The Hegelian Structures of Marx's *Capital*

Abstract: While it has long been recognised that Marx's *Capital* is shaped by Marx's use of Hegel's Logic, attempts to explain *how* have hitherto been superficial and unconvincing, failing to credit either author with having written a logically sophisticated text or recognized the distinction between Political Economy and Logic. It is shown below that Marx used Hegel's Logic in six distinct ways, and divided *Capital* into 18 Parts and Three Volumes in line with its Hegelian structure. Marx's unique use of economic history in lieu of reliance on logic alone is the essential difference between Marx and Hegel.

The Hegelian forms used by Marx are: (1) the concept of ideality (that enabled Marx to overcome the apparent contradiction between the 'law of value' and the uniform, general rate of profit), (2) immanent critique, (3) the 'circle of circles', also associated with (4) the 'rise to the concrete' mentioned in the *Grundrisse*, (5) the syllogism, and notably (6) the 'germ cell' method described in 'The Idea of the True' in Hegel's *Science of Logic*, originating from Goethe, used for 14 of the 18 Parts of *Capital*.

Keywords: History of Economic Thought, Hegel, Marxian, Capital, germ cell, ideality, value.

Science & Society vol. 82(3) kindly published my article demonstrating that Marx used the 'germ cell' method in writing *Capital*, and that he had borrowed this method from Hegel, who had in turn borrowed it from Goethe – though each had made fundamental innovations in the method. In the eight years since the publication of that article, I have learnt that the structure of Marx's *Capital* reflected Marx's use of Hegel from *beginning to end*. The need to explain six different Hegelian features of the structure of *Capital* imposes a difficulty on me in offering the reader a coherent narrative. I beg the reader to bear with me.

Introduction

Karl Marx had earned his PhD in Philosophy and was an avid student of Hegel before he came across communism. Every time he approached a new theoretical problem, the first person he turned to was Hegel, right up to his study of calculus in the final years of his life. So it is no surprise that when he 'grasped the opportunity to withdraw from the public stage to my study, the first work which I undertook to dispel the doubts assailing me was a critical re-examination of the Hegelian philosophy of right' (Marx, 1859).

Lenin advised us in 1914 that 'It is impossible completely to understand Marx's *Capital*, and especially its first chapter, without having thoroughly studied and understood the whole of Hegel's Logic' (Lenin, 1914), and when the *Grundrisse* was published in English by Penguin in 1973, it became widely accepted that Marx's economic theories did indeed owe a debt to Hegel.

My claim to have uncovered Hegelian structures in Marx's *Capital* is based on Marx's logic, not on the similarity or homology of certain passages in *Capital* to certain passages in the *Logic*; it also applies to the *whole* three volumes, not restricted to the first Part of Volume One. I do not claim insight into Marx's mind, so I am reliant entirely on the logic of Marx's argument in *Capital* and Hegel's 'The Idea of the True' in the *Logic*, and Hegel's own application of this to the positive sciences in his *Encyclopaedia*, especially the *Philosophy of Right*.

None of the contributors to this topic have considered these parts of Hegel's work as sources, looking instead to *similarities* between the early chapters of *Capital* and the *Logic*, failing to recognize the categorical difference between Logic and any positive science. The resulting claims are demeaning to both writers and unconvincing (see Author, 2024). Of those Marxist contributors who had studied Marx's Economic Manuscripts few had any real familiarity with Hegel, and those Marxists who had studied Hegel had never read or had misunderstood the texts I relied upon.

The *Science of Logic* concerns human practice in general, so while it lacks any given content, it establishes the procedure for any positive science (Hegel, 1821, Preface). Any positive science, though logical in form, has a definite content and that content is contained in its unit, already a given datum, so each science has a logic of its own.

Marx had three sources for *Capital*: British political economy, Hegel's Philosophy and Economic History. From Hegel, he learnt the art of immanent critique that he applied in his study of political economy and from which he learnt the idea of science as a 'circle of circles' and its related forms. Also from Hegel, he learnt the concept of ideality, especially Hegel's use of this concept in the *Philosophy of Right*. And crucially, Marx learnt the 'germ cell' method outlined in 'The Idea of Cognition' in the *Science of Logic*. Marx's method of critique differed from Hegel's, however, thanks to his use of a 'genealogical' approach to Economic History. He understood that when a human being forms a concept, 'the real subject retains its autonomous existence outside the head just as before; ... Hence, in the theoretical method, too, the subject, society, must always be kept in mind' (Marx, 1973 [1858]).

Marx's immanent critique of the Political Economists also owed a great deal to Hegel, but as this work is already well-known to most readers, I will leave it aside, and confine myself to Marx's critical appropriation of Hegel reflected in the structure of *Capital* and his use of the 'genealogical' approach to the study of history in lieu of reliance solely on logical argument.

1 Ideality

The problem that had defeated all attempts to create a consistent theory of political economy based on the concept of value, was the contradiction between value as a measure of labor and the empirically given fact of a uniform rate of profit across the economy.

This contradiction is insoluble if value is treated as a real property of the commodity; it dissolves if value is treated as ideal, as normative. Marx's concept of ideality, taken from Hegel's *Philosophy of Right*, is what allows him to treat value as objective but not material – determinate of the total social product but of price only in specific circumstances.

Ideality concerns the social properties of material objects and practices, norms in other words. Value is an ideal and has its origin, not in the mind, but in economic history.

After one hundred years, Political economy had established that value was determined by socially necessary labor time, but they treated this property of the commodity in much the same way that one treats the material properties of products. However, it was only *price* that was a real, empirically verifiable measure. They saw value as a 'first approximation' to price, which would in addition be subject to transitory market conditions. So price was the reality and 'value' was just the expected, average, or hypothetical price realized only when supply and demand were taken into account. Most Marxists still see value this way. Attempts to resolve the contradictions that arose from treating value as a real property of a commodity, while taking it as the primary datum were eventually abandoned by political economy, and Alfred Marshall revised his textbook, *Principles of Economics*, to eliminate all reference to 'value'. This was in line with the doctrine of Positivism dominant in the late 19th century. As the Positivists saw it, value was an ideal and had no place in science. Price was determined solely by the interplay of supply and demand, leaving no place for an ideal like 'value'.

Hegel taught, however, that the ideal, value, is the *more primary* category, and price is merely the *appearance* of value, which will vary according to the norms operative in a given situation, and Marx agreed.

In bourgeois society (See §3.1 below), that is, a society of independent producers exchanging their products at value, no contradictions arise from the conception of value as 'average' price. However, in an economy dominated by industrial and finance capital, labor time is not the only systemic determinant of price. Price was subject to other norms. As many as three different economic spheres jointly determine the appearance of value.

That commodities are sold at their value (i.e., the average labor time required for their production in the given economic conditions) is not a law of nature, with or without supply and demand. Ask any woman, immigrant or African-American. Equal pay for equal work is a *norm* that is generally applicable in modern capitalist nations, and Marx and the Political Economists were right in taking the law of value as applicable in bourgeois society. But the in-principle equality of all labor-power is a *norm*, not a law of nature. Bourgeois society is both the source and the product of this norm, although centuries of cultural development are required to realize it.

