

Marx's *Capital*: a concrete analysis of class and capital

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Abstract: A number of features of Marx's *Capital* are indicated suggesting the inspiration of Hegel's *Logic*. In particular: the determination of the commodity as the germ cell, as well as the unit of capital and the unit of surplus value, conception of class as a form of activity, immanent critique in the sequencing of concepts, and the construction of concrete concepts of capital and labour with individual, particular and universal moments. Further, the so-called "transformation problem" and predictions like the falling rate of profit are disposed of.

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Preamble

Once the young Marx decided in 1843 that it was the specific nature of wealth in modern capitalist societies, rather than aristocratic privilege, which was the real source of the oppression and exploitation, and devoted himself to the study of political economy, he had taken the decisive step in his life project.

More than 20 years would pass before he published the first volume of *Capital*. I argue that the opening line of that great work already contained the essential insight which made *Capital* the epoch making work that it was. But *how* and *why* Marx did chose to begin *Capital* from the *commodity*, rather than, for example, “commodity production” or “value”? I will show that Hegel had already demonstrated in his *Encyclopaedia* the method of selecting the “germ cell” or “unit” from which the scientific study of a phenomenon must begin, and understanding this method enables the dialectical analysis of *any* phenomenon, not just capitalism.

Further, I will show that this use of Hegel’s method of determining a “germ cell” did not end with the determination of the commodity, but was followed by the determination of a unit of capital and a unit of surplus value.

I also show that Marx did not follow his own *Theses on Feuerbach* to begin from the analysis of practice, beginning instead with an analysis of the *product*, because only the product of labour can be accumulated. Here his debt is to Moses Hess.

Finally, I will show that the overall structure of *Capital* echoes the structure of Hegel’s *Concept Logic* with Individual, Particular and Universal moments of capital and labour – a concrete concept of capitalist society.

As a result I will demonstrate that the so-called “transformation problem,” of values into prices, is a non-problem and explain the limitations of *Capital* as a predictor of the historic trajectory of capital.

I do not claim to be able to look into Marx’s mind, but the methodological parallels with Hegel are unmistakable.

Introduction

In 1914, coming to the end of his study of Hegel’s *Logic*, Lenin (LCW v. 38, p. 180) wrote in the margin: “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*. Consequently, half a century later none of the Marxists understood Marx!!”

A century later it is still true that few of those who take a real interest in Marx’s *Capital* have thoroughly studied and understood Hegel’s *Logic*, and consequently, despite countless books and articles on the topic, *Capital* is still not completely understood. Insofar as present day writers have been able to grasp the method of *Capital*, invariably the insights gained are limited to the study of “Marxist Economics,” and few indeed have learnt the more general lessons which can be applied to the analysis of diverse phenomena.

In what follows I shall demonstrate how extensively the *Logic* applied by Hegel in his *Encyclopaedia* was applied by Marx in *Capital*. What results is a view of *Capital*, not so much as a work on “Marxist economics” as a detailed anatomy of the classes in the capitalist society of his own time and a development of Hegel’s *Logic* which opens an unlimited field of phenomena to like analysis.

Among the diversity of relations Marxist scholars (see Moseley & Smith, 2015) have seen between the *Logic and Capital*, there seems to be just one point of agreement. That is that the passage in the *Grundrisse, The Method of Political Economy* (Marx, 1858, p. 100), written about 1858. This essay is Marx's synopsis of Hegel's *Logic* in terms of the history of political economy. As such, all Marxist scholars agree that this passage is an important clue as to the relation between *Capital* and the *Logic*. There is, however, no agreement as to precisely *what* *The Method Political Economy* is telling us. Consequently, I will begin with an close examination of this passage, so as to leave no room for misunderstanding.

The Method of Political Economy (1858)

In this passage, Marx describes the historical development in outline of any science, but in particular, the history of political economy. The internal development of what Hegel called a "formation of consciousness," that is, a form of practice, such as a science, is the realisation of the logic which is the subject matter of Hegel's logic.

Marx began his outline of this historical logic as follows.

"When we consider a given country politico-economically, we begin with its population, its distribution among classes, town, country, the coast, the different branches of production, export and import, annual production and consumption, commodity prices etc."

This beginning point is both the way in which the founders of political economic science began, and how anyone not yet having the benefit of a knowledge of political economic science would begin in trying to understand the political economy of a given country. To begin in this way is a logical necessity in the absence of an existing body of science.

Marx continues:

It seems to be correct to begin with the real and the concrete, with the real precondition, thus to begin, in economics, with e.g. the population, which is the foundation and the subject of the entire social act of production.

Every science, and in fact every practice, begins its development with what appears to be the real and concrete. 'Concrete' in the sense of immediately given facts of perception framed in terms of concepts which are part of natural consciousness in the formation from which the practice arises. In the beginnings of political economy, notions like population, export and import, commodity prices, etc., were known. They were not really scientific concepts but were accepted as unproblematic factors which could be measured. So, a picture could be built up of the economic reality by collecting all this data together, prior to having any theory or system of economics.

Hegel refers to this phase in the development of a formation of consciousness as Being. Being is process in which reality is captured as an array of quantities and qualities presented as a series of measures, much like an almanac. This is a true image of reality, full of information about the object, but not providing any sense of it, without rhyme or reason, so to speak. This is the point from which political economists of the past first began to build their science. It was also the way in which they *presented* their theories, seeming to begin with an unproblematic, objective picture of reality, and then discovering various laws and tendencies in the information presented.

Marx then observes:

However, on closer examination this proves false. The population is an abstraction if I leave out, for example, the classes of which it is composed. These classes in turn are an empty phrase if I am not familiar with the elements on which they rest. E.g. wage labour, capital, etc. These latter in turn presuppose exchange, division of labour, prices, etc. For example, capital is nothing without wage labour, without value, money, price etc.

That is, the picture of reality with which the political economist begins is “abstract” in the sense that the *connections* between all the various measures is absent – they are just disconnected, abstract figures, each unexamined, and on their own effectively meaningless. But on the other hand, this picture of reality is concrete in terms of its content, with every little event included in the data omitting nothing – abstract in conceptual form but concrete in its perceptual content.

Thus, if I were to begin with the population, this would be a chaotic conception of the whole, and I would then, by means of further determination, move analytically towards ever more simple concepts, from the imagined concrete towards ever thinner abstractions until I had arrived at the simplest determinations.

This phase of development of a science Hegel calls Essence. The content-rich but chaotic beginning is overcome by working over all the observations, averaging, correlating, sorting them and determining the patterns and relations lying behind the observations, which can be determined by analysis, and inventing new concepts to represent these various higher level entities. A concept such as “value” is the ultimate conquest of this development, alongside the various theories with which it is hoped to explain the laws governing the political economic reality.

So:

From there the journey would have to be retraced until I had finally arrived at the population again, but this time not as the chaotic conception of a whole, but as a rich totality of many determinations and relations.

The whole point of building the conceptual framework of a science is to “reconstruct” the reality with which you began, reconstruct it in theory. That is, instead of the series of numbers with which you began, you end up with a systematic science which can reproduce equivalent numbers as the output of theoretical calculations, and therefore, be in a position to predict and even determine what the numbers will be – a conceptual image of reality which provides a genuinely scientific understanding of the object.

The above applies whether the theorist conducts the conceptual reconstruction according to a positivist conception or a dialectical conception like that of Hegel and Marx. In any case, at this stage, Marx has not yet resolved the problem of just *which* concept to begin with and the *sequence* in which the initial abstract concepts are to be combined.

Depending on the efficacy, consistency and completeness of the system which has been devised, the predicted or determined outcome will well or poorly correspond to the raw data which are in fact measured. That is, there is always a

mismatch between the conceptual image of reality and the perceptual almanac of data it was meant to explain and control.

The writing of *Capital* is an instance of this “return journey,” just like the other systems of political economy which had preceded it. In Marx’s words:

The former is the path historically followed by economics at the time of its origins. The *economists of the seventeenth century*, e.g., always begin with the living whole, with population, nation, state, several states, etc.; but they always conclude by discovering through analysis a small number of determinant, abstract, general relations such as division of labour, money, value, etc.

As soon as these individual moments had been more or less firmly established and abstracted, there began the *economic systems*, which ascended from the simple relations, such as labour, division of labour, need, exchange value, to the level of the state, exchange between nations and the world market.

Not only did the early economists begin their work with the data available to them at the time, which they had to, but they presented their work in the same way – beginning with an overall profile of the economy and then proceeding to derive their various systems. But then Marx remarks:

The latter [i.e., beginning from the simplest abstract determinations like “value”] is obviously the scientifically correct method. The concrete [i.e., the given data] is concrete because it is the concentration of many determinations, hence unity of the diverse. It appears in the process of thinking, therefore, as a process of concentration, as a *result*, not as a point of departure, even though it is the point of departure in reality and hence also the point of departure for observation and conception. Along the first path the full conception was evaporated to yield an abstract determination; along the second [the method Marx is to use in the writing of *Capital*], the abstract determinations lead towards a reproduction of the concrete by way of thought.

The characterisation of the method of building a theory by beginning with the concepts which have emerged from the history of the science as “obviously the scientifically correct method” can be confusing. Systematic political economy began as the systemic character of capitalism began to manifest itself. The systems of political economy all developed their material in this way. However, not all were conscious of this. In *Capital*, on the other hand, Marx will begin with the concepts which have been historically isolated by his predecessors and from there endeavour to reconstruct the real political economy, but in *conceptual* form, that is, as a theory or system of political economy.

Contribution to the Critique of Political Economy 1859

Begin from array of concepts, or select just one concept?

