provisions, and the Size of Farms. With remarks on Population as Affected Thereby. To Which are Added, Proposals for Preventing Future Scarcity. By a Farmer</em> (London, 1773)</td>
<td>vol. 1 fn. 10 p. 446</td>
<td>“The doing of it” (agricultural labour) “at the critical juncture is of so much the greater consequence”.</td>
<td>Arbuthnot provides Marx with support for the idea that co-operation increases productivity, as seen when masses are set to work for short periods, when much work is required at a specific point in time, such as harvests.</td>
</tr>
</tbody>
</table>

Multifarious drafts upon the quantity of money which may be afloat at subsequent dates more or less distant... The bills granted or credits opened, today, need have no resemblance whatever, either in quantity, amount, or duration, to those granted or entered upon tomorrow or next day; nay, many of today's bills, and credits, when due, fall in with a mass of liabilities whose origins traverse a range of antecedent dates altogether indefinite, bills at 12, 6, 3 months or 1 often aggregating together to swell the common liabilities of one particular day...
<table>
<thead>
<tr>
<th>No.</th>
<th>Author cited</th>
<th>Work cited</th>
<th>Location</th>
<th>Citation in Capital</th>
<th>Contribution to Marx’s understanding of time</th>
</tr>
</thead>
</table>
| 23  | Arbuthnot, John | *An Inquiry into the Connection between the Present Price of Provisions, and the Size of Farms. With remarks on Population as Affected Thereby. To Which are Added, Proposals for Preventing Future Scarcity. By a Farmer* (London, 1773) | vol. 1 fn. 4 p. 423 | “The farmer cannot rely on his own labour, and if he does, I will maintain that he is a loser by it. His employment should be a general attention to the whole; his thrasher must be watched, or he will soon lose his wages in corn not threshed out; his mowers, reapers, etc., must be looked after; he must constantly go round his fences; he must see there is no neglect; which would be the case if he was confined to any one spot.” | Arbuthnot provides support for Marx’s point that at a certain stage of capitalist development, the capitalist must be able to devote the whole of his time to appropriating and controlling the labour of others. Relates to Marx’s interest in the genesis of the ‘capitalist farmer’.
| 24  | Bellers, John | *Essays about the Poor, Manufactures, Trade, Plantations, and Immorality* (London, 1699). | vol. 1 fn. 12 p. 609 | “The uncertainty of fashions does increase necessitous. Poor. It has two great mischief’s in it. 1st.) The journeymen are miserable in winter for want of work, the mercers and master-weavers not daring to lay out their stocks to keep the journeymen employed before the spring comes, and they know what the fashion will then be. 2ndly.) In the spring the journeymen are not sufficient, but the master-weavers must draw in many prentices, that they may supply the trade of the kingdom in a quarter of half a year, which robs the plough of hands, drains the country of labourers, and in a great part stocks the city with beggars, and starves some in winter that are ashamed to beg”. | Bellers provides support for Marx’s contention that irregular hours of both overwork and underwork, are caused by production cycles governed by the “murderous, meaningless caprices of fashion”, resulting in sudden orders.
| 25  | Bellers, John | *Proposals for Raising a Colledge of Industry of All Useful Trades and Husbandry* (London, 1696) | vol. 1 fn. 2 p. 764 | “For if one had a hundred thousand acres of land and as many pounds in money, and as many cattle, without a labourer, what would the rich man be, but a labourer? And as the labourers make men rich, so the more labourers there will be, the more rich men ... the labour of the poor being the mines of the rich”. | Bellers provides support for Marx’s point that capitalism needs the labour-time of the working population to exist. Moreover, capitalism seeks for both the maximum labour-time of the worker and a surplus labouring population.
<p>| 26  | Bidaut, J.N. | <em>Du monopole qui s’établit dans les arts industriels et le commerce, au moyen des grands appareils de fabrication. 2e livraison: Du</em> | vol. 1 fn. 8 p. 438 | “These speculators, who are so economical of the labour of the workers they would have to pay.” | Bidaut supports Marx’s point that capitalism aims to shorten necessary labour time, but only in order to lengthen surplus labour time; it seeks to prolong the length of the working day, and to economize labour-time by |</p>
<table>
<thead>
<tr>
<th>No.</th>
<th>Author cited</th>
<th>Work cited</th>
<th>Location</th>
<th>Citation in Capital</th>
<th>Contribution to Marx’s understanding of time increasing its productivity.</th>
</tr>
</thead>
</table>
| 27  | Burke, Edmund | *Thoughts and Details on Scarcity. Originally Presented to the Rt Hon. W. Pitt in the Month of November 1795* (London, 1800) | vol. 1  
fn. 7  
p. 344 | “Those who labour ... in reality feed both the pensioners, called the rich, and themselves.” | Burke provides support for Marx’s contention that the extraction of surplus labour-time is evident in other economic formations. |
| 28  | Burke, Edmund | *Thoughts and Details on Scarcity. Originally Presented to the Rt Hon. W. Pitt in the Month of November 1795* (London, 1800) | vol. 1  
fn. 1  
p. 440 | “Edmund Burke, that famous sophist and sycophant, goes so far as to make the following assertion, based on his practical observations as a farmer: that “in so small a platoon” as that of five farm labourers, all individual differences in the labour vanish, and that consequently any given five adult farm labourers taken together will do as much work in the same time as any other five.” | Burke provides support for Marx’s point that co-operative labour acquires the character of social labour. However, Marx also points out that each man’s day is an aliquot part of the collective working day, regardless of whether their operations are connected. |
| 29  | Cairnes, John Elliot | *The Slave Power* (London, 1862) | vol. 1  
fn. 74  
p. 377 | “...when his [the slave's] place can at once be supplied from foreign preserves, the duration of his life becomes a matter of less moment than its productiveness while it lasts. It is accordingly a maxim of slave management, in slave-importing countries, that the most effective economy is that which takes out of the human chattel in the shortest space of time the utmost amount of exertion is capable of putting forth.” | Cairnes provides Marx with a point of comparison between slavery and capitalism; in the latter case the working population must reproduce itself. Thus, shortening the working day is in the interests of capitalism, which relies on replenishment of working population. |
| 30  | Cantillon, Richard | *Essai sur la nature du commerce en général* (Amsterdam, 1756) | vol. 1  
fn. 11  
p. 697 | “The labour of the journeymen-craftsman is regulated by the day or by the piece ... The master craftsmen know approximately how much work a journeyman can do every day in each trade, and they often pay them in proportion to the amount of work they perform; thus the journey-men do as much work as they can, in their own interest, and without needing any further supervision.” Cantillon, from whom Quesnay, Sir James Steuart and Adam Smith have largely drawn, here already presents the piece-wage as merely a modified form of the time-wage. | Cantillon provides Marx with support for the point that piece wages results in long hours of work through stimulating competition, and consequently lowers the average wage. While piece wages causes individual wages to vary, differences cancel each other out to make an average wage. |
<table>
<thead>
<tr>
<th>No.</th>
<th>Author cited</th>
<th>Work cited</th>
<th>Location</th>
<th>Citation in Capital</th>
<th>Contribution to Marx's understanding of time</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>Carli, G.R.</td>
<td>in Pietro Verri, <em>Meditazioni sulla economia politica</em> (1771), in <em>Scrittori Classici italiani di economia politica, Parte moderna</em>, ed. Custodi, Vol. 15 (Milan, 1804)</td>
<td>vol. 1 fn. 13 p. 447</td>
<td>&quot;The strength of the individual man is very small, but the union of a number of very small forces produces a collective force which is greater than the sum of all the partial forces, so that merely by being joined together these forces can reduce the time required, and extend the field of their action.&quot;</td>
<td>Carli provides support for Marx's point that the combined working day produces a far greater quantity of use-values than an equal sum of isolated working days; productive power arises from co-operation.</td>
</tr>
<tr>
<td>32</td>
<td>Cazenove, John</td>
<td>in a note to his edition of Thomas Malthus's <em>Definitions in Political Economy</em> (London, 1832)</td>
<td>vol. 1 fn. 3 p. 713</td>
<td>&quot;When capital is employed in advancing to the workman his wages, it adds nothing to the funds for the maintenance of labour.&quot;</td>
<td>Cazenove provides support for Marx's point that variable capital is an historical form of appearance of a labour-fund; in capitalism this takes the form of capital advanced by capitalist in wages.</td>
</tr>
<tr>
<td>33</td>
<td>Cazenove, John</td>
<td><em>Outlines of Political Economy</em> (London, 1832)</td>
<td>vol. 1 fn. 29 p. 744</td>
<td>&quot;Mr Senior has substituted for it&quot; (the expression 'labour and profit') &quot;the expression Labour and Abstinence. He who converts his revenue abstains from the enjoyment which its expenditure would afford him. It is not the capital, but the use of the capital productively, which is the cause of profits.&quot;</td>
<td>Cazenove disputes Senior's notion that profit is created by abstinence, thus supporting Marx's point that although time is necessary for capital to be accumulated, it is not due to the thrift of the capitalist.</td>
</tr>
<tr>
<td>34</td>
<td>Cazenove, John</td>
<td><em>Outlines of Political Economy</em> (London, 1832)</td>
<td>vol. 1 fn. 4 p. 435</td>
<td>&quot;A man's profit does not depend upon his command of the produce of other men's labour, but upon his command of labour itself. If he can sell his goods at a higher price, while his workmen's wages remain unaltered, he is clearly benefited ... A smaller proportion of what he produces is sufficient to put that labour into motion, and a larger proportion consequently remains for himself&quot;.</td>
<td>Cazenove provides support for Marx's point that the increased production of surplus-value arises from the curtailment of the necessary labour-time, and the corresponding prolongation of the surplus labour.</td>
</tr>
<tr>
<td>35</td>
<td>Chalmers, Thomas</td>
<td><em>On Political Economy in Connection with the Moral State and Moral Prospects of Society</em> (Glasgow, 1832)</td>
<td>vol. 2 p. 235</td>
<td>&quot;The world of trade may be conceived to revolve in what we shall call an economic cycle, which accomplishes one revolution by business, coming round again, through its successive transactions, to the point from which it set out. Its commencement may be dated from the point at which the capitalist has obtained those returns by which his capital is replaced to him: whence he proceeds anew to engage his workmen; to distribute among them, in wages, their maintenance, or rather, the power of lifting it; to</td>
<td>Chalmers fails to mention the form of the returns of original outlay of capital - whether they are in commodities or money.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>36</td>
<td>Coquelin, Charles</td>
<td>‘Du crédit et des banques dans l'industrie’, in <em>Revue des deux Mondes</em>, 4th series, Vol.31 (Paris, 1842)</td>
<td>vol. 3 p. 527</td>
<td>&quot;In every country, the greater part of credit transactions take place within the orbit of industry ... the raw material producer advances his product to the manufacturer who processes it, and receives from him a promise to pay on a certain date.&quot;</td>
<td>Coquelin provides Marx with support for his discussion of the function and nature of credit.</td>
</tr>
<tr>
<td>37</td>
<td>Corbet, Thomas</td>
<td><em>An Inquiry into the Causes and Modes of the Wealth of Individuals; or the Principles of Trade and Speculation Explained</em> (London, 1841)</td>
<td>vol. 1 fn. 16 p. 735</td>
<td>&quot;Accumulation of stocks ... non-exchange ... over-production&quot;.</td>
<td>Corbet provides support for the point that accumulation of commodities over time is caused through over-production or a bottleneck in circulation.</td>
</tr>
<tr>
<td>38</td>
<td>Corbet, Thomas</td>
<td><em>An Inquiry into the Causes and Modes of the Wealth of Individuals; or the Principles of Trade and Speculation Explained</em> (London, 1841)</td>
<td>vol. 2 fn. 5 p. 216</td>
<td>&quot;Corbet calculated the costs of storing wheat for a nine-month period in 1841 as 1/2 per cent loss in quantity, 3 per cent interest on the price, 2 per cent warehouse rental, 1 per cent sifting and dryage, 1/2 per cent delivery, making a total of 7 per cent, or 3s. 6d. per quarter on a wheat price of 50s.&quot;</td>
<td>Corbet provides Marx with an illustration of the costs involved in circulation, thus requires additional capital outlay.</td>
</tr>
<tr>
<td>39</td>
<td>Courcelle-Seneuil, Jean-Gustav</td>
<td><em>Traité théorique et pratique des entreprises industrielles, commerciales et agricoles ou Manuel des affaires</em>, 2nd ed. (Paris, 1857)</td>
<td>vol. 1 fn. 33 p. 744</td>
<td>&quot;Not only accumulation, but the simple &quot;conservation of a capital requires a constant effort to resist the temptation of consuming it.&quot;</td>
<td>Courcelle-Seneuil provides an example of the bourgeois notion, refuted by Marx, that profit is created through the &quot;abstinence&quot; of the capitalist.</td>
</tr>
<tr>
<td>40</td>
<td>Destutt de Tracy, Antoine comte de,</td>
<td><em>Éléments d'idéologie</em>, Parts 4 and 5: <em>Traité de la volonté et de ses effets</em> (Paris, 1826)</td>
<td>vol. 1 fn. 9 p. 445</td>
<td>&quot;If it is a question of undertaking a complex piece of labour, different things must be done simultaneously. One person does one thing, while another does something else, and they all contribute to the effect that a single man would be unable to produce. One rows while another holds the rudder, and a third casts the net or harpoons the fish; in this way fishing enjoys a success that would be</td>
<td>Destutt de Tracy provides support for Marx's point that co-operation increases productivity by performing different operations simultaneously.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>--------------</td>
<td>--------------------------------</td>
<td>----------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>41</td>
<td>Diodorus Siculus</td>
<td><em>Bibliotheca Historica</em></td>
<td>vol. 1 fn. 4 p. 648</td>
<td>&quot;It is altogether incredible how little trouble and expense the bringing-up of their children causes them. They cook for them the first simple food at hand; they also give them the lower part of the papyrus stem to eat, if it can be roasted in the fire, and the roots of stalks of marsh plants, some raw, some boiled and roasted. Hence a child, until he is grown up, costs his parents not more than twenty drachmas altogether. This is the main reason why the population of Egypt is so numerous, and, therefore, why so many great works can be undertaken.&quot;</td>
<td>Diodorus Siculus provides Marx with an illustration from ancient Egypt that supports the idea that the length of necessary labour-time depends on environmental conditions. Marx qualifies Diodorus’ remarks by suggesting that the gigantic building projects of ancient Egypt owed less to the size of the population than to the large proportion of it that was freely disposable.</td>
</tr>
<tr>
<td>42</td>
<td>Diodorus Siculus</td>
<td><em>Bibliotheca Historica</em></td>
<td>vol. 1 fn. 9 p. 345</td>
<td>&quot;One cannot see these unfortunates (in the gold mines between Egypt, Ethiopia and Arabia) &quot;who are unable even to keep their bodies clean or to clothe their nakedness, without pitying their miserable lot. There is no indulgence, no forbearance for the sick, the feeble, the aged, or for feminine weaknesses. All, forced by blows, must work on until death puts an end to their sufferings and their distress&quot;.</td>
<td>This example supports Marx’s point that surplus labour-time is found in many economic formations, whenever unpaid labour is done for another person. However, in economic formations where use-value predominates, the extraction of surplus labour will be restricted by a more or less confined set of needs. Production of gold and silver, as this example shows, is however, an exception to this.</td>
</tr>
<tr>
<td>43</td>
<td>Dunning, Thomas Joseph</td>
<td><em>Trades' Unions and Strikes: Their Philosophy and Intention</em> (London, 1860)</td>
<td>vol. 1 fn. 8 p. 695</td>
<td>&quot;This spontaneous result [raising intensity of labour] is often artificially helped along, as for instance in London, in the engineering trade, where a customary trick is &quot;the selecting of a man who possesses superior physical strength and quickness, as the principal of several workmen, and paying him an additional rate, by the quarter or otherwise, with the understanding that he is to exert himself to the utmost to induce the others, who are only paid the ordinary wages, to keep up to him ... without any comment this will go far to explain many of the complaints of stinting the action, superior skill, and working-power, made by the employers against the men.&quot;</td>
<td>Dunning provides Marx with support for the point that piece wages has the effect of increasing intensity of labour.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------------</td>
<td>-------------------------------------------------</td>
<td>----------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>44</td>
<td>Dunning, Thomas Joseph</td>
<td><em>Trades' Unions and Strikes: Their Philosophy and Intention</em> (London, 1860)</td>
<td>vol. 1</td>
<td>fn. 10 p. 696 “Where the work in any trade is paid for by the piece at so much per job ... wages may vary materially differ in amount ... But in work by the day there is generally a uniform rate ... recognized by both employer and employed as the standard of wages for the general run of workmen in the trade”</td>
<td>Dunning provides Marx with support for the point that that piece wages results in long hours of work through stimulating competition, and consequently lowers the average wage. While piece wages causes individual wages to vary, differences cancel each other out to make an average wage.</td>
</tr>
<tr>
<td>45</td>
<td>Dunning, Thomas Joseph</td>
<td><em>Trades' Unions and Strikes: Their Philosophy and Intention</em> (London, 1860)</td>
<td>vol. 1</td>
<td>fn. 2 p. 692 “The compositors of London, as a general rule, work by the piece, time-work being the exception, while those in the country work by the day, the exception being work by the price. The shipwrights of the port of London work by the job or piece, while those of all other parts work by the day”</td>
<td>Dunning provides Marx with support for the point that both time wages and piece wages exist simultaneously within the same industry.</td>
</tr>
<tr>
<td>46</td>
<td>Dupont de Nemours, Pierre-Samuel</td>
<td><em>Maximes du docteur Quesnay, ou résumé de ses principes d'économie sociale</em> (1768), in <em>Physiocrates</em>, ed. E. Daire (Paris, 1846)</td>
<td>vol. 2</td>
<td>fn. 1 p. 269 “Later Physiocrats were already describing these avances [capital advances] much more directly as capital: “capital or avances”.”</td>
<td>Dupont provides Marx with support for the point that the Physiocrats transferred the distinction between fixed and circulating capital beyond agricultural capital to other forms of capital.</td>
</tr>
<tr>
<td>47</td>
<td>Engels, Friedrich</td>
<td><em>Die Lage der arbeitenden Klasse in England</em> (Leipzig, 1845)</td>
<td>vol. 1</td>
<td>fn. 9 p. 550 “The slavery in which the bourgeoisie holds the proletariat chained is nowhere more conspicuous than in the factory system. Here ends all freedom in law and in fact. The operative must be in the mill at half past five in the morning; if he comes a couple of minutes too late, he is fined; if he comes ten minutes too late, he is not let in until breakfast is over, and a quarter of the day’s wages is withheld ... He must eat, drink and sleep at command ... The despotic bell calls him from his bed, his breakfast, his dinner...”</td>
<td>Engels provides support for Marx’s discussion of the autocratic time-discipline and regulation in the factory, where the “overseer’s book of penalties replaces the slave-driver’s lash” and punishment of the workers through fines renders more profits for the capitalist.</td>
</tr>
<tr>
<td>48</td>
<td>Engels, Friedrich</td>
<td><em>Die Lage der arbeitenden Klasse in England</em> (Leipzig, 1845)</td>
<td>vol. 1</td>
<td>fn. 5 p. 548 “The wearisome routine of endless drudgery in which the same mechanical process is ever repeated, is like the torture of Sisyphe; the burden of toil, like the rock, is ever falling back upon the worn-out drudge.”</td>