However, the *price* of the products of productive capital and the products of finance capital are subject to *different norms* and the products of capital are in general *not* exchanged at their value. These norms are not mere fancies, but fought out on the arena of class struggle and realized in the economic institutions. Value remains determinant in relation to the total social product, but not in its distribution, which depends on the interplay of different norms.

2 Value and Right are Ideals

The concept of ideality allows Marx to present modern capitalism as the coincidence of three potentially conflicting economic spheres. It was Hegel's use of this idea in the *Philosophy of Right* that provided Marx with a way to resolve the contradiction between the uniform rate of profit and the so-called 'law of value'.

Right – what is right to do – is subject to three different, potentially conflicting norms in the ideal modern state described by Hegel in the *Philosophy of Right*.

Every person has the right own property and to be free of coercion, bound only to respect the rights of other persons. This 'negative freedom' is not sufficient to fulfill the potential of human freedom, Consequently, every moral subject (*i.e.,* sane adult) must act according to their own conscience, having a mind to their own welfare. However, with only finite experience, the moral subject cannot foresee the ultimate consequences of their actions and likely do evil as good. Consequently, every citizen, having a definite position within the state is bound by their particular duties, and participates in the formulation of the laws and customs of the state which are universal and absolute.

Each of these three spheres – of persons, moral subjects and citizens – constitute the social real foundations for the corresponding norms, acting independently of the other spheres (See Hegel, 1821, §278 Remark). However, they may conflict. If Right is treated as if it were a material property of human being, then such conflicts pose insoluble contradictions.

For example, a person may not want to pay taxes and may feel no pang of conscience as a result, but the law will oblige them to pay taxes, and could even compel them to take up arms. If a child is lost, strangers have the right to go about their business and ignore the child, but their conscience would compel them to aid the child.

Because these norms, or idealities, are soundly based in a certain sphere of life, they are not to be taken as subjective beliefs, but are objective. The idealities of the various institutions of the state both determine the activities in their own sphere and are sustained by that activity. The state is the dominant sphere in a modern state, and it may override abstract rights such as personal property, whilst at the same time defending that right.

Hegel successfully built a social theory on the basis of such a discourse on *right*, something that would have been impossible on the basis of cause-and-effect, as if how people live were purely a fact of Nature.

Value is an ideality like right, because it is a normative property, meaningful only within the sphere where it is operative. Just as the state can coerce a person according to its own laws, as the ruling power in modern capitalism, Capital applies its own norms within its own sphere.

3 The Economic spheres in Modern Capitalism

In modern capitalism, three distinct economic spheres, each with its own norms, determine the appearance of value *i.e.*, the price of a commodity.

3.1 Bourgeois Society

Bourgeois society is an analytical abstraction from modern, capitalist society, but one which has a real historical basis in the civil society of mediaeval times. In bourgeois society, *independent producers*, whether individuals or companies, own their own means of production and exchange their products at their value, that is, according to the average labor-time required for the production of each commodity. One commodity singles itself out to play the role of a ‘universal commodity’, namely, money. The producers do not necessarily appropriate a surplus, and may stop work once they have produced the equivalent of the necessities for their subsistence.

This sphere is presented in Part I of Volume One of *Capital*. Bourgeois society originated in the Middle Ages in the interstices of feudal society. Masters organized themselves in guilds and companies in which decisions were made on the basis of one man one vote. These guilds included both artisans and merchants. The norm recognizing the moral equality of the labor of all persons has its roots in *history*, in the independence and voluntary association of the producers, whether companies or individual artisans or merchants, and attained the ‘fixity of a popular prejudice’ (Marx, 1867, 70) flowing over to such practices as voting.

Since people must labor, whatever the social form of that labor and however the surplus labor is appropriated, this chapter establishes the meaning of ‘value’ in its simplest social form, the commodity, and its magnitude. abstract labor-time. In bourgeois society, value *appears* at the moment the commodity is exchanged, and the producers exchange their products at their value.

3.2 Productive Capitalism

In *productive capitalism*, capitalist firms buy and sell their products as commodities, but the independent producers of bourgeois society have now been split into *capitalists* and *proletarians*. The capitalists purchase labor-power from the proletarians who lack capital, are paid a subsistence wage, and forced to work long hours, the surplus of which is appropriated by the capitalists.

In Part II of Volume Three we find that the capitalist firms sell their products not at value but at *cost-price plus profit*, profit being proportional to the capital turned over in a given period of time. Given that the laborer contributes no capital, they receive no share of the profit, and the price of their labor-power is equal its cost of production. The community of independent artisans and merchants has been abolished, and the proletarian must sell their labor-power at cost-price, according to the new ruling norm.

The new norm requires more than replacing C—M—C' with M—C—M'. First, the laborers had to be deprived of the tools of their trade so that they could be forced to work inhumanly long hours unknown to the mediaeval artisan. And not only the laborers objected:

> The guilds of the middle ages therefore tried to prevent by force the transformation of the master of a trade into a capitalist, by limiting the number of laborers that could be employed by one master within a very small maximum. The possessor of money or commodities actually turns into a capitalist in such cases only where the minimum sum advanced for production greatly exceeds the maximum of the middle ages. (Marx, 1867, 313)

Productive capital is dealt with from Part II of Volume One, in which the unit of capital is defined, up to Volume Three, Part III.

In Part II of Volume Three, Marx presents a thought-experiment in which all the capitalists are shareholders in a joint-stock company, while each is still running their own part of the business in whatever sector. Each brings into the company varying amounts of profit, but the capitalists agree that the profits must be shared in proportion to the share of the total capital brought by each shareholder.

This is the norm that determines that each capitalist must buy and sell their products at cost price plus profit at a uniform rate. The capital market and the commodity market jointly function to *realize* this norm as an economic reality. In effect, capitalists with a relatively large portion of constant capital to maintain are cross-subsidized by capitalists in labor-intensive sectors of the economy. At the same time, the capital market moves capital from relatively over-capitalized sectors to the relatively more profitable labor-intensive sectors.

The laborer, however, brings only their labor-power, and he or she is duly paid the cost of its production, but no share of the profit because they contribute no capital. This norm exists to the extent that all commodities in the economy appear as products of capital. As can be seen, the real conflict between the two norms was settled with the historical destruction of craft labor. The cost of production of the worker's labor-power will also differ from its value because the means of subsistence are products of capital whose price differs from their value.

Value remains what it always was, but its *appearance* under the rule of capital is different.

3.3 Finance Capital

Finance capital is dealt with in Part V and landowning capital in Part VI of Volume Three. *Finance capital* arises out of commercial capital (Part IV) but is concerned only with the loaning of capital and trading in various forms of *credit*. Ownership is separated from function, and capital achieves its pure form lacking any role in production.

Just as productive capital reduced the worker to the rank of an instrument which the capitalist uses in production, finance capital reduces the industrial and commercial capitalist to the status of a salaried employee.

The peculiar feature of the ethos of finance capital is that interest is applied to use of the capital-commodity, without releasing ownership, *irrespective* of whether the user makes a profit with it. The average rate of profit is now partially determined by the price of the capital-commodity.