However, there was another step in this analysis which Marx achieved between writing the *Grundrisse* in 1857-1858 and the “first draft of *Capital*,” known as *Contribution to the Critique of Political Economy*, in 1859, and that is that Marx selects *one* concept with which to begin his critique, as opposed to an *array* of concepts. That one concept was to be “value.”

In Hegel's terms, the construction of the various concepts in the process of trying to build theories which "explain" the data is Essence or Reflection, the second book of the Logic, after the first book, Being. In the process of Essence, science digs deeper and deeper into the data, finding connections and correlations and expressing these insights in the form of laws and correlations. The outcome or product of Essence is a *succession* of new "abstract" but explanatory *concepts*.

The third book of the Logic is the Concept Logic, and here the various concepts which come out of Essence are brought into relation to one another and merged in successively more concrete concepts, the most concrete of all being the "conceptual reproduction of the concrete by way of thought," the theory which at last manages to replicate concrete experience in conceptual form, the final product of development of the science. It is this third phase of the science which is represented in the writing of Capital.

According to the structure we find in Hegel's Concept Logic, the beginning is made with *one* concept; this concept is subject to critique, bringing out its internal contradictions, and *then* it is brought into relation with one after another of the *other* concepts which have also been produced through the process of Reflection.

Which concept is to be the first?

Which concept, however, is to be the *first* concept in the conceptual reconstruction of reality, and what shall be the sequence in which one concept after another is merged with the first? This depends on a concrete analysis of the concepts in question; that is, it depends on the particular science. In general, the determination of the first concept depends on a *back and forth* movement of cognition: the theorist posits one concept as the germ of the entire formation, and then checks to see if the given reality *can* be reconstructed from this starting point. If not, the theorist goes back to the drawing board. This work has come down to us in the copious manuscripts originally published as Theories of Surplus Value.

The historical development of the subject itself

I will return to these questions, but let us continue, for the moment, with Marx's remarks in the passage we have been analysing.

In this way Hegel fell into the illusion of conceiving the real as the product of thought concentrating itself, probing its own depths, and unfolding itself out of itself, by itself, whereas the method of rising from the abstract to the concrete is only the way in which thought appropriates the concrete, reproduces it as the concrete in the mind.

But this is by no means the process by which the concrete itself comes into being. For example, the simplest economic category, say e.g. exchange value, presupposes population, moreover a population producing in specific relations; as well as a certain kind of family, or commune, or state, etc. It can never exist other than as an abstract, one-sided relation within an already given, concrete, living whole. As a category, by contrast, exchange value leads an antediluvian existence.

An abstract concept of exchange-value can be formulated by a thinker even in the absence of the social conditions in which exchange-value can fully develop. However, exchange-value is manifested in economic activity only under certain social conditions which have to be present *before* exchange-value can develop, it But is the exchanging products of labour over a protracted period of time which works to create the conditions for its fullest development. But this is a long historical process in which *many other* processes are at work. Marx here draws a distinction between a theory or concept and its evolution as a result of critique, on one hand, and on the other hand, the relevant social practice (the transformation of social relations into commodity relations) in which the concept is realised, which develops “outside the head” as a *part* of social-historical development itself.

There is a difference between a practice, a “formation of consciousness” – and a science is an example for such a formation – and what we could call, by way of contrast, a “*social* formation” or social practice which is the subject matter of the science; there is a difference between the theory of exchange value and a exchange value as it is manifested in a society in which it is at home. The theoretical development of a science is an imperfect and highly mediated image of the development of the object itself (presuming that the object is taken to be a form of practice). As Marx pointed out, the concept of “exchange value” had an “antediluvian existence” – even Aristotle had reflected on this concept, but living in an ancient slave society, it was impossible for him to fully understand it. Slave society had to fall and feudal relations had to be destroyed before exchange-value could fully develop. A full understanding of “exchange-value” would have to wait for a social formation in which exchange-value had become the essential relation of the entire social formation – in 19th century industrial Britain, at least, when all the implications of the concept had *developed themselves* and were manifest to the political economists of that time as they reflected on the world around them. Hegel was content to build his Logic on the basis of practices *as if* they were *designed* by the conceptual activity of the social elite, but the point was to understand the development of the practice itself, according to its own logic. Marx was aware that purely theoretical activity can easily go astray. Only by observing the real manifestation of an economic category in social conditions where its fullest development is possible, can theorists reliably determine the real nature of the concept. This fact is manifested in the obviously limited success of Hegel’s Encyclopaedia, written when the sciences he was outlining were only in their infancy – including political economy.

In Marx’s words:

Therefore, to the kind of consciousness – and this is characteristic of the philosophical consciousness – for which conceptual thinking is the real human being, and for which the conceptual world as such is thus the only reality, the movement of the categories appears as the real act of production – which only, unfortunately, receives a jolt from the outside – whose product is the world; and – but this is again a tautology – this is correct in so far as the concrete totality is a totality of thoughts, concrete in thought, in fact a product of thinking and comprehending; but not in any way a product of the concept which thinks and generates itself outside or above observation and conception; a product, rather, of the working-up of observation and conception into concepts. The

totality as it appears in the head, as a totality of thoughts, is a product of a thinking head, which *appropriates* the world in the only way it can, a way different from the artistic, religious, practical and mental appropriation of this world. The real subject retains its autonomous existence outside the head just as before; namely as long as the head's conduct is merely speculative, merely theoretical. Hence, in the theoretical method, too, the subject, society, must always be kept in mind as the presupposition.

The essay continues, but I will leave off here, for the outstanding problem before us was how Marx determined that the concept of *value* (not just exchange-value, which is a quantity abstracted from the concrete value of the commodity through exchange on the market) should be the starting point of *Capital*, and how successive concepts were brought into relation with value as it was developed in *Capital*.

The selection of the concept which is to be the starting point for the analysis of a social formation is not given by necessity. It is a matter of choice on the part of the theorist, and depends largely on the theorist's life experience, and consequently the world they live in. The Physiocrats, for example, claimed that all value came from the *land*, and this view reflected the dominance of agriculture in their time. The success of the theorist's choice is however measured by the success of the conceptual reconstruction which results: to what extent the resulting theory captures and reproduces the essential nature and dynamics of the given social formation. It was Marx's life-experience, now living in advanced industrial Britain, that led to his specific understanding of capitalist wealth.

Some writers had traced capitalism back to antiquity; other writers dated the birth of capitalism in the Enclosures, which created the mass of landless labourers lacking any means of living. But Marx (1864) showed in an unpublished sixth chapter of *Capital*, that capitalism was born when industrialists began employing these labourers, giving them access to tools and material, but only paying them enough to be able to report for work again the next day; that is, when work itself became a commodity.

Marx does not say *why* he chose "value" as the starting point for the reconstruction of capital. A judgment of the merits of this choice can only be made on the basis of the success of *Capital* in grasping the dynamics of modern society. Michel Foucault (1977) chose not value, but social control as the essential relation of modern society, its archetype being the panopticon prison. Which analysis is superior is a matter of judgment.

But not the "concept of value" ...

However, as late as 1881, in annotations on Adolf Wagner, Marx (1881/2010) wrote:

I do not start out from the "concept of value" ... What I start out from is the simplest social form in the which the labour product is presented in contemporary society, and this is "the commodity."

This is a second development which took place in Marx's thinking before writing the *Contribution* in 1859: the commodity, rather than the concept of value.

On the face of it, this claim seems to be a reiteration of Marx's distancing himself from Hegel. However, as we shall see, beginning not from the "concept of value" – which is what seems to follow from the passage in the *Grundrisse*

which we have been examining, but from the commodity, is *true to Hegel's Logic* when properly understood. What is significant about “the commodity” is that it is an immediately given *discrete, concrete instance* of value, and also, it is not a concept of political economy like “value,” but a concept which is *given to the everyday consciousness* of any citizen of bourgeois society. Everyone knows what a commodity is (or could know, once the concept is clarified). However, it is *not* a question of starting from a material thing or process rather than a concept (i.e., mental image). “Commodity” is a concept, but a concept which is not necessarily part of a theory of political economy, but arises as part of the natural consciousness of participants in bourgeois society.

When closely examined, however, “commodity” is seen to be a quite mysterious concept when subjected to analysis, because there is nothing about the physico-chemical properties of a commodity which makes it a “commodity”: to be a “commodity” is in fact a *social* property of something, its place in human activity. This conception of the social properties of a thing is something which is accessible to natural consciousness of anyone in bourgeois society. You can't start a science from an esoteric concept whose meaning relies on the very science it is meant to underpin. Only a concept which can be readily grasped by a participant in the relevant practice, that is, a citizen of a capitalist society, can provide the starting point for a science. And Marx will demonstrate why “commodity” is eminently suitable as the starting point for understanding capitalist social formations.

The opening lines of Capital

I will return to Capital at greater length later on, but see how Marx (18167) opened Capital. In the 1867 Preface to the First German Edition he remarked:

The value-form, whose fully developed shape is the money-form, is very elementary and simple. Nevertheless, the human mind has for more than 2,000 years sought in vain to get to the bottom of it all, whilst on the other hand, to the successful analysis of much more composite and complex forms, there has been at least an approximation. Why? Because the body, as an organic whole, is more easy of study than are the cells of that body. In the analysis of economic forms, moreover, neither microscopes nor chemical reagents are of use. The force of abstraction must replace both. But in bourgeois society, *the commodity-form of the product of labour — or value-form of the commodity — is the economic cell-form.*

In these words, Marx has already indicated his use of the metaphor of a *cell* (*Cellformen*) but given that in Hegel's day, microscopes had not yet been of sufficient resolution to identify cells, it can be taken that this is an allusion to Hegel's term, the “germ” or “seed” (*der Keim*). Abstraction replaces sensuous perception. Thus, Marx has signalled that the “first” (*das Erste*) is to be a cell (*der Keim*), a discrete instance (*das Eins*), given to natural consciousness in bourgeois society. Marx has chosen not to begin with a quantitative abstraction, but with a real unit (*das Einzel*) of wealth. This is then made abundantly clear in the opening lines of Capital itself.