<td>Engels provides support for Marx’s contention that because of the effect of intense labour on the health of the workers, (and hence of the workers’ ability to produce surplus value).</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx’s understanding of time reducing working hours further is inevitable.</td>
</tr>
<tr>
<td>-----</td>
<td>--------------</td>
<td>------------</td>
<td>----------</td>
<td>---------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>49</td>
<td>Engels, Friedrich</td>
<td><em>Umrisse zu einer Kritik der Nationalökonomie</em>, in Deutsch-Französische Jahrbücher (Paris, 1844)</td>
<td>vol. 1 fn. 30 p. 168</td>
<td>“What are we to think of a law which can only assert itself through periodic crises? It is just a natural law which depends on the lack of awareness of the people who undergo it.”</td>
<td>Engels provides support for Marx’s point that the magnitude of value varies continually as socially necessary labour-time acts as a regulative law of nature</td>
</tr>
<tr>
<td>50</td>
<td>Forster, Nathaniel</td>
<td><em>An Enquiry into the Causes of the Present High Price of Provisions</em> (London, 1767)</td>
<td>vol. 1 fn. 5 p. 649</td>
<td>“Nor can I conceive a greater curse upon a body of poeple, than to be thrown upon a spot of land, where the productions for subsistence and food were, in great measure, spontaneous, and the climate required or admitted little care for raiment and covering ... there may be an extreme of the other side. A soil incapable of produce by labour is quite as bad as a soil that produces plentifully without any labour.”</td>
<td>Forster provides Marx with support for the point that a fertile environment resulting in a small period of necessary labour-time is not necessarily suitable for the development of capitalism.</td>
</tr>
<tr>
<td>51</td>
<td>Fullarton, John</td>
<td><em>On the Regulation of Currencies</em> (London, 1845)</td>
<td>vol. 1 fn. 57 p. 239</td>
<td>“On Whitsuntide, 1824”, said Mr Craig before the Commons Committee of 1826, “there was such an immense demand for notes upon the banks of Edinburgh, that by 11 o’clock we had not a note left in our custody. We sent round to all the different banks to borrow, but could not get them, and many of the transactions were adjusted by slips of paper only; yet by three o’clock the whole of the notes were returned into the banks from which they had issued! It was a mere transfer from hand to hand.”</td>
<td>Fullarton provides Marx with an illustration of the perturbations caused by debt settlement days, due to large quantities of money being required on certain days of the year.</td>
</tr>
<tr>
<td>52</td>
<td>Fullarton, John</td>
<td><em>On the Regulation of Currencies</em> (London, 1845)</td>
<td>vol. 3 fn. 90 p. 580</td>
<td>“A demand for capital on loan and a demand for additional circulation are quite distinct things, and not often found associated.”</td>
<td>Marx queries whether the demand for capital on loan is as disassociated with the demand for additional circulation to the extent that Fullarton implies.</td>
</tr>
<tr>
<td>53</td>
<td>Galiani, Ferdinando</td>
<td><em>Della Moneta</em> (1750), in Scrittori classici italiani di economia politica, Parte moderna, ed. Custodi, Vols. 3 and 4, (Milan, 1803)</td>
<td>vol. 1 fn. 2 p. 431</td>
<td>“When the crafts assume a more perfect form, this means nothing other than the discovery of new ways of making a product with few people, or (which is the same thing) in a shorter time, than previously.”</td>
<td>Galiani provides support for Marx’s point that the creation of relative surplus value requires an increase in productivity of labour (in order to shorten socially necessary labour-time)</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>54</td>
<td>Ganilh, Charles</td>
<td><em>Des Systèmes d'économie politique</em>, 2nd edn, Vols 1-2 (Paris, 1821)</td>
<td>vol. 1 fn. 12 p. 278</td>
<td>“The system of commercial credit had to start at the moment when the worker, the prime creator of products, could, thanks to his savings, wait for his wages until the end of the week, the fortnight, the month, the quarter, etc.”</td>
<td>Ganilh provides support for the point that the worker advances use-value of labour/credit to capitalist, as the wage is not paid until after the labour has been performed.</td>
</tr>
<tr>
<td>55</td>
<td>Garnier, Germain</td>
<td><em>Abrégé élémentaire des principes de l'économie politique</em> (Paris, 1796)</td>
<td>vol. 1 fn. 4 p. 694</td>
<td>“Wages can be measured in two ways: either by the duration of the labour, or by its product.”</td>
<td>Garnier provides support in Marx’s discussion involving the distinction between time and piece wages.</td>
</tr>
<tr>
<td>56</td>
<td>Gilbart, James William</td>
<td><em>A Practical Treatise on Banking</em>, 5th ed., (in 2 vols), Vol. 1, (London, 1849)</td>
<td>vol. 3 fn. 63 p. 482</td>
<td>“In the first period, immediately after pressure, money is abundant without speculation; in the second period, money is abundant and speculations abound; in the third period, speculation begins to decline and money is in demand; in the fourth period, money is scarce and a pressure arrives.”</td>
<td>Gilbart provides Marx with support (together with figures on interest rates) for the point that economic cycles have an effect on interest rates, low in periods of prosperity, high in periods of crisis.</td>
</tr>
<tr>
<td>57</td>
<td>Good, William Walter</td>
<td><em>Political, Agricultural and Commercial Fallacies; or, the Prospect of the Nation after Twenty Years' Free Trade</em> (London, 1866)</td>
<td>vol.2 p. 313</td>
<td>“In regard to quicker returns, this term cannot be made to apply to corn crops, as one return only can be made per annum. In respect to stock, we will simply ask, how is the return of two- and three-year-old sheep, and four- and five-year-old oxen to be quickened?”</td>
<td>Good provides Marx with support for the point that the working period cannot be shortened through division of labour when prescribed by specific natural conditions.</td>
</tr>
<tr>
<td>58</td>
<td>Good, William Walter</td>
<td><em>Political, Agricultural and Commercial Fallacies; or, the Prospect of the Nation after Twenty Years' Free Trade</em> (London, 1866)</td>
<td>vol. 2 p. 313</td>
<td>“...the calves which used to come south from the dairying counties for rearing, are now largely sacrificed, at times at a week and ten days old, in the shambles of Birmingham, Manchester, Liverpool, and other large neighbouring towns,... What these little men now say, in reply to recommendations to rear, is ‘We know very well it would pay to rear on milk, but it would first require us to put our hands in our purse, which we cannot do, and then we should have to wait a long time for a return, instead of getting it at once by dairying’”</td>
<td>Good provides an illustration of cattle being sold and slaughtered early for fast returns to support Marx's discussion of the means used to shorten turnover time of capital.</td>
</tr>
<tr>
<td>59</td>
<td>Grégoir, Henri</td>
<td><em>Les Typographes devant le tribunal correctionnel de Bruxelles</em> (Brussels, 1865)</td>
<td>vol. 1 fn. 12 p. 697</td>
<td>“How often have we not seen many more workers taken on, in some workshops, than were needed actually to do the work? Workers are often set on in the expectation of work which is uncertain, or even completely imaginary;”</td>
<td>Grégoir provides Marx with support for the point that piece wages supports the “hours system” and thus results in long hours of work through stimulating competition, and</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>---------------------</td>
<td>------------------------------------------------------</td>
<td>----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>60</td>
<td>Hegel, Georg Wilhelm Friedrich</td>
<td><em>Grunlinien der Philosophie des Rechts</em>, in <em>Werke</em>, Vol. 8, (Berlin, 1840)</td>
<td>vol. 1 fn. 3 p. 272</td>
<td>“Single products of my particular physical and mental skill and of my power to act I can alienate to someone else and I can give him the use of my abilities for a restricted period, because, on the strength of this restriction, my abilities acquire an external relation to the totality and universality of my being. By alienating the whole of my time, as crystalized in my work, and everything I produced, I would be making into another’s property the substance of my being, my universal activity and actuality, my personality.”</td>
<td>Hegel provides Marx with support for the idea that capitalism is distinguished by way labour-power is sold - for a limited period of time - which causes the alienation of the worker.</td>
</tr>
<tr>
<td>61</td>
<td>Hodgskin, Thomas</td>
<td><em>Popular Political Economy. Four Lectures Delivered at the London Mechanics' Institute</em> (London, 1827)</td>
<td>vol. 2 p. 320</td>
<td>“The difference of time” (although he does not differentiate here between working time and production time) “required to complete the products of agriculture, and of other species of labour” is “the main cause of the great dependence of the agriculturalists. They cannot bring their commodities to market in less time than a year. For that whole period they are obliged to borrow of the shoemaker, the tailor, the smith, the wheelwright, and the various other labourers, whose products they cannot dispense with, but which are completed in a few days or weeks. Owing to this natural circumstance, and owing to the more rapid increase of the wealth produced by other labour than that of agriculture, the monopolizers of all the land, though they have also monopolized legislation, have not been able to save themselves and their servants, the farmers, from becoming the most dependent class of men in the community.”</td>
<td>Hodgskin provides support for Marx’s point that in agriculture the working period is of long duration, and there is a great difference between working time and production time.</td>
</tr>
<tr>
<td>62</td>
<td>Holdsworth, W.A.</td>
<td><em>The Law of Landlord and Tenant, with a Copious</em></td>
<td>vol. 2 p. 256</td>
<td>“A tenant from year to year, on the other hand, is not bound to do more than keep the premises wind and water&quot;</td>
<td>Holdsworth provides Marx with support for his distinction between normal deterioration and the rent of land.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time and occasional repairs in his discussion of the reproduction and turnover of capital.</td>
</tr>
<tr>
<td>-----</td>
<td>----------------------</td>
<td>-------------------------------------------------</td>
<td>----------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>63</td>
<td>Jones, Richard</td>
<td><em>Textbook of Lectures on the Political Economy of Nations</em> (Hertford, 1852)</td>
<td>vol. 1 fn. 4 p. 423</td>
<td>“The class of capitalists are from the first partially, and they become ultimately completely, discharged from the necessity of manual labour.”</td>
<td>Jones provides support for Marx’s point that at a certain stage of capitalist development, the capitalist must be able to devote the whole of his time to appropriating and controlling the labour of others. Relates to Marx’s interest in the genesis of the ‘capitalist farmer’.</td>
</tr>
<tr>
<td>64</td>
<td>Jones, Richard</td>
<td><em>Textbook of Lectures on the Political Economy of Nations</em> (Hertford, 1852)</td>
<td>vol. 1 fn. 8 p. 438</td>
<td>“Their” (the capitalists) “interest is that the productive powers of the labourers they employ should be the greatest possible. On promoting that power their attention is fixed and almost exclusively fixed.”</td>
<td>Jones provides support for Marx’s point that capitalism aims to shorten necessary labour time, but only in order to lengthen surplus labour time; it seeks to prolong the length of the working day, and to economize labour-time by increasing its productivity.</td>
</tr>
<tr>
<td>65</td>
<td>Jones, Richard</td>
<td><em>Textbook of Lectures on the Political Economy of Nations</em> (Hertford, 1852)</td>
<td>vol. 1 fn. 4 p. 714</td>
<td>“The wages of labours are advanced by capitalists in the case of less than one-fourth of the labourers of the earth.”</td>
<td>Jones provides support for Marx’s point that variable capital is an historical form of appearance of a labour-fund; in capitalism this takes the form of capital advanced by capitalist in wages.</td>
</tr>
<tr>
<td>66</td>
<td>Kirchhoff, Friedrich</td>
<td><em>Handbuch der landwirtschaftlichen Betriebslehre. Ein Leitfaden für praktische Landwirthe zur zweckmäßigen Einrichtung und Verwaltung der</em></td>
<td>vol. 2 p. 332</td>
<td>“The agriculturalist must therefore also be a speculator to a certain extent, and hold back the sale of his products according to the conditions of the time.... Marketing the products, however, mostly depends on the person, the product itself and the locality. Someone who, besides being skilful and fortunate (!), is endowed with sufficient</td>
<td>Kirchhoff provides Marx with support for his discussion of the factors that affect turnover time, such as the volume of capital required. Raw materials enter the market in shorter or longer materials, encouraging speculation.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>67</td>
<td>Kirchhof, Friedrich</td>
<td><em>Handbuch der landwirtschaftlichen Betriebslehre. Ein Leitfaden fur praktische Landwirthe zur zweckmäpigen Einrichtung und Verwaltung der Landguter</em> (Dessau, 1852)</td>
<td>vol. 2 p. 258</td>
<td>“Where there is a full, though not excessive stock of implements” (of agricultural and other implements and appliances of all kinds), “the general rule is to estimate the annual wear and tear together with the maintenance of the implements, according to the different conditions obtaining, at 15-25 per cent of the original capital.”</td>
<td>Kirchhof provides support for Marx’s point that it is not always possible to distinguish between maintenance and replacement of fixed capital.</td>
</tr>
<tr>
<td>68</td>
<td>Kirchhof, Friedrich</td>
<td><em>Handbuch der landwirtschaftlichen Betriebslehre. Ein Leitfaden fur praktische Landwirthe zur zweckmäpigen Einrichtung und Verwaltung der Landguter</em> (Dessau, 1852)</td>
<td>vol. 2 p. 318</td>
<td>“The number of working days for the three main working periods is assumed to be as follows in the different districts of Germany, with respect to the climatic and other conditions involved: the spring period from mid-March or the beginning of April up to the middle of May, 50-60 days; the summer period from early June to late August, 65-80 days; the autumn period from early September to the end of October or middle or late November, 55-75 days. As far as winter goes, there is simply the work suited to that period, such as haulage of fertilizer, wood, goods for market, building materials, etc.”</td>
<td>Kirchhof provides Marx with support for his distinction between production time and working time in agriculture, the lengths of which vary from year to year.</td>
</tr>
<tr>
<td>69</td>
<td>Kirchhof, Friedrich</td>
<td><em>Handbuch der landwirtschaftlichen Betriebslehre. Ein Leitfaden fur praktische Landwirthe zur</em></td>
<td>vol. 2 p. 321</td>
<td>“The production of timber is fundamentally different from most others in that here natural forces work independently, and the power of men or capital is not required for natural growth... The production process is</td>
<td>Kirchhof provides support for Marx’s point that some industries are unsuited to capitalist production due to a long turnover time.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>70</td>
<td>Kirchhof, Friedrich</td>
<td><em>Handbuch der landwirtschaftlichen Betriebslehre. Ein Leitfaden für praktische Landwirthe zur zweckmässigen Einrichtung und Verwaltung der Landguter</em> (Dessau, 1852)</td>
<td>vol. 2 p. 324</td>
<td>“Moreover, a stock of all these implements or accessories ... is all the more necessary for replacement at any moment, the less opportunity there is of procuring them quickly in the vicinity... Where there are no craftsmen or shops in the vicinity, a greater stock must be kept than where these are to be found in the locality or very close by. If the requisite stocks are procured in greater quantities at once, under otherwise similar conditions, the advantage in cheap purchase is generally obtained, provided that a suitable point of time has been chosen; but of course a greater sum is then withdrawn at once from the current capital, which cannot always be dispensed with in the business.”</td>
<td>Kirchhof provides support for Marx’s point that amount of capital tied up in the form of productive stock affects turnover, and is affected by circumstances relating to the circulation sphere.</td>
</tr>
<tr>
<td>71</td>
<td>Kirchhof, Friedrich</td>
<td><em>Handbuch der landwirtschaftlichen Betriebslehre. Ein Leitfaden für praktische Landwirthe zur zweckmässigen Einrichtung und Verwaltung der Landguter</em> (Dessau, 1852)</td>
<td>vol. 2 p. 325</td>
<td>“The duration of the lease must in any case not be shorter than the time taken to complete the system of crop rotation that is introduced, and hence with the three-field system it is always reckoned in terms of 3, 6, 9, etc. If we assume the three-field system with complete fallow, the field is cultivated only four times in six years, and in the years cultivated, with both winter and summer grain ... The yield of the land thus varies with the years of cultivation it is different in the first half of the cycle” (in the first three years) “and in the second. Even the average yield over the whole cycle is not the same in one case as in the other, since fertility does not just depend on the...”</td>
<td>Kirchhof provides the example of turnover cycles in crop rotation as support for Marx’s point that the overall turnover of fixed capital encompasses a series of turnovers of fixed capital.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>72</td>
<td>Lardner,</td>
<td><em>Railway Economy: A Treatise on the New Art of Transport, its Management,...</em></td>
<td>vol. 2</td>
<td>“Finally, as is the case throughout large-scale industry, moral deterioration also plays its part. After ten years have elapsed, it is generally possible to buy the same quantity of carriages and locomotives for £30,000 as previously cost £40,000. A depreciation of 24 per cent on the market price must thus be reckoned with on this material, even if there is no depreciation in the use-value.”</td>
<td>Lardner provides Marx with an example to support the point that depreciation can be caused by moral deterioration (due to increase productivity, cheaper prices).</td>
</tr>
<tr>
<td>73</td>
<td>Lardner,</td>
<td><em>Railway Economy: A Treatise on the New Art of Transport, its Management,...</em></td>
<td>vol. 2</td>
<td>“In the course of time the stock of engines and vehicles is continually repaired. New wheels are put on at one time, and a new body at another. The different moving parts most subject to wear are gradually renewed; and the engines and vehicles may be conceived even to be subject to such a succession of repairs, that in many of them not a vestige of the original materials remains ... Even in this case, however, the old materials of coaches or engines are more or less worked up into other vehicles or engines, and never totally disappear from the road. The movable capital therefore may be considered to be in a state of continual reproduction; and that which, in the case of the permanent way, must take place altogether at a future epoch, when the entire road will have to be relaid, takes place in the rolling stock gradually from year to year. Its existence is perennial, and it is in a constant state of rejuvenescence.”</td>
<td>Lardner provides Marx with an example to illustrate his point that it is not always possible to distinguish between maintenance, repairs and replacement.</td>
</tr>
<tr>
<td>74</td>
<td>Lardner</td>
<td><em>Railway Economy: A</em></td>
<td>vol. 2</td>
<td>“... that wear and tear which, being due to the slow</td>
<td>Lardner provides Marx with an example to</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Dionysius</td>
<td><em>Treatise on the New Art of Transport, its Management, Propsects, and Relations, Commercial, Financial, and Social. With an Exposition of the Practical Results of the Railways in Operation in the United Kingdom, on the Continent, and in America</em> (London, 1850)</td>
<td>p. 260</td>
<td>operation of time acting upon the more solid structures, produces an effect altogether insensible when observed through short periods, but which, after a long interval of time, such, for example, as centuries, must necessitate the reconstruction of some or all even of the most solid structures. These changes may not unaptly be assimilated to the periodical and secular inequalities which take place in the movements of the great bodies of the universe. The operation of time upon the more massive works of art upon the railway, such as the bridges, tunnels, viaducts, etc., afford examples of what may be called the secular wear and tear. The more rapid and visible deterioration, which is made good by repairs or reconstruction effected at shorter intervals, is analogous to the periodical inequalities. In the annual repairs is included the casual damage which the exterior of the more solid and durable works may from time to time sustain; but, independently of these repairs, age produces its effects even on these structures, and an epoch must arrive, however remote it be, at which they would be reduced to a state which will necessitate their reconstruction. For financial and economic purposes such an epoch is perhaps too remote to render it necessary to bring it into practical calculation, and therefore it need here only be noticed in passing.</td>