Each of these three historical classes – independent producer, industrial capitalist and finance capitalist – corresponds to a distinctive economic sphere with its own norms. In bourgeois society, products are sold a*t their value.* In productive capitalism, products are sold at *cost of production plus profit*. Under finance capital, property, is *loaned at interest*, but never alienated.

All three of the above economic spheres exist within developed *industrial capitalism*, now dominated by finance capital. The price of any commodity, be that labor-power, a product of capital or a capital-commodity, is determined by capital. Whereas the three spheres of right in Hegel's work were analytical distinctions within the state, the three spheres identified in *Capital* also had a pre-history in which their norms were established.

Failing to see that the 'law of value' is a valid determinant of price only under very restricted conditions meant that the Political Economists inevitably fell into insoluble contradictions when they tried to understand the dynamics of modern capitalism. The principle of ideality removes that contradiction. Cost of production and profit are the *appearance* of value under the rule of industrial capital; interest on the use of capital is the appearance of value under finance capital. The products of capital are not exchanged at value, and value plays no part in the calculations of the capitalists.

Neither norm contradicts the validity of the law of value, which retains its power wherever the appropriate norm applies.

3.4 Totality

Apart from exchange of commodities, there are other circumstances when labor-power is exchanged at value, such as when choosing to apply labor-power to this or that task. The price at which a commodity is exchanged has no effect on the total quantity, *i.e.*, value, of labor socially active in an entire economy. Fred Moseley (2016) has observed that it follows from this that nothing determined in Volume Two and Three of *Capital* has any bearing on the total value, or the surplus value distributed among the various sections of the capitalist class, only how it is distributed among the 'hostile brothers' (Marx, 1894, Chapter 15).

4. Conceptual Reconstruction

Thanks to the particularly lucid passage called 'The Method of Political Economy', in the *Grundrisse*, it is widely understood that Marx was following Hegel's method in reconstructing a science by beginning from one concept and 'rising to the concrete', reproducing 'the concrete … as the concentration of many determinations, hence unity of the diverse' (Marx, 1973 [1858]). This process is not limited to the first concept alone; conceptual reconstruction of political economy will entail a series 14 different 'germ cells'. (See 9.1–9.14 below).

4.1 Abstract Concrete to Concrete Concept

As Hegel saw it, before a science can be written, there is a preparatory process which begins by assembling all the data and organizing this data into its smallest units by whatever criteria are available. All of the data so assembled is abstract in the sense that each is just taken on its own irrespective of its connection with other data, that is, immediately. This stage is that of the *abstract concrete*.

The scientist works through this data, combining data in various ways, until selecting an individual datum that best expresses the universal character of the phenomenon – the 'germ cell' or universal individual. Beginning from this datum and using in turn other such data that capture particular aspects of the phenomenon, the writer then *reconstructs* the appearance of the data from which it began, but now in conceptual terms, rather than in the form of immediately-given data. This is the 'rising to the concrete', or more specifically to the abstract (*i.e.*, conceptual) concrete. In this sense, the movement is a circle.

The writing of *Capital* began from the work already done by the Political Economists, appropriating value and in turn other concepts of political economy, and reconstructing modern capitalism as it appeared to the Political Economists, but critically, rendering its errors and blind spots transparent by critique of these fundamental concepts.

4.2 Circle of Circles in Hegel's *Encyclopaedia*

Each of the sciences outlined in Hegel's *Encyclopaedia* has the form just outlined, moving from the abstract concrete to the concrete abstraction. The *Encyclopaedia*, the Logic and each phase of the Logic have the same form. Being is the immediate, and the Logic of Being culminates in Measure, an 'almanac' of the sensuously given world. Reflecting on this 'almanac', Essence rises from Identity to the simple concept that forms the starting point of the Concept Logic. The *Philosophy of Right* begins from abstract right, *i.e.,* personal liberty and rises to a concrete conceptual reconstruction of the entire state in which liberty is realized.

The *Encyclopaedia* begins with Being, an indeterminate immediate. By immanent critique it then goes through all the sciences winding up with Art, Religion and Philosophy, and thus returns to a concept of everything that is, but now as a concrete abstraction explicitly including the entirety of human experience. The final paragraph of the *Encyclopaedia* is a quote in the original Greek, from Aristotle's *Metaphysics*, in praise of the absolute identity of thought and being. Having begun from immediate Being of Parmenides, science concludes with the entirety of human experience captured in a single concept. But whereas Hegel's circles are affirmative, Marx's are critical.

4.3 The Circle of Circles in *Capital*

Marx begins each of the three Volumes of *Capital* from a concrete immediate and concludes with a conceptually concrete reproduction of the whole, that is in turn shown to correspond to the terms in which it appeared to the founders of political economy.

Capital begins with the observation that 'The wealth of those societies in which the capitalist mode of production prevails, presents itself as 'an immense accumulation of commodities', its unit being a single commodity' (1867). Not only is the commodity the simplest, immediate social form of value, but this observation is in agreement with political economy, while the concept of commodity dated back to antiquity. It is the concept of ordinary consciousness from which political economy began.

The final part of *Capital*, 'Revenues and their Sources', notes that all wealth has been:

> transformed into … actual sources from which these value portions … arise themselves, and from which, therefore, in the final analysis, the value of the product itself arises. (Marx, 1894, Chapter 48)

and after a footnote quoting Adam Smith's *Wealth of Nations* (1776): 'Wages, profit, and rent are the three original sources of all revenue, as well as of all exchangeable value', Marx's manuscript breaks off,

Marx has conceptually reproduced the forms of wealth as they superficially appear under capitalism while having shown them to be products of labor alone. In this sense Marx's 'circle' is *critical* not affirmative. The completion of the conceptual reconstruction of political economy, gave an explicit nod to Hegel's claim that the *Encyclopaedia* was a circle, merely putting Adam Smith in place of Aristotle.

Within this circle the three constituent sciences – One: the immediate production of capital, Two: the circulation of capital and Three: capitalist production as a whole – also form 'circles'.

Volume One: The total wealth of capitalist society is transformed from a vast accumulation of commodities to the form in which it appears to capitalism: a totality of individual capitals.

> So far as accumulation takes place, the capitalist must have succeeded in selling his commodities, and in reconverting the sale-money into capital. Moreover, the breaking-up of surplus-value into fragments neither alters its nature nor the conditions under which it becomes an element of accumulation. (Marx, 1867, Part VII)

Volume Two: begins with the circulation of the capitals of each individual firm from money capital and back to money capital, by means of which Mr. Moneybags imagines himself a self-made man. This beginning is transformed into the reproduction of the means of production and that engaged in production of the means of personal consumption.

> The total product, and therefore the total production, of society may be divided into two major departments: I. *Means of Production*, commodities having a form in which they must, or at least may, pass into productive consumption. II. *Articles of Consumption*, commodities having a form in which they pass into the

> individual consumption of the capitalist and the working-class.
> All the various branches of production pertaining to each of these two departments form one single great branch of production, that of the means of production in the one case, and that of articles of consumption in the other.
> (Marx, 1885, Part III)

Volume Three: The total social capital across Departments I and II, via the transformation of value into prices, is transformed into the revenues of the three classes: wages, profit and rent, the form in which wealth appears to political economy, the Revenues and their Sources (Marx, 1894, Part VII) every bit of it the product of labor.