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. Our

investigation must therefore begin with the analysis of a commodity.

Marx uses the transhistorical term “wealth” and cites his own words in 1859 to observe that in modern capitalism wealth takes the form of an *accumulation of commodities*. He then introduces the term “unit” (*Elementarform*) as the single (*das Eins*) commodity with which he is to begin, that is, the unit (*das Einzel*), the commodity, is to be the first (*das Erste*).

I have emphasised a number of words and given their German equivalents, all applying to the commodity – unit, first, germ, single – the significance of which will become clear when I turn to Hegel presently. But it should be noted that Marx has moved from the position he arrived at with *The Method of Political Economy*: he is starting from *one* concept produced by political economy, not just its “simplest” which he said would be “exchange-value,” but the “simplest social form” in which it appears in bourgeois society. Commodity this is a *concrete* concept inasmuch as it is not a quantitative abstraction but refers to the concrete entity in which value is manifest, and further that a single *discrete* instance of a value is to provide the starting point. The quantitative concept of exchange-value is now to be recovered by critical examination of the commodity.

I can go no further here without clarifying the Hegelian texts which describe the process which lies behind the path which led Marx to open *Capital* with these words. Everyone knows that Marx began *Capital* with the commodity, but very little has been written to explain *why* he started from the commodity. The only explanation is found buried deeply in a little known passage in Hegel’s *Science of Logic*. So I now turn to the passages in the *Science of Logic* which take us beyond the insights Marx reflected in *Method of Political Economy*.

Hegel’s Analytical and Synthetic Method: The Science of Logic

Hegel presents his *Science of Logic immanently*.

How he does this is this: he first engages in an extended examination of the “experience of consciousness” in *The Phenomenology of Spirit*, and subsequently the more systematically elaborated *Introduction to the Encyclopaedia*, to determine a starting point for philosophy in the concept of Being. Each of the 444 concepts which are then elaborated in the 844 pages of the *Science of Logic* are derived only from those concepts which have gone before. Nothing is introduced from outside or in advance of their derivation from the preceding sections of the *Logic*. It is only after more than 750 pages that Hegel begins to explain *how* this construction has been accomplished, that he begins to explain what could be called his “method.”

It is in Hegel’s elaboration of the analytic and synthetic methods where we see at last clearly how Hegel determines the sequence of concepts in the *Logic*. His method is, he says, simultaneously analytic and synthetic, but despite Hegel’s insistence to the contrary it is possible to discern in Hegel’s *Logic* a certain alternation between analysis and synthesis. The method described is used not only in the *Logic* itself, but throughout the *Encyclopaedia*. That is, it is a method which can be used in the dialectical construction of *any* science. Nonetheless, the success of any reconstruction must depend on the relevant practices themselves and therefore on the real development of the science.

Hegel is not claiming that an entire *Encyclopaedia* of the sciences can be developed by logic alone. The point is, in fact, that the starting point for each

science is given by natural consciousness arising within the relevant practice. However, the naturally arising concept which will become the starting point for a new science, has to be subject to critique before a dialectical reconstruction can begin. This first phase of critique, the critique of the spontaneous conception of some phenomenon is an *analytical* phase, the *outcome* of which is the “first” – what in the case of Marx’s political economy turned out to be the commodity rather than “wealth” or “the concept of value.” The second phase is the *synthetic* phase, in which successive abstractions are merged with the first, building up a successively concrete conceptual reconstruction of the phenomenon. This distinction is not widely recognised even among Hegel scholars, let alone Marxists, so a detailed dissection of the text is necessary.

The following is the crucial but little known paragraph from page 801 of the Science of Logic (Hegel, 1816).

The progress, proper to the Concept, from universal to particular, is the basis and the possibility of a **synthetic science**, of a **system** and of **systematic cognition**. 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** (*die konkrete Einzelheit*) that is given to **subjective, natural cognition** as the **first** (*das Erste*); but in cognition that is a **comprehension**, at least to the extent that it has the form of the Concept for basis, the **first** must be on the contrary **something simple** (*das Einfache*), **something abstracted 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 Concept**.

(Hegel S 779. The italics is Hegel’s, the bold is mine)

The first (*das Erste*) is the concept from which each science is to begin – the ‘cell’ (*der Keim*) – a term Hegel uses repeatedly throughout the Shorter Logic.

Hegel is saying is that firstly, the *synthetic* phase of a science must begin with this “**something simple**” (for example, the commodity). This prescription applies to “actuality, whether of nature or spirit” – i.e., the natural and social sciences.

Secondly, Hegel describes this “something simple” (***das Einfache***) as “the concrete individuality that is given to subjective, *natural cognition*.” *Einzelheit* means “single,” so *Einzelheit* means an item or instance. “Natural cognition” refers to the common sense or normative perception of a process *within a given social formation* or practice, prior to critical analysis or synthetic cognition.

For Hegel, ‘concrete’ means the concentration or unity of at least two distinct concepts. (For example, he says (1831, §§87-88) that, whereas Being and Nothing are *abstractions*, Becoming is the first concrete concept because it is the organic unity of Being and Nothing). As an organic unity of opposites, a *concrete* concept contains an internal contradiction which is what drives development and unfolds the content of the ‘concrete individuality’.

The first (***das Erste***) for synthetic cognition, is the *product* of analytical cognition. At nodal points in the development of a science a corresponding “simple something” is abstracted from concrete of whole experience, and subjected to *synthetic cognition*, that is, the dialectical unfolding or

reconstruction of a whole process, the whole ‘circle’ of the particular science. These nodal points, which are characterised by contradictions, mark out the alternation between analytical cognition and synthetic cognition.

This “something simple” must be “*abstracted* from the concrete” by analysis. So the beginning of a science requires the abstraction of such a concrete individuality from the concrete field of experience which can be made the starting point for a synthetic reconstruction of the concrete in theoretical form. This act of abstraction requires an insight into the whole process:

analytic cognition ... starts from a *presupposed*, and therefore individual (*einzeln*), *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 1816/1969, p. 787, S. 753)

Hegel said that “the first requisite for this is, as we have shown, that the beginning be made with the subject matter in the form of a self-related **universal**.” “Self-related” means that it’s meaning is not dependent on some other concept; it is self-standing. So, the concrete *individuality* which is the product of analysis is simultaneously *the universal*, that is to say, it is an *archetype* or “germ cell” of the entire organism which is to be synthesized in theory. “Concrete individuality,” for Hegel, means that the cell is internally contradictory (like the exchange-value and use value of a commodity), the coincidence of two antithetical concepts which can be exhibited by analysis, and it is by the unfolding of this internal, implicit contradiction, that synthetic cognition unfolds the whole circle of phenomena which make up the science in question.

Note that the “something simple” is an *individuality* and this is the difference between, for example, “Morality” and moral *actions*, or between “Art” and a *work* of art. An individuality is discrete and bounded, and not continuous or intangible, a particle rather than matter, a something rather than stuff, an action or an activity rather than activity.

According to Hegel, an exposition of the science following the path of synthetic cognition begins from this concrete individuality which is deemed to be an abstract (i.e., simple, and abstracted from its concrete circumstances) instance of the Universal – the phenomenon which is the subject matter of the whole science, and proceed from there to the various particular forms of the universal. This phase of the science is demonstrated in the Third Book of the *Logic*: a *concept* of a concrete individuality is taken up (clarified and analysed, before proceeding), and is then subjected to immanent critique, successively surpassing its limits, exploring the particular forms implicit in it, until arriving at a contradiction which can be resolved in actuality only by the emergence of some *new* concrete individuality, and with that a *new* branch of science, a new “circle” of philosophy.

It should be noted that Hegel does not believe that the natural and human sciences can be elaborated by logic alone, without reference to observation and experiment:

Their (the sciences’) *commencement*, though rational at bottom, yields to the influence of fortuitousness, when they have to bring their universal truth into contact with actual facts and the single

phenomena of experience. In this region of chance and change, the adequate notion of science must yield its place to reasons or grounds of explanation. (Hegel, 1830, §16. S. 70)

It should be noted that Marx went further than Hegel on this point in that Marx insisted that the *synthetic* phase of the science – the development from the cell to an organism – *also* necessarily relied on observation of the development of the real subject matter itself and the theorist's intervention in the subject matter, rather than by merely logical critique by a philosopher.

Hegel provides us with an understanding of how these prescriptions are to be understood in how he elaborated the three books of the Logic: Being, Essence and Concept.

The Structure of the Logic

The Logic is divided into two volumes. Volume One describes the genesis of a concept from Being, the first book of the Logic, through Essence, the second book of the Logic. Volume Two, the Third Book of the Logic, is the Concept Logic, and insofar as Capital “resembles” Hegel's Logic, it is the Concept Logic. Above we have traced the process by which Marx arrived at the commodity from which Capital would begin. So it is the first two books of the Logic which are relevant to this process which *culminated* in the commodity.

Being, the One and Quantitative Science

“Being” is determined by Hegel to be the concept from which Philosophy must begin, and Hegel observes that it was indeed the claim that “All is Being” that were the first words of modern philosophy, uttered by the Eleatics at the very beginning of ancient Greek philosophy. In making this observation, Hegel excluded metaphysical speculations about the nature of reality, such as there being four elements, earth, fire, water and air, and so on. It was when *being as such* was determined as the concept from which philosophy must begin that the place of Being in philosophy was realised, when philosophy properly so called, began.