<td>illustrate his point that it is not always possible to distinguish between maintenance, repairs and replacement.</td>
</tr>
<tr>
<td>75</td>
<td>Laveleye, Emile de</td>
<td><em>Essai sur l'économie rurale de la Belgique</em> (Brussels, 1863)</td>
<td>vol. 2</td>
<td>p. 321</td>
<td>Laveleye provides Marx with an example of crop rotation in Flanders to support Marx's point that shortening turnover time requires capital outlay.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>76</td>
<td>Lavergne, Léonce de</td>
<td><em>The Rural Economy of England, Scotland, and Ireland. Transl. From the French, with Notes by a Scottish Farmer</em> (Edinburgh, 1855)</td>
<td>vol. 2 p. 315</td>
<td>&quot;The breeder can now send three to market in the same space of time that it formerly took him to prepare one; and if they are not taller, they are broader, rounder, and have a greater development in those parts which give most flesh. Of bone, they have absolutely no greater amount than is necessary to support them, and almost all their weight is pure meat.&quot;</td>
<td>Lavergne provides Marx with an example of selective breeding of the &quot;new Leicester&quot; sheep to support his discussion of the reduction of the working period / reduction of turnover time.</td>
</tr>
<tr>
<td>77</td>
<td>Le Trosne, Guillaume-François</td>
<td><em>De l'intérêt social par rapport à la valeur, à la circulation, à l'industrie, et au commerce intérieur et extérieur</em> (1777), in <em>Physiocrates</em>, ed. E. Daire, Part 2 (Paris, 1846)</td>
<td>vol. 1 fn. 27 p. 215</td>
<td>&quot;It is products which set it&quot; (money) &quot;in motion and make it circulate ... The velocity of its&quot; (money) &quot;motion supplements its quantity. When necessary, it does nothing but slide from hand to hand, without stopping for a moment.&quot;</td>
<td>Le Trosne provides support for the idea that when money is circulated over time through successive transactions, less money is required than for simultaneous sales.</td>
</tr>
<tr>
<td>78</td>
<td>Le Trosne, Guillaume-François</td>
<td><em>De l'intérêt social par rapport à la valeur, à la circulation, à l'industrie, et au commerce intérieur et extérieur</em> (1777), in <em>Physiocrates</em>, ed. E. Daire, Part 2 (Paris, 1846)</td>
<td>vol. 2 fn. 1 p. 269</td>
<td>&quot;As a consequence of the longer or shorter lifespan of the instruments of labour, a nation possesses a considerable stock of riches independent of its yearly reproduction; this represents a capital accumulated over a long period and originally paid for with products, and it is continually maintained and increased.&quot;</td>
<td>Le Trosne provides support for Marx's contention that the Physiocrats transferred the distinction between fixed and circulating capital beyond agricultural capital to other forms of capital.</td>
</tr>
<tr>
<td>79</td>
<td>Liebig, Justus von</td>
<td><em>Über Theorie und Praxis in der Landwirtschaft</em> (Brunswick, 1856)</td>
<td>vol. 1 fn. 10 p. 446</td>
<td>&quot;In agriculture, there is no more important factor than that of time.&quot;</td>
<td>Liebig provides Marx with support for the idea that co-operation increases productivity, as seen when masses are set to work for short periods, when much work is required at a specific point in time, such as harvests.</td>
</tr>
<tr>
<td>80</td>
<td>Liebig,</td>
<td><em>Die Chemie in ihrer</em></td>
<td>vol. 1</td>
<td>&quot;In general and within certain limits, evidence of the</td>
<td>Liebig's example of the diminishing military</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>81</td>
<td>Linguet, Simon-Nicolas-Henri</td>
<td><em>Théorie des lois civiles, ou principes fondamentaux de la société</em>, Vols 1-2 (London, 1767)</td>
<td>vol. 1 fn. 5 p. 342</td>
<td>“If the free worker rests for an instant, the base and petty management which watches over him with wary eyes claims he is stealing from it.”</td>
<td>Linguet provides an illustration of the way in which the capitalist tries to extract the maximum amount of labour-time from the worker.</td>
</tr>
<tr>
<td>82</td>
<td>Malthus, Thomas Robert</td>
<td><em>An Inquiry into the Nature and Progress of Rent</em> (London, 1815)</td>
<td>vol. 1 fn. 7 p.666</td>
<td>“Corn and labour rarely march quite abreast; but there is an obvious limit, beyond which they cannot be separated. With regard to the unusual exertions made by the labouring classes in periods of dearness, which produce the fall of wages noticed in the evidence” (i.e. the evidence presented to the Parliamentary Committees of Inquiry held in 1814 and 1815), “they are most meritorious in the individuals, and certainly favour the growth of capital. But no man of humanity could wish to see them constant and unremitted. They are most admirable as a temporary relief; but if they were constantly in action, effects of a similar kind would result from them, as from the population of a country being pushed to the very extreme limits of its food.”</td>
<td>Marx commends Malthus for arguing against lengthening the working day, (and thus recognising the variable nature of the working day) but errs in explaining the existence of a surplus labour-force of redundant workers, this “over-population”, by appealing to the “eternal laws of nature”.</td>
</tr>
<tr>
<td>83</td>
<td>Malthus</td>
<td><em>An Inquiry into the Nature</em></td>
<td>vol.1</td>
<td>“I confess that I see, with misgiving, the great extension</td>
<td>Malthus provides support for Marx’s point</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx's understanding of time and piece-wages, which become prominent in manufacturing, results in long and more intense working hours.</td>
</tr>
<tr>
<td>-----</td>
<td>--------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Thomas Robert</td>
<td><em>and Progress of Rent</em> (London, 1815)</td>
<td>fn. 15 p. 699</td>
<td>of the practice of piece-wage. Really hard work during 12 or 14 hours of the day, or for any longer time, is too much for any human being.</td>
<td></td>
</tr>
<tr>
<td>84</td>
<td>Mandeville, Bernard de</td>
<td><em>The Fable of the Bees, or Private Vices, Publick Benefits</em> (London, 1714)</td>
<td>vol. 1 fn. 3 p. 765</td>
<td>&quot;It would be easier, where property is well secured, to live without money than without poor; for who would do the work?... As they [the poor] ought to be kept from starving, so they should receive nothing worth saving. If here and there one of the lowest class, by uncommon industry, and pinching his belly, lifts himself above the condition he was brought up in, nobody ought to hinder him; nay, it is undeniably the wisest course for every person in the society, and for every private family to be frugal; but it is the interest of all rich nations, that the greatest part of the poor should almost never be idle, and yet continually spend what they get... Those that get their living by their daily labour... have nothing to stir them up to be serviceable but their wants which it is prudence to relieve, but folly to cure. The only thing then that can render the labouring man industrious, is a moderate quantity of money, for as too little will, according as his temper is, either dispirit him or make him desperate, so too much will make him insolent and lazy... From what has been said, it is manifest, that, in a few nation, where slaves are not allowed of, the surest wealth consists in a multitude of labourious poor; for besides that they are the never failing nursery of fleets and armies, without them there could be no enjoyment, and no product of any country could be valuable. To make the society&quot; (which of course consists of non-workers) &quot;happy and people easier under the meanest circumstances, it is requisite that great numbers of them should be ignorant as well as poor; knowledge both enlarges and multiplies our desires, and the fewer things a man wishes for, the more easily his necessities may be supplied.&quot;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Author cited</th>
<th>Work cited</th>
<th>Location</th>
<th>Citation in Capital</th>
<th>Contribution to Marx's understanding of time</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>Massie, Joseph</td>
<td><em>An Essay on the Governing Causes of the Natural Rate of Interest</em> (London, 1750)</td>
<td>vol.1 fn. 8 p. 650</td>
<td>“There are no two countries which furnish an equal number of the necessaries of life in equal plenty, and with the same quantity of labour. Men's wants increase or diminish with the severity or temperateness of the climate they live in; consequently, the proportion of trade which the inhabitants of different countries are obliged to carry on through necessity cannot be the same, nor is it practicable to ascertain the degree of variation farther than by the degrees of Heat and Cold; from when one may make this general conclusion, that the quantity of labour required for a certain number of people is greatest in cold climates, and least in hot ones; for in the former men not only want more clothes, but the earth more cultivating than in the latter.”</td>
<td>Massie provides support for Marx’s point that the length of necessary labour-time depends on environmental conditions, and thus differs between countries.</td>
</tr>
<tr>
<td>86</td>
<td>Maurer, Georg Ludwig von</td>
<td><em>Einleitung zur Geschichte der Mark, Hof-und Staats-Verfassung und der öffentlichen Gewalt</em> (Munich, 1854)</td>
<td>vol.1 fn. 28 p. 164</td>
<td>“Among the ancient Germans the size of a piece of land was measured according to the labour of a day, hence the acre was called Tagwerk, Tagwanne ... Mannwerk ..., etc.”</td>
<td>Maurer provides Marx with an example from ancient German society to illustrate the point that labour is perceived and measured differently in different economic formations.</td>
</tr>
<tr>
<td>87</td>
<td>Mill, John Stuart</td>
<td><em>Principles of Political Economy</em> (London, 1868)</td>
<td>vol. 1 fn. 16 p. 652</td>
<td>‘Mill says: “The cause of profit is that labour produces more than is required for its support”. So far, nothing but the old story: but Mill, wishing to add something of his own, proceeds as follows: “To vary the form of the theorem; the reason why capital yields a profit, is because food, clothing, materials and tools, last longer than the time which was required to produced them”. Here he confuses the duration of labour-time with the duration of its products. On this view, a baker, whose products last only a day, could never extract the same profit from his workers as a machine manufacturer, whose products last for twenty years or more. Of course, it is very true that if a bird’s nest did not last longer than the time it takes to build, the birds would have to do without nests.”</td>
<td>According to Marx, Mill (and Ricardo) is wrong concerning the origin of surplus-value, confusing the duration of labour-time with duration of products.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>88</td>
<td>Molinari, Gustave de</td>
<td><em>Études économiques</em> (Paris, 1846)</td>
<td>vol. 1 fn. 5 p. 548</td>
<td>&quot;A man becomes exhausted more quickly when he watches over the uniform motion of a mechanism for fifteen hours a day, than when he applies his physical strength throughout the same period of time. This labour of surveillance, which might perhaps serve as useful exercise for the mind, if it did not go on too long, destroys both the mind and the body in the long run through excessive application.&quot;</td>
<td>Molinari provides support for Marx's discussion pointing to the detrimental effects of intense labour on the worker (and hence the workers' inability to produce surplus value), the result of which will be the inevitable reduction of working hours.</td>
</tr>
<tr>
<td>89</td>
<td>Molinari, Gustave de</td>
<td><em>Études économiques</em> (Paris, 1846)</td>
<td>vol. 1 fn. 32 p. 745</td>
<td>&quot;The capitalist robs himself whenever he &quot;lends (!) the instruments of production to the worker&quot;, in other words, whenever he valorizes their value as capital by incorporating labour-power into them instead of eating them up, steam-engines, cotton, railways, manure, horses and all; or, as the vulgar economist childishly conceives, instead of dissipating &quot;their value&quot; in luxuries and other articles of consumption....&quot;The deprivation the capitalist imposes on himself by lending&quot; (this euphemism is used, according to the approved method of vulgar economics, in order to identify the exploited wage-labourer with the industrial capitalist himself, who borrows money from other capitalists!), &quot;his instruments of production to the worker, instead of devoting their value to his own consumption, by transforming them into objects of utility or pleasure&quot;.</td>
<td>Molinari expresses the view, which Marx refutes, that profits are created by the &quot;abstinence&quot; or self-deprivation of the capitalist.</td>
</tr>
<tr>
<td>90</td>
<td>Mommsen, Theodor</td>
<td><em>Römische Geschichte</em>, 2nd edn, Vols 1-3 (Berlin, 1856-7)</td>
<td>vol. 1 fn. 6 p. 275</td>
<td>&quot;In ancient Rome, therefore, the <em>vilicus</em>, as the overseer of the agricultural slaves, received &quot;more meagre fare than working slaves, because his work was lighter.&quot;&quot;</td>
<td>Mommsen's illustration from ancient Rome provides support for the point that the value of labour-power is variable, determined by necessary labour-time to maintain the worker.</td>
</tr>
<tr>
<td>91</td>
<td>Müller, Adam Heinrich</td>
<td><em>Die Elemente der Staatskunst</em>, Part 2 (Berlin, 1809)</td>
<td>vol. 2 fn. 1 p. 264</td>
<td>&quot;Urban production is tied to a cycle of days, rural production to one of years&quot;</td>
<td>Müller provides Marx with support for the notion that cycles of turnover are interrelated, crises provide basis for a new cycle of investment.</td>
</tr>
<tr>
<td>92</td>
<td>Müller,</td>
<td><em>Die Elemente der</em></td>
<td>vol. 3</td>
<td>&quot;In determining the price of things, time is unimportant;</td>
<td>Müller does not see how productive time and</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>------------------</td>
<td>------------------------------------------------</td>
<td>----------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>93</td>
<td>Mun, Thomas</td>
<td><em>England's Treasure by Forraign Trade</em> (London, 1669)</td>
<td>vol. 1</td>
<td>fn. 5</td>
<td>p. 649</td>
</tr>
</tbody>
</table>
|     |                  | in *Oeuvres de M. Necker. Vol. 2* (Paris, 1789) | fn. 17   | p. 735                                                                                | "The first" (natural wealth) "as it is most noble and advantageous, so doth it make the people careless, proud, and given to all excesses; whereas the second [wealth acquired through labour] enforceth vigilance, literature, arts and policy".  
Mun provides Marx with support for the point that a fertile environment / small necessary labour-time is not necessarily suited to the development of capitalism. |
| 94  | Necker, Jacques  | *De l'administration des finances de la France* (1784) | vol. 2   | p. 235                                                                                | "It is in this sense [impressed with the sight of accumulated luxury items] that Necker speaks of the "articles of pomp and magnificence" whose "accumulation has increased with time", and which "the laws of property have assembled together in the hands of a single class of society".  
Necker provides Marx with support for the point that accumulation of commodities over time is caused through over-production or a bottleneck in circulation. |
| 95  | Newman, Samuel   | *Elements of Political Economy* (Andover, New York, 1835) | vol. 3   | fn. 38                                                                                | p. 391                                                                           |
|     | Philips          |                                                | fn. 38   | p. 391                                                                                | "The Economic Cycle ... [is] the whole course of production, from the time that outlays are made till returns are received. In agriculture, seedtime is its commencement, and harvesting its ending."  
Newman fails to mention the form of the returns of original outlay - whether they are in commodities or money: |
| 96  | Newman, Samuel   | *Elements of Political Economy* (Andover, New York, 1835) | vol. 3   | fn. 38                                                                                | p. 391                                                                           |
|     | Philips          |                                                | fn. 38   | p. 391                                                                                | "In the existing economical arrangements of society, the very act, which is performed by the merchant, of standing between the producer and the consumer, advancing to the former capital and receives products in return, and then handing over these products to the latter, receiving back capital in return, is a transaction which both facilitates the economical processes of the community, and adds value to the products in relation to which it is performed". Thus producer and consumer each save time and money by the intervention of the merchant. This service requires an advance of capital and labour and has to be paid for "since it adds value to products, for the same products in the  
Newman overlooks the fact that the circulation of commodities is a cost to capitalist. The intervention of the middleman does not increase the exchange-value of the product. |
<table>
<thead>
<tr>
<th>No.</th>
<th>Author cited</th>
<th>Work cited</th>
<th>Location</th>
<th>Citation in <em>Capital</em></th>
<th>Contribution to Marx’s understanding of time</th>
</tr>
</thead>
<tbody>
<tr>
<td>97</td>
<td>Niebuhr, Barthold</td>
<td><em>Romische Geschichte</em> (Berlin, 1853)</td>
<td>vol. 1</td>
<td>fn. 8  p. 345 &quot;It is evident that monuments like those of the Etruscans, which astound us even in their ruins, presuppose lords and vassals in small (!) states.&quot;</td>
<td>Niebuhr provides support for Marx’s contention that the extraction of surplus labour-time is evident in other economic formations.</td>
</tr>
<tr>
<td>98</td>
<td>Petty, William</td>
<td><em>A Treatise of Taxes and Contributions</em> (London, 1667)</td>
<td>vol. 1</td>
<td>fn. 12 p. 186 &quot;If a man can bring to London an ounce of silver out of the Earth of Peru, in the same time that he can produce a bushel of corn, then the one is the natural price of the other: now, if by reason of new or more easie mines a man can procure two ounces of silver as easily as he formerly did one, the corn will be as cheap at ten shillings the bushel as it was before at five shillings, <em>caeteris paribus.</em>&quot;</td>
<td>Petty provides support for Marx’s point that money, “like every other commodity, cannot express the magnitude of its value except relatively in other commodities. This value is determined by the labour-time required for its production, and is expressed in the quantity of any other commodity in which the same amount of labour-time is congealed”.</td>
</tr>
<tr>
<td>99</td>
<td>Petty, William</td>
<td><em>The Political Anatomy of Ireland ... To Which is Added Verbum Sapienti</em> (London, 1691)</td>
<td>vol. 1</td>
<td>fn. 58 p. 240 &quot;To the question “if there were occasion to raise 40 millions p.a., whether the same 6 millions (gold) ... would suffice for such revolutions and circulations thereof, as trade requires”, Petty replies in his usual masterly manner, “I answer yes: for the expense of being 40 millions, if the revolutions were in such short circles, viz, weekly, as happens among poor artisans and labourers, who receive and pay every Saturday, then 40/52 parts of 1 million of money would answer these ends; but if the circles be quarterly, according to our custom of paying rent, and gathering taxes, then 10 million were requisite. Wherefore, supposing payments in general, to be of a mixed circle between one week and 13, then add 10 millions to 40/52, the half of which will be 5 1/2, so as if we have 5 1/2 millions we have enough.”</td>
<td>Petty provides Marx with support for the idea that the length of the periods of the periodic payments is in direct proportion to the quantity of money (as the means of payment) that is required</td>
</tr>
<tr>
<td>100</td>
<td>Petty, William</td>
<td><em>The Political Anatomy of Ireland ... To Which is Added Verbum Sapienti</em> (London, 1691)</td>
<td>vol. 1</td>
<td>fn. 87 p. 384 &quot;Labouring men” (the meaning then was ‘agricultural labourers’) “work ten hours <em>per diem,</em> and make twenty meals per week, viz., three a day for working days, and</td>
<td>Petty provides Marx with an illustration demonstrating that, prior to the eighteenth century, working hours were reasonably</td>
</tr>
</tbody>
</table>