5 The Logical Division of the Subject Matter

In addition to this exercise in the Hegelian 'circle of circles', the three Volumes of *Capital* are explicitly presented by Marx as a syllogism, emulating, for example, the structure of the Logic of the Concept – Subject, Object (effectively all the other subjects) and their synthesis in The Idea. The young Marx had ridiculed triads like this in 1843, but it was written large in the first chapter of Volume Three of *Capital*. (See §5.3 below).

5.1 The Immediate Production of Capital

The unit of capital is defined in Part II of Volume One. In the Immediate Production of Capital – each unit is analysed as if *independent* of every other unit. Because each unit of capital is considered separately, the total values of each of these components corresponds to the same component part of the total social labor, which can be derived by simple addition. The difference between price and value has no effect on the total component values and nothing which follows in *Capital* or in real life undermines this conclusion.

What is missing with the immediate production of capital is that no explanation is offered for the reproduction of the conditions for production – available labor-power, and all the materials required for production, not to speak of the social and political conditions for the exploitation of labor-power. These conditions are made possible by the circulation of capital through *other* capitals.

5.2 The Circulation of Capital

Volume Two concerns the circulation of capital. Each of the separate capitals of Volume One are now analysed as connected in circuits of value beginning and ending with a sum of money-capital advanced for production. The value circuit begins from money-capital purchasing inputs, production itself, the sale of the commodities, and the return to money-capital in expanded form. This value circuit cannot on its own sustain conditions for the continued accumulation of capital and an on-going form of life. It is not enough that *value* must complete the circuit from money-capital through its various forms. Each of the particular *forms of labor* and *components of capital* must be renewed.

The unit on which Volume Two is based is the circuit of a single capital, but now including the production process and the circulation of commodities, within the unit. Each component part of the production process, including all the machinery, materials, and labor-power, must be renewed, as well as all the divers artifacts and activities which are realized as equivalents of the surplus labor appropriated in production. The dependence of each unit on the whole is now made explicit.

This circuit, beginning and ending with money-capital, is the *universal* circuit of capital, and must be accompanied by the *particular* circuits of commodity-capital (recovering a stock of commodities of all kinds, approximating in abundance the demand for each) and the circuit of productive-capital (the maintenance, repair and upgrading of machinery, acquisition of new supplies, and meeting the needs of the workforce ready for a new cycle of production).

Altogether, the circuit of commodity-capital must provide for the requirements of *production*, on the one hand, and of the means of *consumption* on the other. These are called Department I and Department II. Marx observed that the value of wages and profits generated in Department I (all spent on consumer goods) must equal to the value of the constant capital (machinery and raw materials) needed by Department II.

Capital, in-itself in Volume One now actively creates the conditions for-itself.

Each unit must first be analysed on its own, before it is mediated through its relations with other units, but still taken as if completing the circuit as independent units of capital.

5.3 Capitalist Production as a Whole

The opening words of Volume Three are worth quoting verbatim as Marx is very explicit in pointing to the Hegelian sources of the three-volume structure.

> In Volume One we analysed the phenomena which constitute the *process of capitalist production* as such, as the immediate productive process, with no regard for any of the secondary effects of outside influences. But this immediate process of production does not exhaust the life span of capital. It is supplemented in the actual world by the *process of circulation*, which was the object of study in Volume Two. In the latter, namely in Part III, which treated the process of circulation as a medium for the process of social reproduction, it developed that the capitalist process of production taken as a whole represents *a synthesis of the processes of production and circulation*.
>
> Considering what this third book treats, it cannot confine itself to general reflection relative to this synthesis. On the contrary, it must locate and describe the concrete forms which grow out of the *movements of capital as a whole*.
>
> In their actual movement, capitals confront each other in such concrete shape, for which the form of capital in the immediate process of production, just as its form in the process of circulation, appear only as special instances. The various forms of capital, as evolved in this book, thus approach step by step the form which they assume on the surface of society, in the action of different capitals upon one another, in competition, and in the ordinary consciousness of the agents of production themselves. (Marx, 1894, 27)

This is a classic Hegelian syllogism. The conditions for the immediate reproduction of a unit of capital are provided by the capital through others and returning as part of the reproduction of the whole – just like the Syllogism of Recognition by which a Subject attains self-consciousness (*Enc*. §430).

The three volumes constitute a syllogism, and the third volume completes the reconstruction of concrete form of capitalism, as it appears in the minds of those who act it out.

6 The 'Idea of the True'

Much of the above may already be familiar to readers. However, it will be seen that the fine structure of *Capital*, the selection and development of each of 14 Parts is crafted according to Hegel's directions in 'The Idea of the True' in the *Science of Logic*, with the proviso that Marx's use of Economic History in the application of this method is uniquely Marx, not Hegel. Marx relies not on Hegel's Logic, or Goethe's 'delicate empiricism', but a specific kind of historical research, which I will call *categorical genealogy*. This logical structure extends throughout the three volumes barring the concluding parts of each volume, and reveals the heart and soul of Marx's *Capital*.

'The Idea of the True' is a syllogism of which the first premise is analytical cognition and the second premise synthetic cognition. That is, a science must represent a true concrete concept of the object by an analysis of the object into its smallest parts and a synthesis of those parts according to a concept of the phenomenon – abstract concrete to concrete abstraction.

The subject matter presents itself as a distinct phenomena which will each be known by some abstract general conception, such as 'Right' or 'Value'. The conception which marks out each given phenomenon is characterised as 'abstract general' because in the absence of a true, concrete concept, its conception will be based simply on its relation to human practice in general, such as its use, some common feature or quality of things given in perception or opinion, or some problem or lack in respect to such features.

Analysis requires that any existing theory of the subject matter must first be laid aside and the subject matter apprehended without any mediation, but taken up just as it immediately appears to 'ordinary consciousness'. This is the starting point of a science.

In Hegel's words:

> Analytic cognition … starts from a *presupposed*, and therefore individual, *concrete* subject matter; this may be an object already *complete in itself* for ordinary thought, or it may be a *problem*, that is to say, given only in its circumstances and conditions, but not yet disengaged from them and presented on its own account in simple self-subsistence. (Hegel, 1816, 787)

Generally speaking the concepts elaborated in the Logic of Being in the *Science of Logic* are used in analysis. This is not to say that analysis will *replicate* or mirror the Logic of Being, but simply that analysis *uses* these concepts. However, being applied to some positive content, the conceptions are now not merely *formal*, as they are in the Logic of Being, but have a *content*. That content comes from the concrete individual products of analysis, its units. Analysis establishes what *is* and how much.

When analysis into parts is complete, cognition passes over to synthesis in which products of analysis are brought into relation with one another. There is inevitably a movement back and forth between analysis and synthesis because each analysis is conditional.