But the determination of the starting point for philosophy is not to be derived from history, but must be established philosophically. For this purpose, it was necessary to prove that the concept from which a beginning is to be made must be true *without presuppositions*, because any such presupposition would be in fact the true beginning. To have no presuppositions excluded relying “clear ideas” such as axioms, because such axioms presupposed human intuition, so axioms were never presuppositionless, always depending on the consciousness of individual philosophers. It follows then that in order to be presuppositionless a concept must in fact lack all content. So “Being” for Hegel does not make any claim about the *existence* of something – I can say “Mickey Mouse is a comic character,” and here “is,” the verb to be, does not at all claim that Mickey Mouse exists, only that Mickey Mouse is something apprehended by thought. Existence is another matter altogether.

So, the first stage of determining the starting point for philosophy was a *critical examination* of the concepts put forward in the history of philosophy as starting points, and this critique Hegel elaborates in the Introduction to the Encyclopaedia, reviewing European philosophy from the Scholastics, through Descartes, the Empiricists, Kant and his contemporary, Jacobi. The result is the

determination of Being, an empty abstraction, as the starting point of philosophy.

The Logic itself then begins with an *analysis of Being*. Being is shown to have the same content as Nothing, each being a contentless abstraction, but Hegel points out that this realisation manifests Becoming (Being became Nothing) thus already philosophy has three concepts, although only the third, Becoming, is a concrete concept. But Becoming implies that *Something* must be Becoming. That is, “Becoming” is meaningful only if Some Determinate Being is becoming. Thus we have a fourth concept. But – and this is crucial – “some determinate being” must be a One, a discrete instance or item. Otherwise, one is still at the point of something becoming.

This fifth concept, the One (*das Eins*) is actually the completion of the first phase of the Logic, which has moved from the initial indeterminate abstraction to a definite One. One immediately generates the concept of Many: if there is one, then there could be Many, and from here Hegel unfolds the entire conceptual apparatus of quantitative science, of mathematics and statistics. But it is important to see that the initial concept, Being, which had arisen from the history of philosophy, turned out to be an empty abstraction, and it was only at the point that the One was determined that it was possible to unfold the full range of concepts of quantitative phenomena.

The One (*das Eins*) turned out to be the germ cell (*der Keim*) of objectivist, quantitative science.

So, it is not Being which is the first (*das Erste*), but the One.

Essence, Reflection and Theory

Another important concept which emerged from the history of philosophy is Essence. Philosophers realised that the apparently “objective” data collected by the Empiricists, sorting everything into a categories and counting and measuring natural processes was only an “appearance,” and the task of science was to determine what lay *behind* appearances, that is, what was the “Essence” of things. Hegel set about critiquing this abstract concept, realising that the seeking beyond appearances to find the Essence of things is in fact an *endless process*, and not as might be supposed some final, inner explanation for appearances waiting to be uncovered. Essence was a journey not a destination.

Hegel’s determination of this process was Reflection, in which an existing concept reflects on new information, and is modified as a result of this interaction. He elaborates the dialectic of Reflection by a critique of the concept of Identity, i.e., the claim that the Essence some determinate being. It goes like this. Identity already implies a Difference in that the claim that “this is a that” is meaningless unless the that is something different than the this. But Different in what way? how? leading to the realisation of Diversity. But Diversity implies not just Difference, but Essential Difference, or Opposition. And if there is opposition within Identity, then this is Contradiction. To grasp Contradiction means to find the Contradiction which is the Ground of the Contradiction given in Reflection. The Ground then, is the determinate concept which arises from the abstract concept of Essence. Essence is the search for the Ground of a Contradiction.

On the basis of the concept of Ground, Hegel then proceeds to elaborate the full range of concepts which arise in the process of research into a field of data, searching for the underlying processes generating the immediately given data.

Hegel sees this as an unending process in which theory after theory layers one upon another, everything appears to be both a cause and effect of everything else, and no definitive, final conception of the phenomenon is arrived at, but in the course of the unfolding of Essence, new concepts arise which more or less well encapsulate the processes which have been uncovered, and these new concepts then provide the basis for a new concrete conception of the world. But in order to build such a concrete conception, one must begin with these concepts, a concept which captures reality in a nutshell, so to speak.

The above material constitutes Volume One of the Logic, "Objective Logic," which is the Logic through which an abstract concept which is to form part of the basis for a dialectical reconstruction of the whole emerges. The Second Volume of the Logic, is Third Book, is the Logic of the Concept, the "Subjective Logic," the Idea. This volume deals with the phase of *dialectical reconstruction* reality, what Marx called "obviously the scientifically correct method," to be carried out by him in Capital, whereas I have up to this point only dealt with how Marx arrived at the opening sentence of Capital. So I will defer reflection on Hegel's Concept Logic. For now, what I need to do is show that Marx's determination of the first, the germ cell or unit of capitalist society as the commodity was a realisation of the method Hegel explained and implemented in the Science of Logic.

The Commodity as First, Unit and Germ cell

Hegel's critique of Being demonstrates the same logic that Marx must have gone through when he thought about how to analyse "the wealth of those societies in which the capitalist mode of production prevails." It was necessary to determine what kind of definite, discrete entity could constitute an instance of wealth, i.e., value, in this social formation. He could have concluded that that would be a coin or banknote, but reflection shows that money is a particular kind of wealth which, so long as it is simply hoarded, does not constitute wealth at all. Money is itself a commodity which was only useful as something to exchange, having no other use-value in itself. He could have concluded that a work-action constituted the universal substance of wealth, but self-evidently this cannot be true because everywhere we see that those who work are not those who possess wealth, and in fact, only insofar as labour-power is sold for wages, i.e., used as a commodity, can a worker gain any wealth at all.

I cannot claim to know the thought-processes that Marx went through to arrive at the conclusion that the commodity was the unit of wealth or value, and should be the first concept for an analysis of capital, from which other concepts could be unfolded, but it is clear enough that the single commodity is the unit, first and germ in exactly the sense which Hegel explained in the Science of Logic and demonstrated in the Logic.

The point of this article is not just to show how Marx used Hegel's Logic in his magnum opus, but use this fact to learn how a Marxist interpretation of Hegel's Logic can be used to tackle the analysis of *any* social or natural scientific phenomenon. To further emphasise this point, I will skim briefly across some other sections of Hegel's Encyclopaedia, to show how *Hegel* applied the idea to the full range of natural and human sciences.

Hegel's use of the Unit across the Encyclopaedia

The first book of the Philosophy of Nature ostensibly begins with "Space," but much more determinate concepts are his immediate beginning: the Point, the Line, and the Surface (which encloses a space).

Beginning from "Space," the Philosophy of Nature presents in outline a concrete concept of Nature which Hegel saw as orienting the various natural sciences. The absence of Time from this conception is surprising at first, but it does not imply that movement and change does not exist in Nature, but simply that the concept of Nature, natural science, must take it as given that whatever the laws of nature may be they are constant across time. Otherwise, it would have been impossible to formulate the Big Bang Theory, because this theory relies on the presumption that the laws of physics were the same a billion years ago as they are at the present moment, provided that those laws are properly formulated. So Hegel was right: all natural science rests on a conception of Space (recall Einstein's conception of matter as curvature in space-time), but space is just an abstraction. A single instance of space, the germ cell or unit, is a Point, ... and so on.

The second book of the Philosophy of Nature, nominally begins with "Mechanics," but analysis of Mechanics derives the *Particle* as the first. "Organic Physics," nominally about "Life," actually begins from an Organism.

This pattern is repeated throughout the Encyclopaedia.

In the Philosophy of Objective Spirit, also known as the Philosophy of Right, "Abstract Right," begins with Possession. This section of the Encyclopaedia is of particular interest when comparing the work of Marx and Hegel because here Hegel is addressing the same object as Marx was addressing in Capital.

Hegel saw the state as a creator and guarantor of *rights*. Of course, Hegel was more than aware that any given state may well fail to one degree or another to live up to this concept of the state, but the point was that the *ideal* state, a state which is true to the concept of a state, ensures rights for its citizens. The Young Marx, who was initially active over questions of censorship and the abuses of the aristocracy, probably agreed with Hegel over this, but as Marx tells us: "In the year 1842-43, as editor of the *Neue Rheinische Zeitung*, I first found myself in the embarrassing position of having to discuss what is known as material interests. ..." and "I eagerly grasped the opportunity to withdraw from the public stage to my study." He began with a critical study of Hegel's Philosophy of Right, but was driven to the conclusion which would characterise his work forever after – it was the capitalist mode of production which was the essential source of oppression and exploitation, not the remnants of feudal relations, and consequently, in his analysis of the modern state he would focus on the true instrument of exploitation, *wealth*, wealth accumulated by normal economic activity within the political economy of the capitalist mode of production.

Interestingly, Hegel begins his work on rights with what he took to be the germ cell of right, Possession. Possession is not a legal relation, for one can possess a thing by coercion alone, but such possession is forever unstable and the possessor must always be on their guard against someone taking it from them. It is when possession is *recognised* that it becomes a judicial category, a *right*, and it is in these early paragraphs of the Philosophy of Right that Hegel shows in minute step by step detail how possession becomes recognised and transformed into a right, ultimately defended by law, how possession functions as the germ cell of right, even though it is itself not yet a right, properly so called.

By contrast, Marx begins his analysis of modernity not with *having* but with *exchanging*. It is remarkable, how close, but different, the starting point for the analysis of the modern state is for these two great thinkers: having or exchanging. Along one line of dialectical reconstruction we get a constitutional monarchy based on the rule of a landed aristocracy, along the other we get a capitalist society ruled by ever wealthier capitalist firms bound together by the capital market.