320
<table>
<thead>
<tr>
<th>No.</th>
<th>Author cited</th>
<th>Work cited</th>
<th>Location</th>
<th>Citation in <em>Capital</em></th>
<th>Contribution to Marx’s understanding of time favourable to the worker.</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>Postlethwayt, Malachy</td>
<td><em>Great Britain's Commercial Interest Explained and Improved</em>, 2nd edn, 2 vols (London, 1759)</td>
<td>vol. 1 fn. 90 p. 387</td>
<td>“We cannot put an end to these few observations, without noticing that trite remark in the mouth of too many; that if the industrious poor can obtain enough to maintain themselves in five days, they will not work the whole six. Whence they infer the necessity of even the necessaries of life being made dear by taxes, or any other means, to compel the working artisan and manufacturer to labour the whole six days in the week, without ceasing.... Were they obliged to toil the year round, the whole six days in the week, in a repetition of the same work, might it not blunt their ingenuity, and render them stupid instead of alert and dexterous....”</td>
<td>This excerpt from the work of an eighteenth century “defender” of the workers provides an illustration of arguments made against lengthening working hours, made to counter the arguments of those such as the anonymous author of <em>An Essay on Trade and Commerce</em>.</td>
</tr>
<tr>
<td>102</td>
<td>Proudhon, Pierre-Joseph</td>
<td><em>Système des contradictions économiques, ou philosophie de la misère</em>, Vol 1, (Paris, 1846)</td>
<td>vol. 1 fn. 9 p. 650</td>
<td>“All labour must” (apparently this is also part of the “rights and duties of the citizen”) “leave a surplus”.</td>
<td>Marx disputes Proudhon’s claim, arguing that the production of surplus value is not inevitable; particular historical conditions are required.</td>
</tr>
<tr>
<td>103</td>
<td>Quesnay, François</td>
<td><em>Analyse du tableau économique</em> (1766) in <em>Physiocrates</em>, Part 1, (Paris, 1846)</td>
<td>vol. 2 fn. 1 p. 268</td>
<td>“The annual advances consist of the expenditures annually made for the work of cultivation; these advances must be distinguished from the original advances which form the fund for the commencement of cultivation.”</td>
<td>Quesnay provides support for Marx’s point that the Physiocrats correctly distinguished between fixed and circulating capital, by distinguishing between the way in which value was transferred to the product.</td>
</tr>
<tr>
<td>104</td>
<td>Quesnay, François</td>
<td><em>Analyse du tableau économique</em> (1766) in <em>Physiocrates</em>, Part 1, (Paris, 1846)</td>
<td>vol. 2 p. 416</td>
<td>“If you take a look at the <em>Tableau économique</em>, you will see that the productive class gives out the money with which the other classes come to buy its products, and that these return this money to it the following year in coming back to make the same purchases again ... The sole cycle that you see here is therefore that of expenditure followed by reproduction, and reproduction followed by</td>
<td>Quesnay provides support for Marx’s point that the Physiocrats were the first to stress the “circuit” of money - return of money to its point of departure - as an essential form of the circulation of capital. This movement is distinct from the “circulation” of money that expresses its constant removal from its...</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>105</td>
<td>Ramsay, George</td>
<td><em>An Essay on the Distribution of Wealth</em> (Edinburgh, 1836)</td>
<td>vol. 1 fn. 1 p. 647</td>
<td>&quot;The very existence of the master-capitalists, as a distinct class, is dependent on the productiveness of industry.&quot;</td>
<td>Ramsay provides support for Marx's point that labour must have attained a certain level of productivity to allow free time in which to produce a surplus; this surplus labour is a precondition for the existence of a ruling class.</td>
</tr>
<tr>
<td>106</td>
<td>Ramsay, George</td>
<td><em>An Essay on the Distribution of Wealth</em> (Edinburgh, 1836)</td>
<td>vol. 3 fn. 38 p. 391</td>
<td>&quot;So that he can classify commercial capital as production capital, Ramsay confuses it with the transport industry and calls commerce &quot;the transport of commodities from one place to another.&quot;&quot;</td>
<td>Ramsay overlooks fact that circulation of commodities is a cost to capitalist.</td>
</tr>
<tr>
<td>107</td>
<td>Ravenstone, Piercy</td>
<td><em>Thoughts on the Funding System, and Its Effects</em> (London, 1824)</td>
<td>vol. 1 fn. 1 p. 647</td>
<td>&quot;If each man's labour were but enough to produce his own food, there could be no property&quot;.</td>
<td>Ravenstone provides support for Marx's point that labour must have attained a certain level of productivity to allow free time in which to produce a surplus; this surplus labour is a precondition for the existence of a ruling class.</td>
</tr>
<tr>
<td>108</td>
<td>Regnault, Élias</td>
<td><em>Histoire politique et sociale des principautés danubiennes</em> (Paris, 1855)</td>
<td>vol. 1 fn. 12 p. 348</td>
<td>&quot;According to the <em>Règlement organique</em>, as this code of the <em>corvée</em> is called, every Wallachian peasant owes to the so-called landlord, besides a mass of payments in kind, which are specified in detail, the following: (1) 12 days of labour in general, (2) 1 day of field labour, (3) 1 day of wood-carrying. Taken together, this is 14 days in the year. 'However, with deep insight into political economy, the working day is not taken in its ordinary sense, but as the working day necessary to the production of an average daily product; and that average daily product is determined in such a sly manner than even a Cyclops would be unable to finish the job within 24 hours. Therefore the <em>Règlement</em> itself declares, dryly and with true Russian irony, that by 12 working days one must...&quot;</td>
<td>Marx uses the example of the Danubian <em>corvée</em> system to illustrate the distinction, made clearly visible, between necessary and surplus labour-time; the surplus labour is performed on the boyars' estate, the necessary labour on the peasant's own field. The boyar's drive for surplus labour is appears as a &quot;direct hunt for days of *corvée.&quot;&quot;</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>109</td>
<td>Ricardo, David</td>
<td><em>On Protection to Agriculture</em>, 4th edn, (London, 1822)</td>
<td>vol. 1 fn. 31 p. 169</td>
<td><em>'Even Ricardo has his Robinson Crusoe stories...Ricardo makes his primitive fisherman and primitive hunter into owners of commodities who immediately exchange their fish and game in proportion to the labour-time which is materialized in these exchange values. On this occasion he slips into the anachronism of allowing the primitive fisherman and hunter to calculate the value of the their implements in accordance with the annuity tables used on the London stock exchange in 1817. Apart from bourgeois society, the “parallelograms of Mr Owen” seem to have been the only form of society Ricardo was associated with'</em></td>
<td>According to Marx, Ricardo overlooks the historically-specific character of labour as measure of value.</td>
</tr>
<tr>
<td>110</td>
<td>Ricardo, David</td>
<td><em>On the Principles of Political Economy and Taxation</em>, 3rd edn (London, 1821)</td>
<td>vol. 1 fn. 12 p. 294</td>
<td><em>'Not only the labour applied immediately to commodities affects their value, but the labour also which is bestowed on the implements, tools, and buildings with which such labour is assisted'</em></td>
<td>Ricardo provides Marx with support for the idea that the value of a commodity also includes the labour-time expended in producing the means of production.</td>
</tr>
<tr>
<td>111</td>
<td>Ricardo, David</td>
<td><em>On the Principles of Political Economy and Taxation</em>, 3rd edn (London, 1821)</td>
<td>vol. 1 fn. 33 p. 173</td>
<td><em>The insufficiency of Ricardo’s analysis of the magnitude of value - and his analysis is by far the best - will appear from the third and fourth books of this work. As regards value in general, classical political economy in fact nowhere distinguishes explicitly and with a clear awareness between labour as it appears in the value of a product, and the same labour as it appears in the product’s use-value. Of course the distinction is made in practice, since labour is treated sometimes from its quantitative aspect, and at other times qualitatively. But it does not occur to the economists that a purely quantitative distinction between the kinds of labour presupposes their</em></td>
<td>Marx argues that while the classical economists have analysed value and its magnitude, and have “uncovered the content concealed within these forms”, it has not asked why. Ricardo fails to distinguish between exchange-value and use-value.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>--------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>112</td>
<td>Ricardo, David</td>
<td><em>On the Principles of Political Economy and Taxation</em>, 3rd edn (London, 1821)</td>
<td>vol. 2 fn. 3 p. 300</td>
<td>&quot;The food and clothing consumed by the labourer, the buildings in which he works, the implements with which his labour is assisted, are all of a perishable nature. There is however a vast difference in the time for which these different capitals will endure: a steam-engine will last longer than a ship, a ship than the clothing of the labourer, and the clothing of the labourer longer than the food which he consumes.&quot;</td>
<td>Ricardo misunderstands the distinction between fixed and circulating capital. &quot;The same things and the same classes of things thus appear now as means of consumption, now as means of labour&quot;.</td>
</tr>
<tr>
<td>113</td>
<td>Ricardo, David</td>
<td><em>On the Principles of Political Economy and Taxation</em>, 3rd edn (London, 1821)</td>
<td>vol. 2 fn. 4 p. 301</td>
<td>&quot;According as capital is rapidly perishable, and requires to be frequently reproduced, or is of slow consumption, it is classed under the heads of circulating, or of fixed capital.&quot;</td>
<td>Ricardo misunderstands distinction between fixed and circulating capital. &quot;Ricardo, like Barton, constantly confuses the ratio between variable and constant capital with the ratio between circulating and fixed capital&quot;.</td>
</tr>
<tr>
<td>114</td>
<td>Ricardo, David</td>
<td><em>On the Principles of Political Economy and Taxation</em>, 3rd edn (London, 1821)</td>
<td>vol. 2 p. 304</td>
<td>&quot;It is also to be observed that the circulating capital may circulate, or be returned to its employer, in very unequal times. The wheat bought by a farmer to sow is comparatively a fixed capital to the wheat purchased by a baker to make into loaves. One leaves it in the ground, and can obtain no return for a year; the other can get it</td>
<td>Ricardo misunderstands distinction between fixed and circulating capital. &quot;Ricardo further equates the distinctions that arise in the turnover for reasons other than the distinction between fixed and circulating capital, with the latter distinction itself.&quot;</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>---------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>115</td>
<td>Roy, Henry</td>
<td>The Theory of the Exchanges, 1844 (London, 1864)</td>
<td>vol. 1 fn. 52</td>
<td>p. 237</td>
<td>The following shows how such occasions are exploited by the &quot;friends of commerce.&quot; On one occasion (1839) an old grocer banked (in the city) in his private room raised the kid of the desk he sat over, and displayed to a visitor falls of corks, saying there were 600,000 of them. They were held to make money that night, and would all be left after three o'clock on the same day.</td>
</tr>
<tr>
<td>116</td>
<td>Say, Jean-Baptiste</td>
<td>Traité d'économie politique, 3rd edn. (Paris, 1817)</td>
<td>vol. 1 fn. 24</td>
<td>p. 209</td>
<td>&quot;Products can only be bought with products.&quot;</td>
</tr>
<tr>
<td>117</td>
<td>Schaw, Jakob</td>
<td>Die Erde, Die Pflanzen und der Mensch, 2nd edn. (Leipzig, 1834)</td>
<td>vol. 1 fn. 10</td>
<td>p. 651</td>
<td>&quot;When the inhabitants have convinced themselves, by boring a hole in the tree, that the pine is thoroughly dry, the trunk is cut down and divided into several pieces, the pitch is extracted, mixed with water and filtered: it is then quite fit for use as soot. One tree commonly yields 500-600 lb. There then people go into the forest and cut beard for themselves, just as we cut firewood.&quot;</td>
</tr>
<tr>
<td>118</td>
<td>Scopes</td>
<td>The Elements of Political Economy, 5th edn. (Gottingen, 1777)</td>
<td>vol. 1 fn. 31</td>
<td>p. 343</td>
<td>&quot;No one will sow his wheat, for instance, and allow it to remain a twelvemonth in the ground, or leave his wine and vegetables under the same condition, without additional value. To be sure, he expects to acquire their equivalence at once...&quot;</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------</td>
</tr>
<tr>
<td>119</td>
<td>Scrope</td>
<td><em>The Elements of Political Economy</em>, in Alonzo Potter (ed.) Political Economy: Its Objects, Uses, and Principles: Considered with Reference to the Condition of the American People. With a Summary, for the Use of Students. (New York, 1841)</td>
<td>2</td>
<td>“In some trades the whole capital embarked is turned or circulated several times within the year. In others a part is turned oftener than once a year, another part less often. It is the average period which his entire capital takes in passing through his hands, or making one revolution, from which a capitalist must calculate his profits.”</td>
<td>Scrope supports Marx’s point that overall turnover is calculated by the average turnover of component parts.</td>
</tr>
<tr>
<td>120</td>
<td>Scrope</td>
<td><em>The Elements of Political Economy</em>, in Alonzo Potter (ed.) Political Economy: Its Objects, Uses, and Principles: Considered with Reference to the Condition of the American People. With a Summary, for the Use of Students. (New York, 1841)</td>
<td>vol. 2 p.266</td>
<td>“The capital laid out by a manufacturer, farmer, or tradesman in the payment of his labourer’s wages, circulates most rapidly, being turned perhaps once a week (if his men are paid weekly), by the weekly receipts on his bills or sages. That invested in his materials and stock in hand circulates less quickly, being turned perhaps twice, perhaps four times in the year, according to the time consumed between his purchases of the one and sales of the other, supposing him to buy and sell on equal credits. The capital invested in his implements and machinery circulates still more slowly, being turned, that is, consumed and renewed, on the average, perhaps but once in five or ten years; though there are many tools that are worn out in one set of operations. The capital which is embarked in buildings, as mills, shops, warehouses, barns, in roads, irrigation, etc., may appear scarcely to circulate at all. But, in truth, these things are, to the full, as much as those we have enumerated, consumed in contributing to production, and must be reproduced in order to enable the producer to continue his operations: with this only difference, that they are consumed and reproduced by slower degrees than the rest ... and the capital invested in them may be turned perhaps every twenty or fifty years.”</td>