> Synthetic cognition aims at the *comprehension* of what *is*, that is, at grasping the multiplicity of determinations in their unity, ultimately as determinations of the same concept. It is therefore the second premise of the syllogism in which the *diverse* as such is related. Hence its aim is in general *necessity* … Now synthetic cognition passes over, in the first instance, *from abstract identity to relation*. (Hegel, 1816, 794

During this phase of cognition, the concepts elaborated in the Essence Logic will be utilized, as demonstrated when Hegel talks of the movement from abstract identity to relation. But again, it is *the concepts*, not some kind of coded copy of this section of the Logic that are utilized. The concepts which will be used in the first phase of synthesis draw on those found in this section of the Logic that begins with a *critique of Identity*. Up to this point we are still in the 'pre-scientific' phase of the analysis of a phenomenon.

The key paragraph of the *Science of Logic* comes under the heading of 'Division'. In this context, political economy figures as one division of science, the science of value, but the same principles also apply to divisions *within* political economy.

> The progress, proper to the Notion, from universal to particular, is the basis and the possibility of a *synthetic science*, of a *system* and of *systematic cognition*. (Hegel, 1816, 800)

Analysis must determine *which* individual product of analysis is to be the starting point for the synthesis of a new 'circle', and the sequence of concepts thereafter.

Synthesis must begin from the universal, but the universal is generally the historically last on the scene. Marx's unique use of history is key here.

But when starting from the universal, Hegel is still referring to some concrete product of analysis – the single instance which expresses the universal. Consequently, the subject must select from among the products of analysis a 'universal individual' as follows:

> The first requisite for this is, as we have shown, that the beginning be made with the subject matter in the form of a *universal*. In the sphere of actuality, whether of nature or spirit, it is the concrete individuality that is given to subjective, natural cognition as the *prius* (*das Erste*, i.e., first); but in cognition that is a *comprehension* (*Begreifen*), at least to the extent that it has the form of the Notion (*Begriff*) for basis, the *prius* must be on the contrary something *simple* (*Einfach*), something *abstracted* (*Ausgeschiedene*) from the concrete, because in this form alone has the subject-matter the form of the self-related universal or of an immediate based on the Notion. (Hegel, 1816, 800)

Initially, a phenomenon is identified by some abstract general conception – a definition or archetype – and appears historically in some *particular* form. But only when the *universal* form is attained can the germ cell function to produce the concrete universal.

The universal individual (the prius or first) is a simple something selected from amongst other individual data on the basis that it expresses what is universal in the phenomenon. This determines how the subject conceives of the phenomenon, reflecting existing social consciousness.

Since the universal individual must be a 'concrete individuality' alongside other such individuals, 'value' does not qualify. 'Value' is already a product of reflection drawing together and generalizing diverse parts of the subject matter, which are in turn claimed to be 'forms of value'. 'Value' is an ideal not given to immediate perception. The choice of the universal individual is limited to individual concrete objects of 'subjective, natural cognition'.

Hegel says that the first must be 'something *simple*, something *abstracted* (*Ausgeschiedene*) from the concrete'. Analysis has already produced the simplest possible data which qualify as components of the given phenomenon, in this case, the simplest elements of political economic activity. The unit must be the simplest, most primitive instance of the entity. This simple something is what it is at any stage of development of the economic system.. For this reason, Marx set aside commodities in the particular forms of a service or an ideal (such as intellectual property), taking as its archetype, the simple material product of human labor characteristic of industrial capitalism. The commodity in this universal form was known before political economy, from the earliest times of human society, albeit as a marginal and extraneous part of ancient life. It is self-related in that it does not depend on any other product of analysis for its being, it stands on its own, complete in itself, so to speak.

It was on this basis that Marx selected the commodity. This universal individual can be termed the *unit* (*Einzelheit*), or the *germ cell* (*der Keim*), both terms which Hegel uses in the *Logic*. Unit, because it is the simplest and final complete product of analysis of the subject matter of political economy; 'germ cell' because analysis of the commodity will be the conceptual basis guiding the re-synthesis of political economy as a consistent, concrete science, and is in this sense the embryonic form of a series of forms of value which grow out of it.

> The form of abstract universality is characteristic of its *first*. Therefore any subject matter whatever that seems to possess an elementary universality is made the subject matter of a specific science, and is an absolute beginning to the extent that *ordinary thought is presupposed* to be acquainted with it and it is taken on its own account as requiring no derivation. (Hegel, 1816, 803)

This is the first product of the analysis of political economy. Analysis of this datum, the commodity, is a unique scientific task, producing through critique, a new *universal* concept, co-extensive with the phenomenon under study. But it is only when the commodity achieves its universal form, *money*, understood now as a form of commodity, can this germ cell create the basis for the later development of industrial capitalism.

Part I of *Capital* has a dual task, however. It must establish both the immediate concrete form of value (the commodity) for bourgeois society, and the 'universal commodity' from which to begin the synthesis of the concrete concept of modern capitalism (money). Part I begins with the commodity, but its product is just one kind of commodity, money, which is, so to speak, the universal commodity.

Each division (Part) of the subject matter, moving from the *universal* individual or unit, to the unit at each *particular* stage of the reconstruction, must be made in the same way. This means that not only must the commodity be analysed and provide the basis for further development, but at *each stage* in the synthesis a new first (or unit or gem cell) must be *chosen* from among the concepts of political economy, and its universal form that will function as a unit and germ cell for further development.

Marx has no *Encyclopaedia* to vouch for the validity of an underlying science. In lieu of this, Marx had recourse to the historical development of the object itself and its reflection in the science of the time. 'The real subject retains its autonomous existence outside the head just as before' (Marx, 1973 [1858], 101).

Political economy, however, unlike Logic but like all the natural and human sciences, has a *positive content*. Both Hegel and Marx were well aware of this obvious fact. As Marx saw it, the content of political economy is value, that is, abstract human labor. The whole of *Capital* depends on how Marx formed a concept of abstract human labor, the real content of *Capital*. It is the units of the science which provide the content for the science.

If similarities in form between Hegel's *Logic* and any positive science can be found, it is because the sciences are made up of true concepts and all true concepts contain implicit contradictions characteristic of their subject matter – much as each of the classic works of European music is unique and yet all share a multitude of those forms which are the subject matter of musicology.

Christopher Arthur is surely right when he said:

> So we have in the dialectic of capital one that is less general than Hegel's in its *scope*, but within its own terms equally *absolute* in so far as it is founded on all-round abstraction to leave quasilogical forms. Hegel's philosophy is encyclopaedic, and it has hundreds of categories accordingly. Capital, compared with the universe as a whole, is characterised by a poverty-stricken ontology. (Arthur, 2011)

In the *Science of Logic*, Hegel elaborated a range of more than 400 concepts and transitions from one concept to another from which the sciences he outlined in the *Encyclopaedia* could draw their methodology. All of these concepts concern only human practice *in general*, lacking any specific content. In this, Logic differs from the natural and human sciences which *do* have a positive content.