In two different parts of the Philosophy of Right, Hegel analyses “value,” and it is of interest how Hegel dealt with the contradictions which Marx subsequently uncovered in “value.” Hegel (1821, §196) derived the concept of “value” in the section on Property, specifically under Use, so that value was taken as a measure of the usefulness of a commodity:

labour confers value on means and gives them their utility, and hence man in what he consumes is mainly concerned with the products of men. It is the products of human effort which man consumes.

Although he saw the value of a product was dependent on it being a product of human labour *and* as conditional upon the capacity to exchange it, he did not see that value is *quantitatively* determined in exchange or by labour-time. He still saw the measure of value as determined solely by utility, and failed to see the contradiction between use value and exchange-value. Under social conditions where labour was still largely carried out under traditional relations, without an overarching capital market, this contradiction was invisible to Hegel because it has not manifested in social practice.

Marx’s selection of the commodity as the first and unit of value for an analysis of capitalist society lies squarely in line with Hegel’s example. The difference is that Hegel saw the modern state primarily as the regime of *right*, whereas Marx saw that it was *wealth* resting on the capitalist mode of production which was the determining and characteristic relations of civil society in modern capitalism. These two views flow from the different life experiences of a philosophy professor in the Germany of the first quarter of the 19th century, and that of a communist agitator in the Germany of the third quarter of the 19th century.

Artefact or Action: Theses on Feuerbach vs Capital

Capital begins with the declaration that “our investigation must therefore begin with the analysis of a commodity,” but in the opening lines of Marxism, the Theses on Feuerbach (1845, #8), Marx had declared that “All social life is essentially practical. All mysteries which lead theory to mysticism find their rational solution in human practice and in the comprehension of this practice.”

So in 1845, Marx resolved to begin with a practice, such as the practice of exchanging products of labour (artefacts). And indeed, the Grundrisse (1857-8) began from “Production in general” and “The general relation between production, distribution, exchange and consumption.”

But in 1867, Marx began from the artefact, the material product which is exchanged, and not the practice of producing or exchanging them. This is not a small difference, and Marx emphasised in §1 of Chapter 1, that what unites commodities “cannot be either a geometrical, a chemical, or any other natural property” but *social* properties, and in §3 of Chapter 1 mocks the “fetishism of commodities,” the mystical belief that a thing has human powers. Indeed, the

analysis of social relations in terms of *things* seems to be a very peculiar way to go.

At the time Marx was engaged in his criticism of Feuerbach he was in discussion with Moses Hess, at the time an advocate of “True Communism,” whom he subjected to ruthless criticism in volume 2 of *The German Ideology* and then again in the *Manifesto* in 1848. But in 1843-45, Marx learnt about Communism from Moses Hess. Hess had formerly been a follower of J. G. Fichte, a critic of Hegel and admirer of Babeuf. In 1843, Hess published a book entitled *the Philosophy of the Act*, in which Hess characterised the historical passage from the rule of the nobility to the bourgeoisie to socialism in terms of being, having and doing. The philosophy of the working class was therefore to be based on *doing*, activity, practice; bourgeois philosophy on the other hand would be based on having, on property. This insight is reflected in the contrast between Hegel’s *Philosophy of Right* which begins from Possession, and *Theses on Feuerbach* which posits *practice*.

The point is that Capital is *not* an exposition of Socialism; it is a critique of the *capitalist* society, the society of having, not doing. So it makes sense. Capitalism is a society based on *having* and of forcing the doing of propertyless proletarians to produce things which the bourgeois can *have*. Capitalism will have to be analysed from a unit or germ cell which is the *product* of labour which is exchanged, rather than on the kind of practice of either labourer or bourgeois. The aim remains an understanding of the practice of the capitalists and the kind of labour in which the proletarian are engaged, but it is to be unfolded from the product of labour, the artefact.

Stepping out of the historical frame for a moment, it has been a discovery of Activity Theorists, the one current of Marxism which, following Vygotsky, has embraced the germ cell/unit method of Capital that the germ cell can be an elementary practice, a characteristic artefact or tool, or a key sign or word. In different circumstances one or another mode of existence is appropriate.

A further way that it can be seen that Marx *had* to begin with product of labour for exchange, rather than the action of exchanging is the fact that activity itself cannot be *accumulated*, wealth can only be accumulated insofar as it exists or *could* exist as material things. Marx was adamantly opposed, for example, to the conception of production in which the capitalist and worker each contribute a *service*, the capitalist contributes their machines and material, the worker contributes their labour. Marx did recognise that services can be commodities (such as the teacher in a private school) but insisted on the material product of labour as the *archetype* of commodity. Likewise, one can only make sense of accumulating wealth in the form of credit notes and banknotes on the basis of wealth as an accumulation of means of production which is constantly put into and withdrawn from circulation, and state-guaranteed convertibility. The theoretical foundation had to be built on *material products of labour*.

What follows from this approach is the view of capitalism as a gigantic system of reification, of the transformation of human activity into things, things which are subject to exchange and *possession*. Socialism, on the other hand, would be a system of collaborative activity for which the need for accumulation would be marginal. In that case, the unit of analysis would be a collaborative action.

* * *

All the above was necessary to bring us to the conclusion that “Our investigation must therefore begin with the analysis of a commodity.”

Chapter One of Capital. Analysis of the Commodity

The difficulty I am faced with in analysing the First Chapter of Capital is that Marx explained himself so well that it is hardly necessary for me to add to his own words. Further than that, countless books and articles have been written on this chapter, and I am not suggesting any kind of dissident reading of the chapter. It is an immensely rich text and I could easily spend tens of thousands of words on it without adding significantly to what is already known. So I will be brief.

The crucial and well-known point is that Marx analysed the commodity and disclosed within it a contradiction. It is by the unfolding of this contradiction that the dynamics of bourgeois society will be revealed, and in such a way that it can be seen as a *necessary* development, rather than an arbitrary theoretical construction or hypothesis.

The commodity was an embodiment of a definite quantity of labour, and political economy had already established that the value of the commodity – by means of which it could be *compared* with and therefore in practice *exchanged* with any other commodity – was the quantity of labour embodied in the commodity, that is, the labour time, on the assumption of labour of socially necessary and average skill and intensity. On the other hand, the commodity could only be exchanged, and therefore realise its value, if it met a human need of some kind, that is, if it had use-value. The *quantification* of the commodity as exchange-value depended on reducing the human labour in it to “abstract labour,” labour of a uniform, average kind. The quality of the labour is irrelevant with respect to its exchange value, with all labour being brought into the same market and bought and sold at an average price. By contrast, use-value embodies labour of a particular *quality* meeting qualitatively different human needs.

Also in Chapter 1, Marx introduces us to the fact that the labour power which is sold by the proletarian to the capitalist for the capitalist’s own use, is also a *commodity*, and as such its value (wages) is determined by its average cost of production, that is, the social necessary labour time which is required to produce what the worker needs to reproduce themselves and their dependents every day so as to maintain the supply of labour power to the capitalist.

Likewise, deferring any reference to money as such till part D of Chapter 1, Marx makes it clear that the worker is paid in commodities and that in fact, money is just a special form of commodity. At this stage it is assumed that “money” is a commodity which has been singled out as a medium of exchange, archetypically gold. In this situation, the value of money is not mystified, because money really is a commodity like any other.

Chapter 1 concerns itself only with commodities. No new units or germ cells are introduced. Time is the measure of labour, its unit being the working day (not hours), but time is not a new unit as its only role in Chapter 1 is as the measure of labour.

Commodities exchanged at their value

In his analysis of capital Marx adopted from the natural sciences the technique of “holding constant” factors extraneous to the process which is currently under the analytical microscope. This has in fact the same effect as Hegel’s immanent method, but rendering it in this way makes the concept more comprehensible than relying, as Hegel did, on appeal to the logical sequence of concepts alone.

In order to analyse a complex phenomenon in which many different causes and effects are at work, the analyst must find a way of theoretically isolating the relation on which they need to focus. To do this all other relations are analytically “held constant.” According to Marx’s analysis, capital is a dynamic system and cannot be finally understood other than through its dynamics. However, in order to get started he explicitly holds constant everything beyond the immediate relation of exchange which is in focus.

Further, in order to understand a form of human life, it is necessary to examine the social formation under conditions in which all the actors act according to how they *should* act, normatively. An implication of this is that all commodities – including labour-power and the money-commodity – are exchanged *at their value*. This is a method adopted from Hegel in his Philosophy of Right, which Marx had mocked in his 1843 *Critique*. Hegel analysed the state under conditions in which a state was “true to its concept,” fully aware that just as in the Germany of his time, any actual state is far from being a “true state.” Likewise, Marx established that the ills of life under capitalism arose *not* because people cheated each other or because workers were not paid the true value of their labour-power, but on the contrary, because all commodities were exchanged at their value. A fully dynamic picture of capital is not arrived at until all three volumes of Marx’s Capital have been completed.

There are a number of implications of this move.

The first implication is that in the first volume of Capital the *price of commodities are equal to their value*. Now “price” and “value” are conceptually distinct in that value is an “inner” social property of a commodity, whereas “price” generally refers to the value realised in definite acts of exchange. Laying that distinction aside, Marx has shown that exchange-value is the socially necessary quantity of average labour embodied in the production of the commodity, and “price” is the quantity of money whose value is equal to that of the commodity. That is the meaning of “commodities are exchanged at their value” when one of the commodities is money. Recall that “money” here is taken to be a quantity of gold. Paper money and so on still lie ahead. If all else is held constant, and commodities are exchanged at their value, price equals value.

In reality, generally prices are *not* equal to values, but by definition that contradiction arises under conditions when commodities are not exchanged (i.e., bought and sold) at their equivalent. The situation will be shown to arise not because people cheat, but because of dynamic factors arising from the capitalist economy as a whole, but this too still lies ahead.