<td>Scrope confuses the “difference in the flow of particular parts of the fluid capital brought about by payment periods and credit conditions, with turnovers arising from the nature of the capital”. The quantity of money required is in direct proportion to the length of the payment periods.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>----------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>121</td>
<td>Senior, Nassau William</td>
<td><em>Letters on the Factory Act, as it Affects the Cotton Manufacture. To which are appended, a letter to Mr Senior from Leonard Horner, and minutes of a conversation between Mr Edmund Ashworth, Mr Thompson and Mr Senior</em> (London, 1837)</td>
<td>vol. 1 fn. 10 p. 334</td>
<td>&quot;Under the present law, no mill in which persons under 18 years of age are employed ... can be worked more than 11 1/2 hours a day, that is, 12 hours for 5 days in the week, and 9 on Saturday. Now the following analysis (1) will show that in a mill so worked, the whole net profit is derived from the last hour... On the other hand, if the hours of working were reduced by one hour per day (prices remaining the same), the net profit would be destroyed - if they were reduced by one hour and a half, even the gross profit would be destroyed.&quot;</td>
<td>Marx disputes Senior’s famous “last hour” claim as a fallacious argument that supports the drive toward a longer working day. Senior is the manufacturers’ “prize-fighter” against the Factory Act of 1833 and the Ten Hours’ Agitation, “which aimed to go beyond it.”</td>
</tr>
<tr>
<td>122</td>
<td>Senior, Nassau William</td>
<td><em>Letters on the Factory Act, as it Affects the Cotton Manufacture. To which are appended, a letter to Mr Senior from Leonard Horner, and minutes of a conversation between Mr Edmund Ashworth, Mr Thompson and Mr Senior</em> (London, 1837)</td>
<td>vol. 1 fn. 70 p. 530</td>
<td>“The great proportion of fixed to circulating capital ... makes long hours of work desirable”. With the increased use of machinery, etc., “the motives to long hours of work will become greater, as the only means by which a large proportion of fixed capital can be made profitable.”</td>
<td>Senior provides support for Marx’s point that machinery encourages long working hours; by lengthening the working day, the scale of production can be expanded without further capital outlay in machinery and buildings.</td>
</tr>
<tr>
<td>123</td>
<td>Senior, Nassau William</td>
<td><em>Principes fondamentaux de l'économie politique, tr by J. Arrivabene</em> (Paris, 1836)</td>
<td>vol. 1 fn. 29 p. 744</td>
<td>“I substitute”, he [Senior] proudly says, “for the word capital, considered as an instrument of production, the word abstinence.” An unparalleled example of the ‘discoveries’ of vulgar economics! It replaces an economic category with a sycophantic phrase, and that is all. “When the savage”, says Senior, “makes bows, he exercises an industry, but he does not practise abstinence”. This is supposed to explain how and why, in the earlier states of society, the implements of labour were constructed “without the abstinence” of the capitalist. “The more society progresses, the more abstinence is demanded”, namely from those whose business it is to appropriate the industry and the products of others.</td>
<td>Marx disputes Senior’s claim that profits are created by the “abstinence” of the capitalist.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------</td>
<td>------------------------------------------------</td>
<td>----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>124</td>
<td>Senior, Nassau Williams</td>
<td>Three Lectures on the Rate of Wages (London, 1830)</td>
<td>vol. 1 fn. 13 p. 689</td>
<td>“If one man performs the work of two ... the rate of profits will generally be raised ... in consequence of the additional supply of labour having diminished its price”.</td>
<td>Senior provides support for Marx’s point that long hours reduces the price of labour.</td>
</tr>
<tr>
<td>125</td>
<td>Senior, Nassau Williams</td>
<td>Three Lectures on the Rate of Wages (London, 1830)</td>
<td>vol. 1 fn. 4 p. 685</td>
<td>“The labourer is principally interested in the amount of wages”, that is to say, the worker is principally interested in what he receives, the nominal sum of his wages, not in what he gives, the quantity of labour”.</td>
<td>Senior provides support for Marx’s point that the price of labour can be lowered without a change in the nominal wage.</td>
</tr>
<tr>
<td>126</td>
<td>Sismonde, Jean-Charles- Léonard Simonde de</td>
<td>Nouveau Principes d’économie politique, 2 vols. (Paris, 1819)</td>
<td>vol. 1 fn. 27 p. 801</td>
<td>“Thanks to the advance of industry and science”, says Sismonde, “every worker can produce every day much more than he needs to consume. But at the same time, while his labour produces wealth, that wealth would, were he called on to consume it himself, make him less fit for labour”. According to him, “men” (ie non-workers) “would probably prefer to do without all artistic perfection, and all the enjoyments that industry procures for us, if it were necessary that all should buy them by constant toil like that of the worker ... Exertion today is separated from its recompense; it is not the same man that first works, and then reposes; but it is because the one works that the other rests ... The indefinite multiplication of the productive powers of labour can have no other result than the increase of luxury and enjoyment of the part of the idle rich”.</td>
<td>Sismonde provides support for Marx’s point that working population creates leisure time for capitalist due to increase in technological advance.</td>
</tr>
<tr>
<td>127</td>
<td>Sismonde, Jean-Charles- Léonard Simonde de</td>
<td>Nouveau Principes d’économie politique, 2 vols. (Paris, 1819)</td>
<td>vol. 1 fn. 7 p. 732</td>
<td>“Several successive acts of exchange have only made the last represent the first.”</td>
<td>Sismonde provides support for Marx’s point that the sale of labour is the starting point of constantly renewed process of periodic repetition.</td>
</tr>
<tr>
<td>128</td>
<td>Sismonde, Etudes sur l’économie</td>
<td>vol. 1</td>
<td>“Economies in the cost of production can only be</td>
<td>Sismonde provides support for Marx’s point</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>129</td>
<td>Skarbek, Frédéric</td>
<td>Théorie des richesses sociales, 2nd edn, Vol. 1 (Paris, 1839)</td>
<td>vol. 1 fn. 8 p. 444</td>
<td>“It should be noted further than this partial division of labour can occur even when the workers are engaged in the same task. Masons, for example, engaged in passing bricks from hand to hand to a higher stage of the building, are all performing the same task, and yet there does exist amongst them a sort of division of labour. This consists in the fact that each of them passes the brick to a given space, and, taken together, they make it arrive much more quickly at the required spot than they would do if each of them carried his brick separately to the upper storey.”</td>
<td>Skarbek provides support for Marx’s idea that co-operation can increase productivity by performing different operations simultaneously</td>
</tr>
<tr>
<td>130</td>
<td>Smith, Adam</td>
<td>An Inquiry into the Nature and Causes of the Wealth of Nations, 2 vols (London, 1776)</td>
<td>vol. 1 fn. 16 p. 137</td>
<td>“Equal quantities of labour, at all times and places, must have the same value for the labourer. In his ordinary state on health, strength and activity; in the ordinary degree of his skill and dexterity, he must always lay down the same portion of his ease, his liberty and his happiness.”</td>
<td>Marx points out Smith’s ambiguity: On some occasions, Smith sees value of commodity determined by labour-time, (where equal quantities of labour always have the same value), while at other times he sees the value of a commodity as being equal to value of labour</td>
</tr>
<tr>
<td>131</td>
<td>Smith, Adam</td>
<td>An Inquiry into the Nature and Causes of the Wealth of Nations, 2 vols (London, 1776)</td>
<td>vol. 1 fn. 9 p. 681</td>
<td>‘Adam Smith only incidentally alludes to the variation of the working day, when he is dealing with piece-wages’.</td>
<td>Marx suggests Smith failed to account for variability in the working day, which led him to assert that the value of labour is constant.</td>
</tr>
<tr>
<td>132</td>
<td>Smith, Adam</td>
<td>An Inquiry into the Nature and Causes of the Wealth of Nations, 2 vols (London, 1776)</td>
<td>vol. 1 fn. 5 p. 714</td>
<td>“Though the manufacturer” (i.e. the worker engaged in manufacture) “has his wages advanced to him by his master, he in reality costs him no expense, the value of those wages being generally restored, together with a profit, in the improved value of the subject upon which his labour is bestowed.”</td>
<td>Smith provides support for Marx’s point that variable capital is an historical form of appearance of a labour-fund; in capitalism this takes the form of capital advanced by capitalist in wages.</td>
</tr>
<tr>
<td>133</td>
<td>Stewart,</td>
<td>Lectures on Political</td>
<td>vol. 1</td>
<td>“The employer will be always on the stretch to economise</td>
<td>Stewart supports Marx’s point that capitalism</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Dugald</td>
<td><em>Economy (1800)</em>, in: <em>The Collected Works</em>, ed. Sir. W. Hamilton, Vol. 8 (Edinburgh, 1855)</td>
<td>fn. 8 p. 438</td>
<td>“time and labour.”</td>
<td>aims to shorten necessary labour time, but only in order to lengthen surplus labour time; it seeks to prolong the length of the working day, and to economize labour-time by increasing its productivity.</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>Stewart, Dugald</td>
<td><em>Lectures on Political Economy (1800)</em>, in: <em>The Collected Works</em>, ed. Sir. W. Hamilton, Vol. 8 (Edinburgh, 1855)</td>
<td>vol. 1 fn. 11 p. 464</td>
<td>“It” (the division of labour) “produces also an economy of time by separating the work into its different branches, all of which may be carried on into execution at the same moment... By carrying on all the different processes at once, which an individual must have executed separately, it becomes possible to produce a multitude of pins completely finished in the same time as a single pin might have been either cut or pointed.”</td>
<td>Stewart provides Marx with support for the point that division of labour in manufacturing, which entails simultaneous processes (previously successive in time), increases productivity within a given time.</td>
</tr>
<tr>
<td>135</td>
<td>Storch, Henri</td>
<td><em>Cours d’économie politique</em>, Vols 1-3 (St Petersburg, 1815)</td>
<td>vol. 1 fn. 13 p. 278</td>
<td>“The worker lends his industry”, says Storch. But he shily adds to this the statement that the worker “risks nothing”, except “the loss of his wages... The worker does not hand over anything of a material nature”.</td>
<td>Marx uses Storch to point out the consequences of the worker advancing labour in lieu of wages - the risk of losing wages if the capitalist goes bankrupt.</td>
</tr>
<tr>
<td>136</td>
<td>Storch, Henri</td>
<td><em>Cours d’économie politique</em>, Vols 1-3 (St Petersburg, 1815)</td>
<td>vol. 1 fn. 26 p. 801</td>
<td>“The progress of social wealth”, says Storch, “begets this useful classes of society ... which performs the most wearisome, the vilest, the most disgusting functions, which, in a word, takes on its shoulders all that is disagreeable and servile in life, and procures thus for other classes leisure, serenity of mind and conventional” (c’est bon, ça) “dignity of character”. Storch then asks himself what the actual advantage is of this capitalist civilization, with its misery and its degradation of the masses, as compared with barbarism. He can find only one answer: security!”</td>
<td>Storch provides support for Marx’s point that the working population creates leisure time for capitalist; the capitalist’s time is gained at expense of the worker’s time.</td>
</tr>
<tr>
<td>137</td>
<td>Tooke, Thomas</td>
<td><em>A History of Prices, and of the State of the Circulation, from 1839 to 1847 Inclusive</em> (London, 1848)</td>
<td>vol. 3 fn. 64 p. 483</td>
<td>“Tooke explains this [fluctuating interest rates] “by the accumulation of surplus-capital necessarily accompanying the scarcity of profitable employment for it in previous years, by the release of hoards, and by the revival of”</td>
<td>Tooke provides Marx with support for the point that economic cycles have an effect on interest rates, low in periods of prosperity, high in periods of crisis; the category of</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time interest “lies outside the movement of industrial capital itself.”</td>
</tr>
<tr>
<td>-----</td>
<td>--------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------</td>
<td>-----------------------------------------------------------------</td>
</tr>
<tr>
<td>138</td>
<td>Tooke, Thomas</td>
<td><em>An Inquiry into the Currency Principle; the Connection of the Currency with prices, and the Expediency of a Separation of Issue from Banking</em>, 2nd. edn, (London, 1844)</td>
<td>vol. 3 p. 527</td>
<td>“Credit, in its most simple expression, is the confidence which, well, or ill-founded, leads a person to entrust another with a certain amount of capital, in money, or in goods computed at a value in money agreed upon, and in each case payable at the expiration of a fixed term. In the case where the capital is lent in money, that is whether in banknotes, or in a cash credit, or in an order upon a correspondent, an addition for the use of the capital of so much upon every £100 is made to the amount to be repaid. In the case of goods the value of which is agreed in terms of money, constituting a sale, the sum stipulated to be repaid includes a consideration for the use of the capital and for the risk, till the expiration of the period fixed for payment. Written obligations of payment at fixed dates mostly accompany these credits, and the obligations or promissory notes after date being transferable, form the means by which the lenders, if they have occasion for the use of their capital, in the shape whether of money or goods, before the expiration of the terms of the bills they hold, are mostly enabled to borrow or to buy on lower terms, by having their own credit strengthened by the names on the bills in addition to their own.”</td>
<td>Tooke provides support for Marx’s discussion on the function and nature of credit.</td>
</tr>
<tr>
<td>139</td>
<td>Turgot, Anne-</td>
<td><em>Réflexions sur la formation et la distribution des richesses</em></td>
<td>vol. 2 fn. 1</td>
<td>“Turgot already uses the term “capital” for the avances more regularly, and more closely identifies the avances of</td>
<td>Turgot provides support for Marx’s point that the Physiocrats transferred the distinction</td>
</tr>
</tbody>
</table>