The only participant in the recent debate over *Capital* and the *Logic* (see Blunden, 2024) who noticed the existence of this chapter is Christopher Arthur, who wrote:

> What is striking is that this is thematised by Hegel in the part *preceding* the Absolute Idea, namely *cognition*. Here there *is* a discussion of how, in theory and in practice, the Idea both discovers, and creates, itself in what seems other than it. Yet by thematising this *before* the logical Absolute, Hegel makes it appear that success is guaranteed in advance.
>
> So I think that cognition should come at the end of the Logic, encapsulating the ambition of the concept to make itself Idea through uniting thought and reality, but with the job itself still to be done in the following parts of the *Encyclopaedia*. Cognition is surely the *hinge* of the logical and the real. (Arthur, 2011)

What Arthur overlooked in reading this passage is that the actor is not the Idea as such, but the 'Subjective Idea', that is, a finite mind. The Subject in question could be an individual person or a social movement or project such as Science. This finite mind has an urge (*Trieb*) or will to realize itself in the objective world, whose existence Hegel claims to prove in the Subjective Spirit. There can be no sequence of concepts unless and until there is a subject which drives a concept beyond its limits in striving to realize itself.

7 Marx's Use of History

One sense in which Hegel was an Idealist is that Hegel overestimated the power of the reasoning of an individual person armed only with Logic. Marx also relied on the 'real subject', which he apprehended through the study of economic history.

History is intelligible, but even leaving aside the accident and perversity of real history, institutions and practices do not unfold just according to their own inner logic, the logic that immanent critique can reveal. Marx relied on the ruthless criticism on the part of 'the real historical process' (Marx, 1973 [1858], 101–102) to do what no finite human mind could do.

The starting point is always a multifarious array of more or less independent, more or less interdependent forms of life, and 'world history' is something that the human species may or may not live long enough to see.

The development of any single institution depends on its conditions. Like any organism, it can maintain itself despite changes in its environment. But only up to a point. Bourgeois society (*i.e.*, the market place) barely existed for centuries even after the invention of gold coin, and was certainly too underdeveloped for its true nature to manifest itself and provide the thinker with something to think about. Only the present day can provide that. But how is one to analyze the infinite complexity of global human society? By Logic? A study of the actual conditions which either fostered or inhibited a practice, must be utilized along with logic.

The study of the historical development of a *single form of practice* or institution – abstracted from its conditions and irrespective of its place in the whole social formation, just in its own right – is called genealogy. But to distinguish this interest in history from family history, to which it is akin, I call it 'categorical genealogy'.

This is the kind of history Marx brought to bear on the categories of political economy, their immanent critique, their selection and sequence in *Capital*.

Capital is not an historical work as such (though it does have historical chapters). It's plan is logical not historical.

Christopher Arthur says:

> I draw a distinction between systematic dialectic (which is a method of exhibiting the inner articulation of a given whole) and historical dialectic (which is a method of exhibiting the inner connection between stages of development of a temporal process). (Arthur, 2011)

and

> The effort is to deploy a systematic dialectic in order to articulate the relations of a given social order, namely capitalism, as opposed to a historical dialectic studying the rise and fall of social systems. (Arthur, 2011)

But it is wrong to counterpose systematic dialectic and the dialectic of the rise and fall of economic relations on the historical plane – doubly so if attention is confined to *whichever economic relation is dominant in a successive epochs*. The historical dialectic which is of interest is the development of *each single economic relation taken on its own* and in its dependence on its conditions.

Insofar as the rise and fall of a social system is intelligible, and not due to some external or accidental cause, then the key to understanding that demise *does* lie in the tendencies revealed by systematic dialectic. However, while an economic system is generally consistent within itself and able to cope with internal conflicts within the economic system as such, this is not true of the relations of the economic to *other* circles of human practice. The economic whole is but a *part* of the totality of human practice, of human social life in nature.

In the absence of his own *Encyclopaedia*, and in the spirit of a philosophy whose substance is human practices, Marx relied on the work of the 'real subject' which 'retains its autonomous existence outside the head'.

> In the succession of the economic categories, as in any other historical, social science, it must not be forgotten that their subject – here, modern bourgeois society – is always what is given, in the head as well as in reality, and that these categories therefore express the forms of being, the characteristics of existence, and often only individual sides of this specific society, this subject, and that therefore this society by no means begins only at the point where one can speak of it *as such;* this holds *for science as well.* This is to be kept in mind because it

> will shortly be decisive for the order and sequence of the categories. (Marx, 1973 [1858], 106)

Yes, the sequence of categories is different in the systematic elaboration of an economic system from their sequence as dominant relations in the history of economic systems. But that is not the question at issue. The determination of the logic of political economy requires a study of the historical development of *each* of those relations themselves, and not just in their present situation or in their period of dominance.

Specifically, a practice usually appears on the scene of history in a partial, undeveloped form marked by particularity. Its own internal development will tend, up to a point, towards a more universal form, until secular developments in its relations to others, internal contradictions or external forces bring it down.

Further, as an institution becomes established and grows in its influence, it may colonize other institutions and transform them into subordinate organs of itself.

Thus, categorical genealogy reveals, by its abstraction, the interdependence of the categories of a science, and thereby informs their ordering in the sequence of categories in the conceptual reconstruction of a phenomenon or problem.

In particular, Marx needed to investigate the history of the concept of 'value' and its various social forms, such as the commodity, money, capital, and wages.

The results of his genealogical study of value-forms up to and including the money-commodity are briefly presented in §3 of Chapter 1 of *Capital*, where it is already presented in logical form and demonstrably shaped by the concrete understanding of value which Marx had arrived at by the time of writing *Capital*. His 'categorical genealogy' is a merging of both logical and historical investigation.

It is well-documented that commodity exchange was marginal in ancient times; travelers and itinerant merchants and neighboring peoples provided only occasional exotic products. In early mediaeval times, market activity was tightly regulated by the monarchy and restricted to monthly markets and later to the growing towns. In late mediaeval times, the flow of products from other countries gradually undermined traditional guild control of production. In these times, there was no clear distinction between a working class and the bourgeoisie; these were merely the better-off or poorer sections of the merchant and artisan classes gradually developing in the towns, trading in imported goods, agricultural produce purchased from farmers and the products of artisans.

Gradually, the differentiation between masters and wealthy merchants on one hand, and laborers, journeymen and apprentices on the other, began to widen, especially with the growth of colonialism. Merchant companies like the East India Company became enormously wealthy whilst the monarchy, saddled with expensive business of waging war and maintaining order became relatively impoverished and had to borrow from the now wealthy bourgeoisie.

The creation of an impoverished proletariat in the towns as a result of the Enclosures and the existence of significant accumulations of capital as a result of colonial trade provided the conditions for industrial capitalism to take root. These were the conditions which led to the revolutions of the seventeenth and eighteenth centuries that ultimately put the bourgeoisie in political power and would make the commodity-form the dominant economic relation in modern society. Early concentrations of workers in large workshops gradually gave way to full-blown industrial capitalist exploitation.