The analytical isolation Marx adopts in the first volume is that he assumes that the rest of the economy surrounding a given exchange is taking place either in isolation from the given transaction or takes place under identical conditions so that market relations or relations of competition or movement of capital across the economy do not disturb that presumed conditions of equilibrium of the transaction in focus. The economy is effectively taken to be many *like transactions happening side by side in conditions of static equilibrium*.

Quantity and Quality

These conditions are necessary to realise the contradiction at the heart of the commodity relation. On the face of it, the *quantity* of abstract labour embodied in producing the commodity is simply incommensurable with the *quality* of the human need being met by the commodity (and the quality of human labour

required to meet that need). Every human need has its own unique measure, whereas labour-power is measured by time alone. However, if we assume an economy in equilibrium with commodities being exchanged at their values, then the magnitude of production of the means of satisfaction of every need must exactly match the magnitude of the sum total demanded. There is no place for over- or under-production here. Consequently, the equilibrium assumption presupposes a perfect division of labour and capital across all industries and firms.

Every social formation, whether capitalist or not, distributes its social labour across the whole range of productive activities according to its needs and aspirations. Consequently, the real total quantity of product of a *certain quality* corresponds to a *certain proportion* of the total social labour. Thus, there is a *contradiction* between the value of a commodity determined by its use-value and the value of a commodity determined by the labour embodied in its production. These are two, distinct, potentially contradictory determinants of value, of how the total social labour will be distributed, which will be identical *only* under conditions of equilibrium. This contradiction is manifest only when the real totality of social production is brought into view. This standpoint is still beyond the horizons of Chapter 1, however. It will take Marx three volumes of Capital to work through this contradiction presented in the very first chapter of Capital.

One of the implications of this move of “holding everything else constant” is that by presuming the entire economy to be in effect a large number of acts of employment of labour effectively isolated from one another because they are taken as if all taking place under identical conditions, is that in this first part of Capital, it is the *individual* producer which is the subject matter. A real economy is of course unlike this. The workings of a real economy, with a diversity of different producers working in a diversity of conditions drawn together in a single capital market with a common currency, still lies beyond the scope of this volume.

* * *

There is much more which could be said: I have said nothing of “commodity fetishism,” nothing of “abstract labour” perfected in the factory system and its dehumanising effects, nothing of Marx’s historical derivation of money as the medium of exchange, etc. These important aspects of Chapter 1 would lead me away from my aim, so I am passing over them.

However, we have travelled a long way to see why Marx began with the commodity, and to see how in Chapter 1 Marx renders bourgeois society in the image of a commodity market. Most significantly, he discloses the contradiction within the unit of value, namely, that a commodity contains both exchange-value determined by the socially necessary quantity of abstract, uniform labour embodied in production of the commodity, and use value, which is diverse in its qualities and has a value which is relatively independent of the quantity of embodied labour. Thus a contradiction in the heart of the unit/germ cell.

In Chapters 2 and 3, the unit, the commodity, C, is expanded.

In modern society exchange is always mediated by money, M. People rarely exchange products of labour, they buy and sell commodities. So instead of simple circulation, C—C, we now have C—M—C. Money has already been shown to be a commodity, a special commodity, so the mediation of exchange by

money (C—M—C) appears like a kind of virus, a proto-organism growing out of the cell, emerging out of the circulation of commodities.

Purchase and sale are concepts well known to the natural consciousness of anyone living in a society where there is commerce. Money enters the picture as the commodity which is used as the universal medium of exchange. If Marx, like the political economists, had introduced money from the start, its nature would have been mystified. By starting with the commodity, even though a society of pure commodity exchange has almost never existed, Marx is able to introduce money in such a way that its genesis from commodity exchange is obvious and there is no mystery about the value of money.

Nonetheless, C—M—C is a new unit, a unit which arises from and builds upon the original unit, C, the unit of bourgeois society.

The sequence in which the units are combined

I explained above that there is no fixed procedure for determining the *first* concept in the dialectical reconstruction of reality. It usually requires a trial and error process of some kind. For example, the theorist looks back in history to the putative origins of the social formation for a germ cell relation, and then traces the development of that germ cell forwards. Does the germ cell encapsulate the essential character of the formation? Does the germ cell create self-sustaining relations which generate the conditions for its own existence? And moving back and forth, searching for the essential relation which most perfectly captures the dynamic of present reality. However, the question now is, having selected the first concept, here “commodity,” from which the dialectical reconstruction is to proceed, how is the *sequence* of concepts following to be determined?

I have already shown how the reconstruction begins from a critique of the germ cell concept which has the effect of synthetically unfolding the implications of the germ cell. In the case of Part I of Capital, this produced in particular, the rendering of labour power, money, and means of production as forms of commodity and the process, C—M—C, by means of which commodities circulate.

Hegel described the Encyclopaedia as a “circle of circles.” What he meant by this is that the circle of philosophy as a whole is made up of many smaller circles. Each circle begins from the unfolding of a contradiction which has arisen from the previous circle and could not be resolved within that circle, an unresolved problem. Each circle is completed with the discovery of a new contradiction which, in turn, gives rise to a new circle. This is exactly what Marx does in Volume I of Capital.

The “contradiction” typically takes the form of an *overdetermination*, where unfolding of the initial unit leads to conflicting, incompatible determinations of some kind, or, of an *indeterminacy* in which a question arises for which there is no determined answer. As Hegel demonstrates, these contradictions can take extremely diverse forms but these two are most significant.

Not only does comprehension of the ground of each successive contradiction lead to a new phase of synthetic, dialectical reconstruction of the real process, ever more adequately grasping its dynamics, but in general, *how* a social formation responds to a contradiction is *indeterminate*. For example, commodities circulated in England for centuries, but the nobility were able to suppress the growth of commercial capital, and in China, for example, industrial

capital did not emerge until recent times. Every nodal point in the dialectical reconstruction therefore also marks a point of indeterminacy.

Part II: The Transformation of Money into Capital

The Individual unit of capital

Part I of Volume 1 of Capital is made up of the first three chapters in which there are in effect only commodities. Wages are commodities. Labour power is a commodity. Money is a commodity. In Part II, the subject matter is to be capital.

In Part I, Marx has already established the circulation of commodities by purchase and sale, mediated by money repeatedly moving into and out of circulation through the unit C—M—C. In Part II, Marx points out how instead of starting, like the proletarian with only something to sell (their labour-power), by starting, like the capitalist with money, the cycle can be rendered as M—C—M. The starting point, M or C, is indeterminate. Either is possible.

This is a new unit, a form of activity already well known to the everyday natural consciousness of any citizen of a capitalist social formation – the capitalist firm. However, the motivation for buying in order to sell is only to make a profit, so the unit becomes M—C—M', in which M' represents a sum of money which includes a profit from the transaction.

Here we have presented in crystal clear form the essential classes of a capitalist society: the proletarian whose activity is C—M—C, and the capitalist whose activity is M—C—M'.

Three observations follow about this concept.

Firstly, note that Marx has defined the two great classes of capitalist society as *forms of activity* (in line with Theses on Feuerbach) not as mutually exclusive groups of people.

Secondly, in the fourth Chapter, the chapter in which Marx introduces capital, Marx *personifies* the capitalist firm; he refers to it as:

“As the conscious representative of this movement, the possessor of money becomes a capitalist. His person, or rather his pocket, is the point from which the money starts and to which it returns,”

In Chapter 5, he is “Our friend, Moneybags.”

The significance of this form of presentation is that the individual capitalist is the *germ cell* of the capitalist firm. In any developed capitalist society, the activity M—C—M' is a capitalist firm, but in the logically primitive situation of Part II of Volume 1 of Capital, in which we have been considering individual economic actors in a market, the germ cell of this unit is an individual capitalist. Putting it another way, the *unit* of capital is a capitalist firm, but the *germ cell* of a capitalist firm is an individual entrepreneur, which *becomes* a firm.

Finally, M—C—M' appears to be in *contradiction* to what was assumed to begin with, namely, that commodities are exchanged at their value. How is it that by starting with money, the capitalist ends up making a profit? This is of course the nub of the problem Marx tackled in writing Capital. It turned out that labour-power is the one commodity which, rather than its value being either preserved or destroyed in consumption, *expands* value when consumed in production.

It is invariably overlooked, that Marx not only began Capital with the germ cell/unit of the single commodity, but began Part II of Capital with the unit of

the individual capitalist firm, its germ cell being the individual capitalist, Moneybags. The subject matter of the book is obviously not commodities, but capital. This is a common theme. For example, the subject matter of Hegel's Philosophy of Right is generally understood to be the State, but he begins with the simplest right, Property, whose germ cell is Possession. Before one can understand the "macro-unit," one must first understand the "molecular" unit of which the macro-unit is composed (for a capitalist firm is an aggregate of commodity transactions, capital being a mass of money repeatedly put back into circulation). However, it is the macro-unit (state, organism, firm) which *organises* the micro-units (rights, cells, commodities).

The capitalist is a concept already known to everyone, even if imperfectly. One doesn't need to have a theory of political economy to recognise Moneybags. But he is not posited from the outset, but is *derived* from the circulation of commodities through purchase and sale. This already-known figure has been logically derived from its preconditions, which he reproduces in his activity.

The origins of surplus value – the unit of surplus value

Part III of Volume 1 of Capital, beginning with Chapter 7, addresses itself to the contradiction which Marx has uncovered in the capitalist firm, namely, how it is that through exchanging commodities at the value, a profit can be made: M—C—M'.

Marx's move here is brilliant. His analysis of labour power has already drawn attention to the fact that a day's labour power has a definite value, being the labour time required to produce the equivalent of a what a worker needs to be able to work again the next day and down the generations. He introduces the idea of "necessary labour time," being the time a worker needs to work, whether for the capitalist or on his own account, in order to produce the equivalent of their wage each day (it always being presumed that the worker is *only* paid enough to live). But! This is *less than* one working day. In every day's work a worker provides to the employer there is *surplus labour time*, and the capitalist gets to use this labour power for free; the worker has already earned their wage, but they are forced to continue working solely for the benefit of the employer.