331
<table>
<thead>
<tr>
<th>No.</th>
<th>Author cited</th>
<th>Work cited</th>
<th>Location</th>
<th>Citation in Capital</th>
<th>Contribution to Marx's understanding of time between fixed and circulating capital beyond agricultural production to other forms of capital.</th>
</tr>
</thead>
<tbody>
<tr>
<td>140</td>
<td>Turgot, Anne-Robert-Jacques, de L'Aulne</td>
<td>Réflexions sur la formation et la distribution des richesses (1769-70), in Oeuvres, ed. E. Daire, Vol. 1 (Paris, 1844)</td>
<td>vol. 2 p. 416</td>
<td>“It is this continuous advance and return of capitals that must be called the circulation of money, this useful and fertile circulation which animates all the works of society, sustaining the movement and life of the body politic in a way that may well be compared with the circulation of blood in the animal body.”</td>
<td>Turgot provides support for Marx's point that the return of money to its point of departure is essential to circulation. This “circuit” of money must be distinguished from the “circulation” of money “which expresses its constant removal from its starting-point through a series of hands.”</td>
</tr>
<tr>
<td>141</td>
<td>Ure, Andrew</td>
<td>The Philosophy of Manufactures (London, 1835)</td>
<td>vol. 1 fn. 11 p. 337</td>
<td>“Dr. Andrew Ure showed that if children and young persons under 18 years of age, instead of being kept the full 12 hours in the warm and pure moral atmosphere of the factory, are turned out an hour sooner into the heartless and frivolous outer world, they will be deprived, owing to idleness and vice, of all hope of salvation for their souls.”</td>
<td>Marx uses this moral argument from Ure (which, like Senior's “last-hour” is “all-bosh”) to colour the picture he paints of the capitalist drive to prolong the working day.</td>
</tr>
<tr>
<td>142</td>
<td>Ure, Andrew</td>
<td>The Philosophy of Manufactures (London, 1835)</td>
<td>vol. 1 fn. 5 p. 694</td>
<td>“So much weight of cotton is delivered to him” (the spinner), “and he has to return by a certain time, in lieu of it, a given weight of twist or yarn, of a certain degree of fineness, and he is paid so much per pound for all that he so returns. If his work is defective in quality, the penalty falls on him, if less in quantity than the minimum fixed for a given time, he is dismissed and an able operative procured.”</td>
<td>Ure provides support for Marx's point that piece wages provide an exact measure of the intensity of labour, so that an average degree of efficiency can be established.</td>
</tr>
<tr>
<td>143</td>
<td>Ure, Andrew</td>
<td>The Philosophy of Manufactures (London, 1835)</td>
<td>vol. 1 fn. 17 p. 699</td>
<td>“The productive power of his spinning-machine is accurately measured, and the rate of pay for work done with it decreases with, though not as, the increase of its productive power.”</td>
<td>Ure provides support for Marx's point that piece wages are altered by changes in productivity.</td>
</tr>
<tr>
<td>144</td>
<td>Vanderlint, Jacob</td>
<td>Money Answers All Things (London, 1734)</td>
<td>vol. 1 fn. 93 p. 388</td>
<td>'Jacob Vanderlint declared as early as 1734 that the secret of the capitalist's complaints about the laziness of the working people was simply this, that they claimed six days' labour instead of four for the same wages.'</td>
<td>Vanderlint provides support for Marx's point that in the eighteenth century, workers could survive on the wages of a four day week.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>145</td>
<td>Wade, John</td>
<td><em>History of the Middle and Working Classes</em>, 3rd edn. (London, 1835)</td>
<td>vol. 1 fn. 86 p. 383</td>
<td>&quot;From the statement above&quot; (i.e. with regard to the Stgate of 1496) &quot;it appears that in 1496 the diet was considered equivalent to one-third of the income of an artificer and one-half the income of a labourer, which indicates a greater degree of independence among the working-classes than prevails at present; for the board, both of labourers and artificers, would now be reckoned at a much higher proportion of their wages&quot;.</td>
<td>Wade provides Marx with support for the idea that in the eighteenth century, workers enjoyed a comparatively reasonable standard of living.</td>
</tr>
<tr>
<td>146</td>
<td>Wakefield, Edward Gibbon</td>
<td><em>A View of the Art of Colonization, with Present Reference to the British Empire</em> (London, 1849)</td>
<td>vol. 1 fn. 4 p. 443</td>
<td>&quot;There are numerous operations of so simple a kind as not to admit a division into parts, which cannot be performed without the co-operation of many pairs of hands. I would instance the lifting of a large tree on to a wain ... everything, in short, which cannot be done unless a great many pairs of hands help each other in the same undivided employment and at the same time.&quot;</td>
<td>Wakefield provides Marx with support for the point that co-operation heightens the mechanical force of labour, and increases productivity.</td>
</tr>
<tr>
<td>147</td>
<td>Wakefield, Edward Gibbon</td>
<td><em>England and America</em>, Vols 1-2 (London, 1833)</td>
<td>vol. 1 fn. 5 p. 729</td>
<td>&quot;Labour creates capital before capital employs labour.&quot;</td>
<td>Wakefield provides Marx with support for the point that capital is created out of capital - labour creates capital to employ additional labour. In short, labour is the source of capital.</td>
</tr>
<tr>
<td>148</td>
<td>West, Sir Edward</td>
<td><em>Price of Corn and Wages of Labour</em> (London, 1826)</td>
<td>vol. 1 fn. 2 p. 683</td>
<td>&quot;The price of labour is the sum paid for a given quantity of labour.&quot;</td>
<td>West provides support for Marx's point that time-wages differ as length of working day varies.</td>
</tr>
<tr>
<td>149</td>
<td>West, Sir Edward</td>
<td><em>Price of Corn and Wages of Labour</em> (London, 1826)</td>
<td>vol. 1 fn. 3 p. 684</td>
<td>&quot;The wages of labour depend upon the price of labour and the quantity of labour performed ... An increase in the wages of labour does not necessarily imply an enhancement of the price of labour. From fuller employment, and greater exertions, the wages of labour may be considerably increased, while the price of labour may continue the same.&quot;</td>
<td>West provides support for Marx's point that wages do not necessarily reflect the price of labour.</td>
</tr>
</tbody>
</table>
| 150 | Williams, Richard Price | 'On the Maintenance and Renewal of Permanent Way', in *Minutes of Proceedings of the Institution of Civil* | vol. 2 p. 249 | "The cost of maintaining the road does not depend so much upon the wear and tear of the traffic passing over it, as upon the quality of wood, iron, bricks, and mortar exposed to the atmosphere. A month of severe winter | Williams provides Marx with an example of the way in which climatic factors play an important part in deterioration and thus the length of turnover of fixed capital. "The
<table>
<thead>
<tr>
<th>No.</th>
<th>Author cited</th>
<th>Work cited</th>
<th>Location</th>
<th>Citation in <em>Capital</em></th>
<th>Contribution to Marx’s understanding of time</th>
</tr>
</thead>
<tbody>
<tr>
<td>151</td>
<td><em>Children’s Employment Commission Report</em> (1863)</td>
<td><em>Children’s Employment Commission Report</em> (1863)</td>
<td>vol. 1 fn. 7 p. 687</td>
<td>‘As for instance in paper-staining until the recent introduction into this trade of the Factory Act. “We work on with no stoppage for meals, so that they day’s work of 10 1/2 hours is finished by 4.30 p.m. and all after that is over-time, and we seldom leave off working before 6 p.m., so that we are really working overtime the whole year round.”’</td>
<td>Supports Marx’s discussion of overwork - workers are forced to work over-time to earn enough to survive.</td>
</tr>
<tr>
<td>152</td>
<td><em>Children’s Employment Commission Report</em> (1863)</td>
<td><em>Children’s Employment Commission Report</em> (1863)</td>
<td>vol. 1 fn. 9 p. 696</td>
<td>‘This system’ (piece-work) “so advantageous to the employer ... tends directly to encourage the young potter greatly to over-work himself during the four or five years during which he is employed in the piece-work system, but at low wage ... This is ... another great cause to which the bad conditions of the potters are to be attributed.”</td>
<td>Supports Marx’s point that piece wages encourages a lengthening of the working day.</td>
</tr>
<tr>
<td>153</td>
<td><em>Children’s Employment Commission Report</em> (1864)</td>
<td><em>Children’s Employment Commission Report</em> (1864)</td>
<td>vol. 1 fn. 6 p. 687</td>
<td>‘The rate of payment for overtime’ (in lace-making) “is so small... that it stands in painful contrast to the amount of injury produced to the health and stamina of the workpeople ... The small amount thus earned is also often obliged to be spent in extra nourishment.”</td>
<td>Supports Marx’s discussion of overwork - workers are forced to work over-time to earn enough to survive.</td>
</tr>
<tr>
<td>154</td>
<td><em>Children’s Employment Commission Report</em> (1864)</td>
<td><em>Children’s Employment Commission Report</em> (1864)</td>
<td>vol. 1 fn. 14 p. 279</td>
<td>“It is a common practice with the coal masters to pay once a month, and advance cash to their workmen at the end of each intermediate week. The cash is given in the shop” (i.e. the tomy-shop which belongs to the master); “the men take it on one side and lay it out on the other.”</td>
<td>Marx uses this example to illustrate the negative consequences on the worker who “advances credit” to the capitalist by receiving delayed wages.</td>
</tr>
<tr>
<td>155</td>
<td><em>Children’s Employment Commission Report</em> (1864)</td>
<td><em>Children’s Employment Commission Report</em> (1864)</td>
<td>vol. 1 fn. 3 p. 606</td>
<td>‘Similarly, at the present time, in those branches of lace manufacture not yet subject to the Factory Act, it is maintained that meal-times cannot be regular owing to the different periods required by the various kinds of lace for drying, periods which vary from three minutes to up to an hour and more. To this the Children’s Employment</td>
<td>Report supports Marx’s point that natural barriers and difficulties to the regulation of hours were found to be surmountable.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Commissioners answer: &quot;...Some of the principal manufacturers in the trade urged that, in consequence of the nature of the materials used, and their various processes, they would be unable, without serious loss, to stop for meal-times at any given moment. But it was seen from the evidence that, by due care and previous arrangement, the apprehended difficulty could be got over...&quot;</td>
<td>Supports Marx’s point that the low price of labour encourages a lengthening of the working day</td>
</tr>
<tr>
<td>156</td>
<td><em>Children’s Employment Commission Report (1864)</em></td>
<td>vol. 1 fn. 12 p. 688</td>
<td>The hand nail-makers of England, for example have to work 15 hours a day, because of the low price of their labour, in order to hammer out an extremely wretched weekly wage. “It’s a great many hours in a day (6 am to 8 pm), and he has to work hard all the time to get 11d. or 1s., and there is the wear of the tools, the cost of firing, and something for waster iron to go out of this, which takes off altogether 2 1/2 d or 3d.”</td>
<td>Supports Marx’s point that irregular habits of workers can obstruct the regulation of working hours. “This is especially the case where piece-wages predominate, and where loss of time in one part of the day or week can be made good by subsequent overtime or by night-work, a process which brutalizes the adult worker and ruins his wife and children.”</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td><em>Children’s Employment Commission Report (1864)</em></td>
<td>vol. 1 fn. 6 p. 607</td>
<td>With blast-furnaces, for instance: “work towards the end of the week being generally much increased in duration, in consequence of the habit of the men of idling on Mondays and occasionally during a part of the whole of Tuesday’s also” ... “The little masters generally have very irregular hours. They lose two or three days, and then work all night to make it up” ... “The want of regularity in coming to work, encouraged by the possibility and practice of making up for this by working longer hours” ... “In Birmingham ... an enormous amount of time is lost ... idling part of the time and slaving the rest.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>158</td>
<td><em>Children’s Employment Commission Report (1865)</em></td>
<td>vol. 1 fn. 7 p. 608</td>
<td>The extension of the railway system throughout the country has tended very much to encourage giving short notice. Purchasers now come up from Glasgow, Manchester, and Edinburgh once every fortnight or so to the wholesale city warehouses which we supply, and give small orders requiring immediate execution, instead of</td>
<td>Provides support for Marx’s discussions concerning the detrimental effects of irregular working hours.</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>159</td>
<td><em>Children's Employment Commision Report (1865)</em></td>
<td>vol. 1 fn. 8 p. 609</td>
<td>“Employers ... avail themselves of the habitual irregularity [in work at home] when any extra work is wanted at a push, so that work goes on till 11 and 12 p.m., or 2 a.m., or as the usual phrase is, ‘all hours’” and in places where “the stench is enough to knock you down; you go to the door, perhaps, and open it, but shudder to go further.”</td>
<td>Provides support for Marx’s discussions concerning the detrimental effects of irregular working hours.</td>
<td></td>
</tr>
<tr>
<td>160</td>
<td><em>Children's Employment Commision Report (1865)</em></td>
<td>vol. 1 fn. 9 p. 609</td>
<td>“They are curious men”, said one of the witnesses, a shoemaker, speaking of the masters, “and think it does a boy no harm to work too hard for half the year, if he is nearly idle for the other half.”</td>
<td>Provides support for Marx’s discussions concerning the detrimental effects of irregular working hours.</td>
<td></td>
</tr>
<tr>
<td>161</td>
<td><em>Daily Telegraph (17 January 1860)</em></td>
<td>vol. 1 fn. 32 p. 353</td>
<td>“Mr. Broughton Charlton, county magistrate [of Nottingham] ... declared ... that there was an amount of privation and suffering among that portion of the population connected with the lace trade, unknown in other parts of the kingdom, indeed, in the civilised world ... Children of nine or ten years are dragged from their squalid beds at two, three, or four o'clock in the morning and compelled to work for a bare subsistence until ten, eleven, or twelve at night, their limbs wearing away, their frames dwindling, their faces whitening, and their humanity absolutely sinking into a stone-like torpor, utterly horrible to contemplate ... The system, as the Rev. Montagu Valpy describes it, is one of unmitigated slavery, socially, physically, morally, and spiritually ... What can be thought of a town which holds a public meeting to...”</td>
<td>This is one example of many that Marx cites in order illustrate the terrible suffering of sectors of the working class.</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>----------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>162</td>
<td><em>Economist</em> (1866)</td>
<td>vol. 2 pp.329-330</td>
<td>“The crisis of 1847 enabled the banking and mercantile community of that time to reduce the India and China usance” (time allowed for the currency of bills of exchange between there and Europe) “from ten months’ date to six months’ sight, and the lapse of twenty years with all the accelerations of speed and establishment of telegraphs ... all the accelerations of speed and establishment of telegraphs ... renders necessary ... a further reduction” - from six months’ sight to four months’ date as a first step to four months’ sight. “The voyage of a sailing vessel via the Cape from Calcutta to London is on the average under 90 days. An usance of four months’ sight would be equal to a currency of say 150 days. The present usance of six months’ sight is equal to a currency of say 210 days”. On the other hand: “The Brazilian usance remains at two and three months’ sight, bills from Antwerp are drawn” (on London) “at three months’ date, and even Manchester and Bradford draw upon London at three months and longer dates. By tacit consent, a fair opportunity is afforded to the merchant of realizing the proceeds of his merchandise, not indeed before, but within a reasonable time of, [when] the bills drawn against it fall due. In this view, the present usance for Indian bills cannot be considered excessive. Indian produce for the most part being sold in London with three months’ prompt, and allowing for loss of time in effecting sales, cannot be realized much within five</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This source provides support for Marx’s point that distant markets gave impetus to development of credit. The relative length of the journey affects circulation time - the amount of time productive capital is tied up. “The variations in turnover brought about in this way form one of the material bases for different periods of credit, just as overseas trade in general, in Venice and Genoa, for instance, formed one of the original sources of the credit system in its true sense”.