The above narrative is not of course a good exemplar of the work of the historian. But:

> Once production founded on capital is presupposed … its *historic presuppositions*, which, precisely as such *historic* presuppositions, are past and gone, and hence belong to the *history of its formation*, but in no way to its *contemporary* history, i.e. not to the real system of the mode of production ruled by it. … While e.g. the flight of serfs to the cities is one of the *historic* conditions and presuppositions of urbanism, it is not a *condition*, they therefore disappear as real capital arises, capital which itself, on the basis of its own reality, posits the conditions for its realisation. … These presuppositions, which originally appeared as conditions of its becoming – and hence could not spring from its *action as capital* – now appear as results of its own realisation, reality, as *posited by it – not as conditions of its arising, but as results of its presence*. … These indications, together with a correct grasp of the present, then also offer the key to the understanding of the past … In order to develop the laws of bourgeois economy, therefore, it is not necessary to write the *real history of the relations of production*. But the correct observation and deduction of these laws, as having themselves become in history, always leads to primary equations … which point towards a past lying behind this system. … Therefore, it is not necessary to write the *real history of the relations of production* (Marx, 1973 [1858], 459-460)

Thus, Marx was able to determine that the commodity was not only the simplest form of value, but it appeared long before and independently of the bourgeoisie and was the chief process which paved the way for the growth of the bourgeoisie and the dominance of capital. Further, industrial capital did not just exploit the existence of an impoverished mass of proletarians, but actively and continuously *reproduced* and *expanded* that class, laborers earning just enough each day to be able to return to work the next day. Capital now did not merely bring industrial workers together under one roof, but actively drove the continuous revolutionisation of the techniques of production.

In short, Marx had to study the *history* of the commodity, of capital, wages and so on, the various forms of value, *in order to* understand their essential nature and their logical relation to one another – their genealogy.

8. The Units of Capital

Before moving to the structure and sequencing of the Parts of *Capital* which will conclude this analysis, I will now reflect on what we expect to find in each Part of *Capital*, having a mind to immanent critique, the Idea of the True, and the use of categorical genealogy.

8.1 The Unit and Immanent Critique

In line with Hegel's Idea of the True, the unit must be a concept known to everyday consciousness in the relevant form of life and *not* a *product* of the science. So constant capital, variable capital, and rate of surplus value, which Marx introduces with phrases like 'which I call', *cannot be units*. Concepts introduced as part of the critique 'disappear' in the result.

Each unit arises on the basis of the social formation and conditions already established in prior parts of the reconstruction. But this has to be qualified, because none of these units arrives on the scene fully formed. Economic history is required to identify the universal form and establish logical dependence.

Despite the titles Marx gave the Parts of *Capital*, the unit is essentially a countable noun – an individual, simple something. For example, a commodity, a capitalist firm, an unpaid portion of a day's labor. Although this is essentially the case, in many cases the language does not provide clear distinctions.

8.2 The Units Carry the *Content* of the Science

It is the *unit* that provides the science with its content and the nature of its unfolding. This is what fundamentally distinguishes Science from Logic and one science from another. The unit of the Logic is the One (NB: not 'Being') – a *unit* without a content. The basic unit of political economy is the commodity (NB: not an 'empty concept'). political economy also has other units, such as capital, wages, profit, etc., each of which is introduced in turn along with its unique content.

8.3 The Universal and Particular of each Unit

Analysis identifies a diversity of entities as irreducible contents of a phenomenon. One is to be selected as the *universal* individual, capturing the nature of the relevant phase of the phenomenon in a nutshell. The universal commodity, money, is exchangeable with any particular other commodity and performs all the functions of a commodity as a unit of wealth – means of exchange, measure of value, store of value. The universal unit of capital is the industrial capitalist because all other forms of capital can only partake of a share of the surplus realized by the industrial capitalist; the daily wage is the universal form of wage because labor power is fundamentally produced by the day and other means of payment are merely means of squeezing more labor-power out of the worker.

Other forms of the unit are *particular*; ordinary products of industry, exchangeable for money, for example; day-labor is the universal form of wage, but piecework and part-time work wages are particular forms of wage-payment that exist within a labor market still determined by the cost of subsistence for one whole day.

The universal unit not only typifies the whole process; controls all the particulars. The universal circuit of capital, beginning from money, dominates the particular units beginning from production or commodities. This can be verified by historical investigation.

8.4 The use of Historical Critique in each Unit

All this was explained by Hegel in the 'Idea of the True'. However, unlike Hegel, Marx is not prepared to just declare that money is the universal commodity – a claim which could quite easily be made on a purely logical basis. Instead, he writes §3 of Chapter 1 that traces the development from the elementary form of value up to gold coinage. The point is: under what conditions does gold or any other form of commodity function as money? This cannot be decisively resolved by Logic. It has to be said though, that:

> it is not necessary to write the real history of the relations of production. But the correct observation and deduction of these laws, as having themselves become in history, always leads to primary equations … which point towards a past lying behind this system. (Marx, 1973 [1858], 459–460)

Like a family history, a genealogy is not a comprehensive history such as would truly warrant the name of historical investigation. It is just necessary to trace the social conditions which facilitate or block the development of the unit and the particular forms which the unit takes before attaining the universal form and how.

For example, in Part II of Volume One, Marx observed that the particular forms of capital – usury, and merchant's capital – long pre-existed industrial capital. But only industrial capital was able to regenerate the conditions for its continued existence by exploiting wage labor and forcing workers to return again the next day to be able to live. Ultimately, all the particular forms of capital became dependent organs of industrial capital, until the rise of finance capital. Consequently, Marx is at pains to draw the historical distinctions between usury and finance capital. All this has to be verified or falsified by genealogical investigation.

Contrary to the claim that *Capital* is a work of systemic dialectic and not one of history, it will be seen that the logic of *Capital* is an 'historical logic'; not the logic of the succession of dominant forms, but the internal logic of relations and their dependence on conditions (see Ilyenkov, 1960).

The historical observations to be found in all the Parts of *Capital* may appear to be just examples or illustrations, but this is not the case. It is this historical investigation that distinguishes the dialectic of *Capital* from the dialectic of Hegel's *Encyclopaedia*.

8.5 Not All Parts are Units

Finally, of the 18 Parts of *Capital*, only 14 are units, or 'germ cells'. The second last Part of Volume One and the last Parts of Volumes Two and Three mark the completion of the 'circle of circles'. The last Part of Volume One on Primitive Accumulation represents a *transitional* formation, and is not part of the structure of capital in its developed form.

Many of the chapters of *Capital* have profound ideological, historical and political significance. For example, 10% of Volume One is devoted to the Working Day – clearly intended as a political intervention in the labor movement. But the subject of this article is the Hegelian roots of Marx's *Capital*, so I have limited myself to consideration of those aspects of *Capital*, which represent the structure of the whole and have direct connection to Hegel's Logic.

Finally, Part I of Volume One plays a double role: it must ground the *whole science*, *i.e.*, value, in its simplest social form, the commodity, and the unit for the development of modern capitalism, money, as the universal commodity.

9 Analysis by Units

The remaining 14 Parts are units or 'germ cells', as follows.

9.1 The Commodity (Vol. One, Part I)

Marx's *Capital* begins with the *commodity*, the simplest social form of value. The commodity is the foundation of the whole work in the sense that the whole of *Capital* is concerned with the transformation and distribution of value in a series of different forms. The concept of 'value' is thus concretized by the identification of these successive forms.