This *surplus labour time* – the number of hours of unpaid labour the capitalist exploits from the worker every day – is a new unit, the unit of surplus value. This idea would be novel; workers know they are being exploited, but it had always been a mystery just how the capitalist gets rich while the worker doesn't, despite the worker being paid the going rate for their labour power. But it makes immediate sense, at least to the worker: it is being forced to work those extra hours every day which is how the capitalist is appropriating the surplus from the worker. It could be said that the unpaid labour time is the *germ cell* of surplus value, because in developed capitalism surplus value can be extracted by more round about means.

This is the third unit Marx has introduced in Capital by drawing on what is given to the everyday consciousness of citizens of capitalist social formations. Surplus labour time is of course a *germ cell*, but all the forms in which surplus value is extracted in capitalist society grow out of and rest on this germ cell.

The remainder of Part III is dedicated to examining how the capitalist makes the surplus labour time each day as large as possible and the necessary labour time as small as possible, and the distinction between that part of capital whose value is simply recovered when it is consumed and sold (materials, costs of

machinery, etc.), “constant capital,” and that part of capital which *expands* when it is used – “variable capital,” the value of the labour power consumed. In Parts IV and V, Marx introduces us to the concepts of absolute and relative surplus value, according to whether the capitalist extracts a surplus by extending the working day and thus the social struggle over the working day, or thanks to the wider economy producing the workers’ needs with the expenditure of less labour time and the ongoing process of revolutionising the forces of production.

Marx avoids discussing the rate of profit, postponing treatment of this concept until the 3rd volume. But already in what we have learnt from Volume 1, a contradiction has come into view. The capitalist is motivated by the amount of surplus labour he appropriates per unit of invested capital (both constant and variable), expressed in the rate of profit. (I leave aside the question of turn-over time). But what Marx has derived is the amount of surplus labour appropriated per unit of capital invested in labour power alone. Self-evidently these two rates are different. And not only are they different, but they are *not in any given fixed proportion* to one another because the ratio depends on the division of capital between constant and variable capital which is actually *variable*. But it is well known that across an entire real economy there is a more or less uniform rate of profit. But in Marx’s analysis the rate of surplus value is also a characteristic of the entire economy, depending only on the necessary labour time – the same for all workers – and the length of the working day, also more or less uniform across the economy. So there is a contradiction here, and Marx lets that contradiction lie, because so long as he is dealing with *individual* capitalist firms, under the presumption of “holding constant” any effects of differences between the conditions of production from one firm to another are excluded.

There is no contradiction so long as commodities are sold at their value and all the individual capitalist firms are working under exactly the same conditions in, for example, the organic composition of capital being the same in every individual firm, the optimal use of technology being applied equally in all firms, all firms having access to the same supply of capital, land and labour power. Under these circumstances there is a fixed proportion between the rate of surplus value and the rate of profit, and the simultaneous uniformity of both presents no contradiction.

But Marx knows that this contradiction which will manifest itself in any real economy cannot be comprehended without taking account of competition between firms, without the movement of labour and capital between different industries and without a capital market, and with a variable rate of turn-over of capital. Solution of the contradiction between the uniform rate of surplus value and the uniform rate of profit must be postponed until the scope of the analysis has been broadened.

All of Volume 1 of Capital is concerned with immediate process of production, with *individual* transactions, *individual* proletarians and *individual* capitalist firms, with “everything else held constant,” and consequently wages and goods are all bought and sold at their value, and prices are equal to values.

The market as a quantifier of human labour

Others (See Chris Arthur pp. 269-281, Moseley & Smith, 2015) have observed that there is a kind of *homology* between the subject matter of the first chapter of Capital, and the subject matter of the first book of Hegel’s Logic. Chapter One

of Capital examines the process in which human labour is reduced, through the activity of the market, to a single quantity, abstract labour – labour of socially average skill and intensity, irrespective of the differing quality of the human needs being met. Book One of the Logic, Being, is the Logic of Measure, in which whatever the subject matter, all is reduced to a kind of statistical manual, in which everything is sorted into different categories and counted. This is the logic which underlies quantitative science and statistics. In a sense, Capital is describing an *objective social process* in which the work of sorting everything into categories and counting them is carried out independently of any overall conscious intelligence.

This has led to people seeking a kind of parallel between the two books, even to the extent of one-to-one matching of concepts. Fascinating as this exercise may be, one of the side effects of the approach focussed on the homology of economics and quantitative logic, is that Marx's Capital, as a unique unrepeatable application of the Logic tells us nothing about how Hegel's Logic can be used to understand the whole field of social and political phenomena. On the other hand, the economic homology does have very far-reaching implications for the understanding of how *ideals* of all kinds arise from human activity independently of the voluntary, subjective activity of writers or political leaders. I have chosen not to further pursue these issues at this time.

Volumes 2 and 3 of Capital

In opening Volume 3 of Capital, Marx explains the roles of the three volumes:

In Volume 1 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 2.

Marx refers to the subject matter of Volume 1 as “the immediate productive process,” but this is necessarily one in which *individual* workers and capitalists confront one another. As Hegel puts it in the Science of Logic (p. 621): “The individual, therefore, as self-related negativity, is immediate identity of the negative with itself; it is a being-for-self. Or it is the abstraction that determines the Concept, according to its ideal moment of being, as an immediate.”

Volume 2, he says, is concerned with the circulation of commodities and capital which bind the whole into a single process – no longer are other processes to be “held constant” and no longer therefore can prices be deemed to correspond to values. The Third Volume:

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 volume, 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

Particular capital

In Part I of the third volume entitled “The Conversion of Surplus-Value into Profit and of the Rate of Surplus-Value into the Rate of Profit,” Marx considers units of capital competing with one another in the market for the same commodity. Assuming all such units of capital buy labour power from the same market, the quantity of necessary labour time embodied in each product depends only on the efficiency of the technology used by the capitalist, as does the quantity of constant capital invested in materials and machinery for each product. However, since all must sell their product into the same market, and therefore at the same price, every capitalist is forced to adopt the most efficient technology to meet and try to undercut their competitors’ price. The result is a constant drive to revolutionise the means of production.

A number of general tendencies result from this revolutionising of the technology. Generally speaking, each product unit contains a smaller and smaller quantity of the workers’ labour (since that is precisely what is motivating the technological improvement), and in consequence a larger and larger proportion of “constant capital” – both material used per hour (because of increased production), and the value of machinery worn out in production (a tendency, rather than a logical necessity). Operative across the whole economy, this process also forces down the labour time required to reproduce the workers’ labour power every day. The labour market therefore ensures that wages are cut, ironically further increasing the “organic composition of capital,” and reducing the proportion of labour-time (wage-values) in the total value of the product. As the rate of surplus value is increased, the rate of profit tends to go down. If workers force up their real wages, then the opposite occurs – the organic composition of capital and the rate of surplus value are reduced.

Further, the constant revolutionising of production caused by competition in the same market is that *all* the capitalists competing in the same market are forced to adopt the same technique, or at least, techniques of equal efficiency, and consequently forces the organic composition of each unit of capital to the same value and consequently forces the ratio between the rate of profit and the rate of surplus value to a *fixed* proportion. Thus, *competition within a particular market forces all the individual units of capital to share a common rate of profit* with no consequent contradiction with the uniform rate of surplus value applying over the whole shared labour market.

There is much more to Marx’s analysis, but I am going to limit myself to the above result because the coexistence of a uniform rate of profit with a uniform rate of surplus value validity has stood the test of time.

Universal capital

Part II is entitled “Conversion of Profit into Average Profit” and its first chapter is entitled “Different Compositions of Capitals in Different Branches of Production and Resulting Differences in Rates of Profit.”

How do units of capital operating in different markets compete with one another? They compete for capital. If the organic composition of capital is more favourable in one particular market than in another, then thanks to the *capital market*, capital will flow into that particular industry, and other industries with a lower rate of profit will be starved of capital. Ironically, the effect of the intense competition which results from the inflow of capital to a particular industry is an *increase* in the proportion of constant capital relative to wages,

bringing *down* the rate of profit. The converse effect in those particular industries which have been starved of capital, ensures ironically that a higher proportion of living labour per unit of the total value of the product prevails.

Thus the result of the flow of *universal capital* across all the particular industries is the *equalisation* of the organic composition of capital across the entire economy. Further, the ever-wider adoption of automated methods of production, reducing labour costs, pushes the quality of labour into a uniform, average kind of labour, corresponding to “abstract labour,” which can freely move from one particular industry to another, producing in the process a *universal working class* as the *particular* trades are increasingly merged by participation in a single labour market.

Part III concerns the resulting tendency of the rate of profit to fall. This is, of course, an important result of Marx’s analysis, but it is a complex problem and its examination does not further my argument here, so I am going to pass over it, other than to remark that this tendency is the contradiction which is the outcome of Volume 3 of Capital. Consequently, *how* capital and labour will respond to this contradiction is indeterminate. History would tell.

A Concrete Concept of Capital

What Marx has established in Volume 3 of Capital is “the concrete forms which grow out of the *movements of capital as a whole*,” a *concrete concept* of capital in precisely the meaning given to this term in Hegel’s Logic.