---

337
<table>
<thead>
<tr>
<th>No.</th>
<th>Author cited</th>
<th>Work cited</th>
<th>Location</th>
<th>Citation in <em>Capital</em></th>
<th>Contribution to Marx’s understanding of time</th>
</tr>
</thead>
<tbody>
<tr>
<td>163</td>
<td></td>
<td><em>Public Health Report (1863)</em></td>
<td>vol. 1 fn. 10 p. 688</td>
<td>“The work which obtains the scanty pittance of food, is, for the most part, excessively prolonged.”</td>
<td>Supports Marx’s point that low wages results in long hours of work.</td>
</tr>
<tr>
<td>164</td>
<td></td>
<td><em>Public Health Report (1864)</em></td>
<td>vol. 1 fn. 14 p. 278</td>
<td>’The undersellers, almost without exception, sell bread adulterated with alum, soap, pearl ash, chalk, Derbyshire stone-dust and other ‘similar agreeable, nourishing and wholesome ingredients ...’ Tremendereere states that as they are not paid their wages before the end of the week, they in their turn are unable “to pay for the bread consumed by their families during the week, before the end of the week ... wages are paid fortnightly and even monthly; with such long intervals between the payments, the agricultural labourer is obliged to buy on credit.”’</td>
<td>Marx uses this example to illustrate the negative consequences on the worker who “advances credit” to the capitalist by receiving delayed wages.</td>
</tr>
<tr>
<td>165</td>
<td></td>
<td><em>Report of the Committee on the Baking Trade in Ireland for 1861 (1861)</em></td>
<td>vol. 1 fn. 53 p. 362</td>
<td>’The Committee of the English government ... “believe that any constant work beyond 12 hours a day encroaches on the domestic and private life of the working man, and so leads to disastrous moral results, interfering with each man’s home, and the discharge of his family duties as a son, a brother, a husband, a father. That work beyond 12 hours has a tendency to undermine the health of the working man, and so leads to premature old age and death, to the great injury of families of working men, thus deprived of the care and support of the head of the family when most required.”’</td>
<td>Provides support for Marx’s discussion of the negative consequences of overwork.</td>
</tr>
<tr>
<td>166</td>
<td></td>
<td><em>Report on Bank Acts (1857)</em></td>
<td>vol. 3 fn. 11 p. 655</td>
<td>Footnote consists of table showing average number of days for which a banknote remains in circulation.</td>
<td>Table provides support for Marx’s point that the velocity of circulation affects the amount of banknotes in circulation.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>---------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>167</td>
<td>Reports by H.M. secretaries of embassy and legation, on the manufactures, commerce, &amp;c, of the countries in which they reside (1865)</td>
<td>vol. 2 p 318</td>
<td>“In some of the northern districts, field labour is only possible during from 130 to 150 days in the course of the year, and it may be imagined what a loss Russia would sustain, if out of 65,000,000 of her European population, 50,000,000 remained unoccupied during six or eight months of winter, when all agricultural labour is at a standstill.” Besides the 200,000 peasants who work in Russia’s 10,5000 factories, particular cottage industries have grown up everywhere in the villages ... These cottage industries, incidentally, are already being pressed more and more into the service of capitalist production; for example, merchants supply the weavers with warps and weft, either directly, or by intermediate agents.”</td>
<td>Report provides example supporting Marx’s point in an unfavorable climate, the working period is short; this large distinction between production period and working period is the basis for the emergence of cottage industries.</td>
<td></td>
</tr>
<tr>
<td>168</td>
<td>Reports of the Inspectors of Factories (1841)</td>
<td>vol. 1 fn. 98 p. 389</td>
<td>“It is certainly much to be regretted that any class of persons should toil 12 hours a day, which, including the time for their meals and for going to and returning from their work, amounts, in fact, to 14 of the 24 hours ... Without entering into the question of health, no one will hesitate, I think, to admit that, in a moral point of view, so entire an absorption of the time of the working classes, without intermission, from the early age of 13, and in trades not subject to restriction, much younger, must be extremely prejudicial, and is an evil greatly to be deprecated ... For the sake, therefore, of public morals, of bringing up an orderly population, and of giving the great body of the people a reasonable enjoyment of life, it is much to be desired that in all trades some portion of every working day should be reserved for rest and leisure”</td>
<td>Provides support for Marx’s discussion of the negative consequences of overwork.</td>
<td></td>
</tr>
<tr>
<td>169</td>
<td>Reports of the Inspectors of Factories (1841)</td>
<td>vol. 1 fn. 31 p. 403</td>
<td>“During the 15 hours of the factory day, capital dragged in the worker now for 30 minutes, nor for an hour, and then pushed him out again, to drag him into the factory and thrust him out afresh, hounding him hither and thither, in scattered shreds of time, without ever letting go until the full 10 hours of work was done. As on the stage, the same</td>
<td>Drawing on the Report, Marx cites the “shifting system” as a way of getting around loopholes in the Factory Act to continue to extend the working day.</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>--------------</td>
<td>-----------------------------</td>
<td>----------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>170</td>
<td></td>
<td><em>Reports of the Inspectors of Factories</em> (1844)</td>
<td>vol. 1 fn. 78, 79, 81 p. 535</td>
<td>persons had to appear in turn in the different scenes of the different acts. And just as an actor is committed to the stage throughout the whole course of the play, so the workers were committed to the factory for the whole 15 hours, without reckoning the time taken in coming and going. Thus the hours of rest were turned into hours of enforced idleness, which drove the young men to the taverns and the young girls to the brothels. Every new trick the capitalist hit upon from day to day for keeping his machinery going for 12 or 15 hours without increasing the number of the personnel meant that the worker had to gulp down his meals in a different fragment of time.</td>
<td><em>Reports</em> cite arguments that suggest that while the regulation of the working day increased efficiency in non-machine industries, it would not in machine industries - a suggestion that Marx refutes - controverted by evidence.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>--------------</td>
<td>------------</td>
<td>----------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>171</td>
<td></td>
<td>Reports of the Inspectors of Factories (1848)</td>
<td>vol. 1 fn. 13 p. 688</td>
<td>April 1844, from 12 to 11 hours a day. The result of about a year on this system was that 'the same amount of product for the same cost was received, and the workpeople as a whole earned in 11 hours as much wages as they did before in 12'... in the weaving department... &quot;Here we have more produced in 11 hours than previously in 12, entirely as a result of steadier application to the work and a more economical use of time on the part of the workers. While they got the same wages and gained one hour of spare time, the capitalist got the same amount produced and saved the cost of coal, gas and other such items for one hour. Similar equally successful experiments were carried out in the mills of Messrs Horrocks and Jacson.&quot;</td>
<td>The Reports support Marx’s point that competition between workers induces longer hours and lowers wages.</td>
</tr>
<tr>
<td>172</td>
<td></td>
<td>Reports of the Inspectors of Factories (1848)</td>
<td>vol. 1 fn. 5 p. 663</td>
<td>&quot;For instance, if a factory worker refuses to work the long hours which are customary, &quot;he would very shortly be replaced by somebody who would work any length of time, and thus be thrown out of employment&quot;.&quot;</td>
<td>Supports Marx’s point that a shortening of the working day increases the productivity and the intensity of labour&quot;</td>
</tr>
<tr>
<td>173</td>
<td></td>
<td>Reports of the Inspectors of Factories (1848)</td>
<td>vol. 3 p. 171</td>
<td>&quot;There are compensating circumstances ... which the working of the Ten Hours' Act has brought to light.&quot;</td>
<td>Supports Marx’s point that the extension of the working day requires little additional fixed capital.</td>
</tr>
<tr>
<td>174</td>
<td></td>
<td>Reports of the Inspectors of Factories (1852)</td>
<td>vol. 3 p. 194</td>
<td>&quot;The expense of working a factory 10 hours almost equals that of working it 12.&quot;</td>
<td>Supports Marx’s point that the restriction of the length of the working day gave impetus to the increased speed of machines.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>----------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>175</td>
<td></td>
<td><em>Reports of the Inspectors of Factories (1852)</em></td>
<td>vol. 3 p. 191</td>
<td>&quot;In his report for October 1852, Leonard Horner quotes a letter from the famous engineer James Nasmyth of Patricroft, the inventor of the steam-hammer, which says among other things: ‘... The public are little aware of the vast increase in driving power which has been obtained by such changes of system and improvements’ (of steam engines) ‘as I allude to. The engine power of this district’ (Lancashire) ‘lay under the incubus of timid and prejudiced traditions for nearly forty years, but now we are happily emancipated. During the last fifteen year, but more especially in the course of the last four years’ (since 1848) ‘some very important changes have taken place in the system of working condensing steam-engines... The result... has been to realize a much greater amount of duty or work performed by the identical engines, and that again at a very considerable reduction of the expenditure of fuel... For a great many years after the introduction of steam-power into the mills and manufactories of the above-named districts, the velocity of which it was considered proper to work condensing steam-engines was about 220 feet per minutes of the piston; that is to say, an engine with a 5-feet stroke was restricted by ‘rule’ to make 22 revolutions of the crankshaft per minute. Beyond this speed it was not considered prudent or desirable to work the engine; and as all the mill gearing... were made suitable to this 220 feet per minute speed of piston, this slow and absurdly restricted velocity ruled the working of such engines for many years. However, at length, either through fortunate ignorance of the ‘rule’, or by better reasons on the part of some bold innovator, a greater speed was tried, and as the result was highly favourable, others followed the same example, by, as it is terms, ‘letting the engine away’, namely, by so modifying the proportions of the first motion wheels of the mill gearing...’</td>
<td>This excerpt from the inventor of the steam hammer supports Marx’s point that the restriction of the length of the working day gave impetus to the increased speed of machines.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>176</td>
<td>Reports of the Inspectors of Factories (1853)</td>
<td>vol. 1 fn. 14 p. 278</td>
<td>&quot;The block-printers of Paisley and Kilmarnock&quot; (Western Scotland) &quot;enforced in 1933 by a strike the reduction of the period of payment from monthly to fortnightly&quot;</td>
<td>Marx uses this example to illustrate the negative consequences on the worker who &quot;advances credit&quot; to the capitalist by receiving delayed wages.</td>
<td></td>
</tr>
<tr>
<td>177</td>
<td>Reports of the Inspectors of Factories (1855)</td>
<td>vol. 1 fn. 4 p. 662</td>
<td>&quot;All things being equal, the English manufacturer can turn out a considerably larger amount of work in a given time than a foreign manufacturer, so much as to counterbalance the difference of the working days, between 60 hours a week here, and 72 or 80 elsewhere.&quot;</td>
<td>Supports Marx's point that the intensity of labour is different in different countries. &quot;The more intensive working day of one nation would be represented by a greater sum of money than the less intensive day of another nation.&quot;</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>Reports of the Inspectors of Factories (1855)</td>
<td>vol. 1 fn. 11 p. 337</td>
<td>&quot;In the year 1848, after the passing of the Ten Hours Bill, the masters of a number of flax-spinning mills, which lie scattered over the countryside on the borders of Dorset and Somerset, foisted a petition against the bill onto a few of their workers. One of the clauses of this petition is as follows: &quot;Your petitioners, as parents, conceive that an additional hour of leisure will tend more to demoralise the children than otherwise, believing that idleness is the parent of vice&quot;. On this the factory report of 31 October 1848 says: &quot;The atmosphere of the flax mills, in which the children of these virtuous and tender parents work, is so</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Reports provide Marx with examples that mitigate against arguments for a longer working day as put forward by people such as Senior and Ure.*
<table>
<thead>
<tr>
<th>No.</th>
<th>Author cited</th>
<th>Work cited</th>
<th>Location</th>
<th>Citation in <em>Capital</em></th>
<th>Contribution to Marx’s understanding of time</th>
</tr>
</thead>
<tbody>
<tr>
<td>179</td>
<td></td>
<td><em>Reports of the Inspectors of Factories (1856)</em></td>
<td>vol. 1 &lt;br&gt;fns 25-29 &lt;br&gt;p. 352</td>
<td>Loaded with dust and fibre from the raw material that it is exceptionally unpleasant to stand even 10 minutes in the spinning rooms for you are unable to do so without the most painful sensation, owing to the eyes, the ears, the nostrils, and the mouth being immediately filled by the clouds of flax dust from which there is no escape. The labour itself, owing to the feverish haste of the machinery, demands unceasing application of skill and movement, under the control of a watchfulness that never tires, and it seems somewhat hard, to let parents apply the term “idling” to their own children, who, after allowing for meal-times, are fettered for 10 whole hours to such an occupation, in such an atmosphere... These children work longer than the labourers in the neighbouring villages... Such cruel talk about “idleness and vice” ought to be branded as the purest cant, and the most shameless hypocrisy... That portion of the public, who, about twelve years ago, were struck by the assurance with which, under the sanction of high authority, it was publicly and most earnestly proclaimed, that the whole net profit of the manufacturer flows from the labour of the last hour, and that, therefore, the reduction of the working day by one hour would destroy his net profit, that portion of the public, we say, will hardly believe its eyes, when it now finds that the original discovery of the virtues of “the last hour” has since been so far improved as to include morals as well as profit; so that, if the duration of the labour of children is reduced to a full 10 hours, their morals together with the net profits of their employers, will vanish, both being dependent on this last, fateful hour.”</td>
<td>Drawing on the <em>Report</em>, Marx illustrates the attempts by capital to continue to extract the maximum working day, despite the legislation to limit it.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>180</td>
<td>Reports of the Inspectors of Factories (1858)</td>
<td>vol. 1 fn. 18 p. 350</td>
<td><em>An additional hour a day gained by small instalments before 6 a.m., after 6 p.m., and at the beginning and end of the times nominally fixed for meals, is nearly equivalent to working 13 months in the year.</em></td>
<td>One of many citations from the <em>Reports</em> illustrating the attempts by capital to fraudulently extract the maximum working day.</td>
<td></td>
</tr>
<tr>
<td>181</td>