The commodity is a particular kind of labor, use value, and its magnitude, exchange value — abstract labor-time, the socially average time required for the production of the given use value. Value is more fundamental than price, which is but the *appearance* of value, affected by a multiplicity of social conditions manifested only when the commodity is exchanged. The substance of value is therefore abstract labor-time, whatever the form of value.

Using categorical genealogy, Marx shows that the universal commodity is money.

9.2. The Embryo Capitalist (Vol. One, Part II)

The embryonic unit of capital is an *individual capitalist* who buys in order to sell more dearly. The individual capitalist develops into a capitalist firm. Capital is a unique form of value which can arise neither within circulation nor outside circulation, but must continuously be put into circulation and withdrawn again.

The *universal* form of capitalist firm is the industrial capitalist, which exists alongside the continued existence of particular forms of capital, the merchant capitalist and the usurer. The industrial capitalist employs labor-power and expands its magnitude by appropriation of surplus value from the laborer.

9.3 Unpaid Labor-time (Vol. One, Part III)

The surplus value acquired by an industrial capitalist through the employment of wage-labor is the *unpaid labor-time* worked every day by the laborer over and above the time necessary to produce the equivalent of their wage, their subsistence needs for the day. This surplus value is appropriated by forcing the laborer to work unpaid labor time. All the surplus value accrued by the total social capital and redistributed among the various sectors of the capitalist class, and subsequently shared with landowners and finance capitalists, is equal to the total of unpaid labor time of all the workers involved in the cooperative production process.

In Part III, Marx also defines second-order units which are the three component parts of capital: constant, variable and surplus value. These concepts, however, belong to Marx’s analysis and are not Parts of Political Economy itself. Surplus value may be acquired by other means, but unpaid labor-time is its universal form.

9.4 The Necessary Labor- time (Vol. One, Part IV)

The *necessary labor-time* is the time required by each worker, on average, to produce the equivalent of their daily needs. This is paid by the capitalist to the worker. Its significance is that the progressive development of the productive forces by productive capital continuously reduces this necessary labor-time, which constitutes the share of the total social labor which accrues to the working class.

In their endeavors to increase their profits by increasing the productivity of labor, thus reducing the necessary labor time, the capitalists collectively reduce their investment in wages, the portion of capital which generates their profit.

9.5 The Productive Laborer (Vol. One, Part V)

Marx identifies the unit of *productive labor*. Unlike the capitalist who counts only the ‘hands-on’ front-line worker as ‘productive’, Marx says that ‘it is no longer necessary for you to do manual work yourself; enough, if you are an organ of the collective laborer’.

9.6 The Daily Wage (Vol. One, Part VI)

The industrial capitalist pays the *daily wage* to the worker for the use of their labor-power for an entire working day. Its value, however, is the labor-time necessary for the production of a day's labor-power. Marx isolates this unit to analyze the various particular forms of payment which serve to disguise the nature of the value of the worker's labor-power. The daily wage is the universal form of wage because labor-power is produced by the day, even if it is used by the hour.

This completes the immediate production of capital, *i.e.*, one unit of capital at a time. Parts VII and VIII are not units.

9.7 The Circuit of Capital (Vol. Two, Part I)

The basic unit of Volume Two is the complete circuit of a commodity from money-capital to productive capital to commodity-capital and back to money-capital, ready for reinvestment in expanded magnitude.

This *universal* unit is interlaced with the *particular* units – the circuit of commodity-capital and the circuit of productive capital.

Each individual capital plays a part in ensuring the conditions for the renewal of each circuit in the absence of any overall plan.

9.8 Turnover (Vol. Two, Part II)

Turnover is the time taken for a unit of capital to complete its circuit and return to capital in the same form. The turnover time makes the denominator in the determination of the rate of profit.

The need to put capital into circulation and pull it back out as fast as possible forces the capitalist to reduce the turnover time. Part III is not a unit.

9.9 Cost-price and Price of Production (Vol. Three, Part I)

The cost-price is the portion of the total value of a commodity which is accounted for by the total capital invested, irrespective of its division into constant capital and wages. The price of production is the cost-price plus profit on the total capital invested.

Cost-price and price of production are both mere *appearances* and do not correspond to objective needs of society for its reproduction. This is the *appearance* of the economic categories under the rule of capital.

9.10 The Average Rate of Profit (Vol. Three, Part II)

The *average rate of profit* is the total social surplus divided by the total capital invested in a given period of time, such as a year. In line with capitalist norms, this rate is generalized by the joint action of the commodity market and the capital market and applies to all units of capital whether productive or commercial.

The rate of profit can be equalized only by industries which are inherently more profitable effectively *cross-subsidizing* those sectors that have a large quota of constant capital to sustain. This happens by commodities being sold above or below their value and by the movement of capital on the capital market.

9.11 Accumulated Fixed Capital (Vol. Three, Part III)

Marx demonstrates that the drive to increase the productivity of labor inevitably leads to a disproportionate increase in the mass of material and machinery which the capitalist has accumulated and which must be put back into circulation. Therefore, with the increase in the rate of surplus value, the absolute value of profit grows, but its proportion to capital advanced, the rate of profit, tends to decline.

9.12 The Commercial Capitalist (Vol. Three, Part IV)

The *commercial capitalist* is a capitalist firm which buys in order to sell more dearly, but deals solely with forms of credit arising in the circuit of commodity capital.

The activity of commercial capital in its *pure* form is speculative and does not contribute to the creation of the social surplus.

9.13 The Finance Capitalist (Vol. Three, Part V)

The *finance capitalist* is a capitalist firm which *loans* money-capital without releasing ownership of it, and charges interest for its use. This is the *universal* form of finance capital; *particular* forms of finance capital include those firms who hire out the use of infrastructure such as warehouses or roads or platforms like Facebook or Google Earth on the same basis.

In finance capital, *function is divorced from ownership*. The interest of finance capital in the expansion of credit serves as a burden on the back of productive capital and the source of a new class antagonism.

9. 14 The Private Landowner (Vol. Three, Part VI)

The *private landowner* is a unit which plays no part in production whatsoever, but charges a levy on productive capital by means of its monopoly control of land. The private landowner is a redundant class, surviving only on the basis of an inherited monopoly of the land. Part VII is not a unit.

In concluding this section on units, it is important to note that the *sequence* of units in *Capital* was derived by Marx from his analysis of political economy beginning from the commodity – a category of social labor, *not* a logical category. The *method* is logical, but the *content* is drawn from the units appropriated by Marx from political economy in the light of economic history.

Conclusion

One hundred years later, it seems that Lenin was right. *Capital* and the *Science of Logic* are two books which, if properly understood, have stood the test of time. In his desire to distance himself from the Young Hegelians and speak to his audience of self-educated artisans, Marx chose not to make his debt to Hegel explicit. Perhaps he believed that educated readers would see it for themselves? It seems the institutional separation of philosophy and political economy has made this kind of reading rare, if not impossible.

In particular, the 'germ cell' method that Marx and Hegel both used in their scientific work, and the concept of ideality, are little understood today, but have considerable merit in dealing with complex problems. We should learn from Hegel and Marx.

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