<td>Reports of the Inspectors of Factories (1858)</td>
<td>vol. 1 fn. 91 p. 540</td>
<td><em>The great improvements made in machines of every kind have raised their productive power very much. Without any doubt, the shortening of the hours of labour ... gave the impulse to these improvements. The latter, combined with the more intense strain on the workman, have had the effect that at least as much is produced in the shortened working day</em> (shortened by two hours or one-sixth) <em>as was previously produced during the longer one.</em></td>
<td>This example supports Marx's point that the speeding up of machinery increase productivity of labour; shortening hours of labour gave impetus to increasing speed and productivity of machines.</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>Reports of the Inspectors of Factories (1858)</td>
<td>vol. 3 p. 217</td>
<td><em>And as in past experience I have seen spindles and looms multiply both in numbers and speed in an incredibly short space of time, and our exports of wool to France increase in an almost equal ratio, and as both at home and abroad the age of sheep seems to be getting less and less, owing</em></td>
<td>The <em>Reports</em> provide support for Marx's discussion of the incompatibility of a rational agriculture with capitalism.</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>183</td>
<td>Reports of the Inspectors of Factories (1858)</td>
<td>vol. 3 fn. 11 p. 170</td>
<td>“Since in all factories there is a very large amount of fixed capital in buildings and machinery, the greater the number of hours that machinery can be kept at work the greater will be the return.”</td>
<td>Supports Marx’s point that the extension of the working day requires little additional fixed capital</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>Reports of the Inspectors of Factories (1858)</td>
<td>vol. 1 fn. 16 p. 699</td>
<td>“Those who are paid by piece-work ... constitute probably four-fifths of the workers in the factories.”</td>
<td>Supports Marx’s point that piece-wages become dominant in industries under the Factory Act, “because there capital can increase the yield of the working day only by intensifying labour”.</td>
<td></td>
</tr>
<tr>
<td>185</td>
<td>Reports of the Inspectors of Factories (1859)</td>
<td>vol. 1 fn. 68 p. 416</td>
<td>“A still greater boon is the distinction at last made clear between the worker’s own time and his master’s. The worker knows now that which he sells is ended, and when his own begins; and by possessing a sure foreknowledge of this, is enabled to pre-arrange his own minutes for his own purposes”... “By making them masters of their own time”... (the Factory Acts) “have given them a moral energy which is directing them to eventual possession of political power.”</td>
<td>Provides support for the Marx’s stress on the importance of the workers control over their time.</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>Reports of the Inspectors of Factories (1860)</td>
<td>vol. 1 fn. 11 p. 688</td>
<td>“It is a generally known fact that the longer the working day in a branch of industry, the lower the wages are. The factory inspector Alexander Redgrave illustrates this by a comparative review of the twenty years from 1839 to</td>
<td>Supports Marx’s point that low wages corresponds with longer working hours.</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>----------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>187</td>
<td><em>Reports of the Inspectors of Factories (1860)</em></td>
<td>vol. 1 fan. 3 p. 693</td>
<td>&quot;A factory employs 400 people, the half of which work by the piece, and have a direct interest in working longer hours. The other 200 are paid by the day, work equally long with the others, and get no more money for their overtime. The work of these 200 people for half an hour a day is equal to one person's work for 50 hours, or 5/6 of one person's labour in a week, and is a positive gain to the employer.&quot; &quot;Overworking to a very considerable extent still prevails; and, in most instances, with that security against detection and punishment which the law itself affords. I have in many former reports shown ... the injury to work-people who are not employed on piece-work, but receive weekly wages.&quot;</td>
<td>Supports Marx's point that time wages and piece-wages often co-exist, and encourage exploitation.</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td><em>Reports of the Inspectors of Factories (1861)</em></td>
<td>vol. 3 p. 226</td>
<td>&quot;In Ashton, Stalybridge, Mossley, Oldham etc., the reduction of the time has been fully one-third, and the hours are lessening every week. Simultaneously with this diminution of time there is also a reduction of wages in many departments.&quot;</td>
<td>Supports Marx's point in his discussion of cyclical fluctuations that as working hours decrease, wages decrease.</td>
<td></td>
</tr>
<tr>
<td>189</td>
<td><em>Reports of the Inspectors of Factories (1862)</em></td>
<td>vol. 1 fn. 86 p. 538</td>
<td>&quot;The speed of the spindles has increased upon thrusters 500, and upon mules 1,000 revolutions a minute, i.e. the speed of the throttle spindle, which in 1839 was 4,500 times a minute, is now&quot; (1862) &quot;5,000; and of the mule spindle, that was 5,000, is now 6,000 times a minute, amounting in the former case to one-tenth; and in the second case to one-fifth additional increase.&quot;</td>
<td>This example supports Marx's point that the speeding up of machinery increase productivity of labour, thus producing relative surplus value</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td><em>Reports of the Inspectors of Factories (1863)</em></td>
<td>vol. 1 fn. 8 p. 687</td>
<td>&quot;As for instance in the bleaching works of Scotland. &quot;In some parts of Scotland this trade&quot; (before the introduction of the Factory Act in 1862) &quot;was carried on by a system of overtime, i.e. ten hours a day were the regular hours of work ... The effect of this system&quot; (was as follows) &quot;a</td>
<td>Supports Marx's point that low wages forces worker to work longer hours.</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>--------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Anonymous</td>
<td><em>A Defence of the Landowners and Farmers of Great Britain</em> (London, 1814)</td>
<td>vol. 1 fn. 14 p. 698</td>
<td>“By far the greater part of agricultural operations is done by people, who are hired for the day or on piece-work. Their weekly wages are about 12 shillings, and although it may be assumed that a man earns on piece-work under the greater stimulus to labour, 1 shilling, or perhaps 2 shillings more than on weekly wages, yet it is found, on calculating his total income, that his loss of employment, during the year, outweighs this gain.”</td>
<td>Anon. author provides support for Marx’s point that piece wages, which become prominent in manufacturing, results in longer and more intense hours of work, but yields no benefits for the agricultural proletariat.</td>
</tr>
<tr>
<td>2</td>
<td>Anonymous</td>
<td><em>An Essay on Trade and Commerce, By the Author of ‘Considerations on Taxes’</em> (London, 1770)</td>
<td>vol. 1 fn. 3 p. 765</td>
<td>“Temperate living and constant employment is the direct road, for the poor, to rational happiness” (by which the author means the longest possible working days and the smallest possible amount of the means of subsistence) “and to riches and strength for the state” (namely for the landowners, capitalists, and their political dignitaries and agents).”</td>
<td>Anon. author provides an example of an argument justifying the perpetuation of the existence of an impoverished working class through the extraction of maximum labour time for minimum wages.</td>
</tr>
<tr>
<td>3</td>
<td>Anonymous</td>
<td><em>An Essay on Trade and Commerce, By the Author of ‘Considerations on Taxes’</em> (London, 1770)</td>
<td>vol. 1 fn. 17 p. 789</td>
<td>“The author of the <em>Essay on Trade and Commerce</em> grasps the effect of a relative surplus population on the employed workers with his usual unerring bourgeois instinct. “Another cause of idleness in this kingdom is the want of a sufficient number of labouring hands … Whenever from an extraordinary demand for manufactures, labour grows scarce, the labourers feel their own consequence, and will make their masters feel it likewise - it is amazing; but so depraved are the dispositions of these people, that is such cases a set of workmen have combined to distress the employer by idling a whole day together!” Those fellows were actually asking for a wage-increase!”</td>
<td>Marx cites the anon. author to illustrate bourgeois arguments for the necessity of a surplus population to enable the extraction of maximum labour-time; it is required due to fluctuations in the demand for labour.</td>
</tr>
<tr>
<td>4</td>
<td>Anonymous</td>
<td><em>An Essay on Trade and Commerce, By the Author of ‘Considerations on Taxes’</em> (London, 1770)</td>
<td>vol. 1 fn. 4 p. 342</td>
<td>“An hour’s labour lost in a day is a prodigious injury to a commercial State … There is a very great consumption of luxuries among the labouring poor of this kingdom: particularly among the manufacturing populace, by which they also consume their time, the most fatal of consumptions.”</td>
<td>Marx uses this excerpt to illustrate the capitalist’s attitude to the workers time in their arguments for their “right” to extract the maximum length of the working day from the worker.</td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in Capital</td>
<td>Contribution to Marx's understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>---------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>193</td>
<td>Reports of the Inspectors of Factories (1863)</td>
<td>vol. 3 p. 228</td>
<td>“A very serious objection to the use of Surat cotton, as manufacturers are now compelled to use it, is that the speed of the machinery must be greatly reduced in the processes of manufacture. For some years past every effort has been made to increase the speed of machinery, in order to make the same machinery produce more work; and the reduction of the speed becomes therefore a question which affects the operative as well as the manufacturer; for the chief part of the operatives are paid by the work done; for instance, spinners are paid per lb. for the yard spun, weavers per piece for the number of pieces woven; and even with the other classes of operatives paid by the week there would be diminution of wages in consideration of the less amount of goods produced.”</td>
<td>Illustrates point that productivity can decrease due to the introduction of inferior raw materials.</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>Reports of the Inspectors of Factories (1863)</td>
<td>vol. 3 p. 226</td>
<td>“The earnings of the weavers” (meaning the operatives) “are much reduced from the employment of substitutes for flour as sizing for warps. This sizing, which gives weight to the yarn, renders it hard and brittle. Each thread of the warp in the loom passes through a part of the loom called ‘a heald’, which consists of strong threads to keep the warp in its proper place, and the hard state of the warp causes the threads of the heald to break frequently; and it is said to take a weaver five minutes to tie up the threads every time they break; and a weaver has to piece these ends at least ten times as often as formerly, thus reducing.”</td>
<td>Illustrates point that productivity can decrease due to the introduction of inferior raw materials.</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Author cited</td>
<td>Work cited</td>
<td>Location</td>
<td>Citation in <em>Capital</em></td>
<td>Contribution to Marx’s understanding of time</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------</td>
<td>-----------------------------------------------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>195</td>
<td>Reports of the Inspectors of Factories (1865)</td>
<td>vol. 1 fn. 4 p. 606</td>
<td>“The inconveniences we expected to arise from the introduction of the Factory Acts into our branch of manufacture [lace manufacture], I am happy to say, have not arisen. We do not find the production at all interfered with; in short we produce more in the same time.”</td>
<td>Report supports Marx’s point that natural barriers and difficulties to the regulation of hours were found to be surmountable, and in fact, increased efficiency</td>
<td></td>
</tr>
<tr>
<td>196</td>
<td>Royal Commission on Railways (1867)</td>
<td>vol. 2 p. 249</td>
<td>‘Wear and tear is occasioned in the first place by actual use. As a general rule, the rails wear out in proportion to the number of trains ... The wear and tear also increases by more than the square of the speed; i.e. if the speed of the trains doubles, then the wear and tear increases more than fourfold.’</td>
<td>The Report provides Marx with an example of deterioration in the rolling stock in relation to the length of turnover of fixed capital. “The various elements of fixed capital in a particular investment have differing life-spans, and hence also different turnover times”.</td>
<td></td>
</tr>
<tr>
<td>197</td>
<td>Royal Commission on Railways (1867)</td>
<td>vol. 2 p. 258</td>
<td>“We maintain our stock by number. Whatever number of engines we have we maintain that. If one is destroyed by age, and it is better to build a new one, we build it at the expense of revenue, of course, taking credit for the materials of the old one as far as they go ... there is a great deal left; there are the wheels, the axles, the boilers, and in fact a great deal of the old engine is left ... Repairing means renewing; I do not believe in the word replacement...; once a railway company has bought a vehicle or an engine, it ought to be repaired, and in that way admit of going on for ever.”</td>
<td>The authors in the Report provide Marx with an example supporting his point that it is often impossible to separate repairs from replacement.</td>
<td></td>
</tr>
<tr>
<td>198</td>
<td>Statistical Abstract for the United Kingdom (1866)</td>
<td>vol. 1 fn. 96 p. 544</td>
<td>‘The rapid advance of English industry between 1848 and the present time, i.e. during the period of the 10-hour working day, surpasses the advance made between 1833 and 1847, during the period of the 12-hour working day, by far more than the latter surpasses the advance made during the half century after the first introduction of the factory system, i.e. during the period of the unrestricted working day.’</td>
<td>This evidence provides support for Marx’s point that the introduction of laws to limit the working day increased the productivity of labour.</td>
<td></td>
</tr>
</tbody>
</table>
Bibliography

Primary Sources


———, “Difference Between the Democritean and Epicurean Philosophy of Nature”, trans. by J. Dirk and S.R. Struik, in Karl Marx and Friedrich Engels -


Secondary sources

Unpublished Works

Kay, G. and Mott, J., “Concept and Method in Postone’s ‘Time, Labor and Social Domination’”, forthcoming in Historical Materialism.


Books


Baumer, F. Le Van, Main Currents of Western Thought: Readings in Western European Intellectual History from the Middle Ages to the Present, New Haven: Yale University Press, 1978.


Major-Poetzl, P., Michel Foucault's Archaeology of Western Culture, Chapel Hill: The University of North Carolina Press, 1983.


**Book Chapters**


"... Modernity's Consciousness of Time and its Need for Self-Reassurance", in The Philosophical Discourse of Modernity: Twelve Lectures,


Janmohamed, A., "Refiguring Values, Power, Knowledge; or Foucault's Disavowal of Marx", in B. Magnus and S. Cullenberg (eds), Whither Marxism: A Global Crisis in International Perspectives, New York: Routledge, 1995, pp. 31-64.


Leff, G., "St Augustine and His Successors", in Medieval Thought, Harmondsworth: Penguin, 1958.


Journal Articles / Review Essays


Den Boer, W., "Graeco-Roman Historiography in its Relation to Biblical and Modern Thinking", *History and Theory*, vol. 7, (1968), pp. 60-75.


__________, "Postmodernism, or, the Cultural Logic of Late Capitalism", *New Left Review*, no.146, (1984), pp. 53-92.