Although the Logic began with Being, the subject matter of the Logic is not Being, but the Concept. But the Logic of the Concept is the *third* Book of the Logic, and it begins with an elaboration of the three *moments* of the concept, namely the Individual, Particular and Universal moments. I have emphasised the terms individual, particular and universal in the above because it is in precisely the meaning of these terms, as used here in relation to capital, that Hegel uses the terms in the Logic. That is, we do not have here a homology or a metaphor, but an identity. In order to construct a concrete concept of capital, Marx had to show how universal capital was constructed out of the individual capitalist firms thanks to competition and the flow of capital through the capital markets. The competition for capital between different industries, and the competition in the commodity market between individual firms in particular markets, binds the capitalist class into a single form of activity, a single concrete concept.

It should be observed that a concrete concept of the working class also emerges from the same reflections. Individual workers employed in individual firms form themselves into individual branches of the workers’ movement through their solidarity in each individual firm, and form trade unions in each particular industry (understood as employing particular kinds of labour). One of the results of this process will be transitory under- and over-valuing of different qualities of labour. The mobility of labour and this tendency towards reduction of labour to labour of a uniform kind moderates this difference, bringing all workers into similar conditions of labour. The trade unions form themselves into great industrial unions and ultimately trade union congresses uniting workers across an economy, except where other factors intervene.

Interestingly, capital nowadays also itself manifests a tendency to reorganising individual enterprises along the same lines through the practices of outsourcing and service provision within the capitalist economy.

So it is that the two great classes of capitalist society organise their activity as opposing concrete concepts of capital and labour. Only in Volume 1 of *Capital* do we see the Hegelian practice of identifying individual germ cell/units. This is because Volume 1 deals with the *immediate* process of production. In that volume Marx introduces the basic concepts which are the form the substance of his analysis: commodity, labour and its personification, the worker, the capitalist firm and its personification, the capitalist, necessary and surplus (unpaid) labour time, constant and variable capital – all *units*. Before the real and concrete process of production could be realised, Marx had to consider the *circulation* of capital with all the well-known institutions of the capital market.

Finally, it is in the Third Volume that we see that the overall structure of the work is also guided by the overall structure of the *Logic*. Of course, I do not know Marx's thinking process and I do not claim to. The extent to which Marx emulated Hegel and followed his advice, and the extent to which, working in the shadow of Hegel, he simply rediscovered what Hegel had discovered in his own way, I cannot tell. Fred Moseley (Moseley & Smith, 2015) believes that Marx was directly inspired by a reading of Hegel's *Logic*. (See pp. 123-124 *op. cit.*)

What remains indisputable however, is that these two very important methodological characteristics were shared by Marx and Hegel. And these same insights need to be used by all of us who wish to continue working in this tradition.

Value and Price

One of the great controversies in the interpretations of Marx's *Capital* is the relation between values and prices – the so-called “transformation problem.” I will briefly recapitulate what I have said above on this topic to make the situation clear.

Price and value are conceptually different in that “price” is given immediately as an empirical realization of value, and in particular is measured as a quantity of money. (I leave out of account all components of price such as rent paid by the capitalist or taxes levied by government, which are taken as identical for each producer in Volume 1). “Value” on the other hand is an inner essence which is not given immediately but expresses relations inhering in the state of an entire economy. Specifically, value depends on the amount of *socially necessary, average* labour time embodied in a product, not the labour time actually embodied in producing the same product and is realized in exchange on the market. And price is measured in dollars, whereas value is measured in hours.

Despite this conceptual difference, it is easy to bring value and price into commensurate terms, for, in the terms of Volume 1, money has value. Any given weight of gold, for instance, has a certain value given by the socially necessary average labour time embodied in such and such a weight of gold, and this ratio is fixed by the operation of the gold market. All gold, whether stolen, found on the ground, or mined hundreds of metres underground, has the same value and the same price. Price can therefore be expressed in labour-hours and value can be expressed in gold. The replacement of gold by paper money introduces further features to capitalist development, but does not undermine the conceptual basis of price and value in terms of a money-commodity.

Thus value appears as an average or “fair” price, the price a product can be expected to realise if *all else is held constant* and the same technical conditions of labour apply for all producers of the product. In the context of Volume 1,

therefore, commodities are indeed in general bought and sold *at their value*, and the only difference is the conceptual difference between value and immediately realised value. There is a fixed proportion between them.

However, in the real, concrete circumstances of a capitalist economy in which it is no longer presumed that “outside influences” can be ignored, and all else is not “held constant,” the capital market has forced a more or less uniform rate of *profit* across the whole economy, and the organic composition of capital varies from one industry to another. The rate of surplus depends only on the labour time required to produce the equivalent of a day’s labour power, and this can be expected to be more or less uniform across all labour markets. To the extent that the processes of automation have reduced all labour to an average uniform kind, moving freely from one industry to another, this rate of surplus value will be reflected in the living standards of all workers. But insofar as this process of the formation of “abstract” labour is incomplete, particular branches of the working class will enjoy different standards of living.

Put simply, at any given point in the development of the capitalist economy, prices will deviate from their values. But the historical tendency of capitalism as it revolutionises the techniques of production and capital flows from one industry to another in pursuit of profit, the conditions of production *tend* to equilibrium and uniformity, prices *tend* to their values, as *assumed* in Volume 1. Nonetheless, decade by decade, year by year, from country to country, industry to industry, all kinds of crises and unexpected new pressures, and the creative destruction of capitalism, “distort” the capitalist economy, that is, move prices and wages away from their values. Capitalism is a dynamic system and the identity of values and prices is a feature of capitalism only in static equilibrium.

However, the concrete concept of capital (i.e., the activity of the capitalist class) and labour as determined by *values*, more truly reflects the relations between the classes and the quantity of social necessary labour subsumed under the various individual capitalist firms, than such an analysis based on *prices*.

“Marxist Economics”?

There can be no doubt that Marx’s *Capital* provides insights into the workings of the economy which have survived all the revolutions in productivity since 1867, all the “distortions” produced by the intervention of all manner of crooks and politicians, and which have survived the repeated revolutionisation of production and the invention of a vast infrastructure for international financial management of the world economy. Wall Street figures regularly affirm this themselves. But how extensive are these insights? I do not fancy myself as an economist, but I do observe that at least over the span of years, though maybe not decades and centuries, the realities of economic life are determined to a great extent by central banks and like figures, not to mention finance market operators who act according to their own theories of economics and have a profound impact on what happens in so doing. Consequently, a critical understanding of the theories these characters are using, such, for example, as could allow you to predict how they will react to this or that circumstance, are important to understanding what will happen next.

At the same time, the relative *success* of the workers’ movement in upvaluing the value of their labour and using not only solidarity, in effect labour cartels, but also political means, electing sympathetic governments and pressuring them, has obviously significantly impacted the historical development of capital.

What Marx said was, in effect: *if the capitalists continue to think and act like they do, this is what will result*. But the capitalist class has *not* continued to think and act the same way. Frederick Taylor, Henry Ford, John Maynard Keynes, Monetarism, Toyota, Facebook, Google and co, have repeatedly changed the rules. Perhaps Marx could have predicted some of these changes which result from the *response* of workers and capitalists to the contradictions which have emerged in the course of capitalist development, but predicting was not his job. The development of capital did not stop in 1867. Marx's successors have to analyse each new situation which has arisen as the capitalist class changed strategy, the working class counter-punched and world wars, revolutions and crises of all kind transformed the landscape.

This is the point. Dialectical reconstruction leads to the identification of *contradictions* implicit in the successive units. Insofar as the theorist is reconstructing an existing social formation, then the indeterminacy of the contradiction *has been* resolved. Industrial capitalism *did* arise in Britain, it did not arise in other parts of the world until later introduced by imperialism. But to the extent that the theorist is trying to *predict future development*, then all the theorist can say is that if you keep doing this, you are going to face this contradiction. Marx could not know in advance how the actors in capitalist societies would respond to the contradictions he identified as latent within capitalism. If the response to a contradiction is not indeterminate, then it is not a contradiction.

All I am saying here is that I would not exaggerate what can be learnt from Capital in predicting the movements of capitalist economics in either the long or short term. Capital does, however, provide a critical framework for the criticism of bourgeois economic theory. From his letters we know that Marx was anxious that Capital would be recognised as a scientific work by academic economists, but fundamentally what he produced was not a *quantitative* science, but a *concrete* science.

Capital will remain forever as a model for the scientific analysis of complex phenomena, building, as I have shown, on Hegel's insights as set out in the Logic.

Conclusion

Once the young Marx had decided that it was the peculiar nature of wealth in modern capitalist societies which was the real source of the oppression and exploitation he saw around him, and devoted himself to the study of political economy, he had taken the decisive step in his life project.

More than 20 years would pass before he published the first volume of Capital. I argue that the opening line of that great work already contained the essential insight which made Capital the epoch making work that it was.

Little has been written hitherto to understand *how* and *why* Marx chose to begin Capital from the commodity. In the foregoing I have demonstrated that Hegel had explained and demonstrated the method of selecting the "first" or "germ cell" from which the scientific study of a phenomenon must begin in his Science of Logic and the Encyclopaedia. The importance of understanding how Marx arrived at this starting point is that the same method can be used in approaching the analysis of *any* phenomenon, not just political economy.

Further, I have shown that this use of Hegel's method of determining a "germ cell" did not end with the determination of the commodity, but was repeated on several occasions through Volume 1 of Capital.

I have also explained why Marx did not follow the suggestion of his own Theses on Feuerbach to begin from the analysis of practice, but instead began from the social analysis of an *artefact*, and indicated the extent to which this move can be replicated in the study of other phenomena.

In addition, I have shown that the overall structure of Capital echoes the structure of Hegel's Concept Logic so that one result of Capital is a determination of the concrete structure of the two great classes of capitalist society in terms of value. I have further demonstrated that the so-called "transformation problem," the relation of values to prices, is a non-problem once this feature of the structure of Capital is understood. This method, of determining capital in its individual, particular and universal moments, is also a method which can be widely applied.

I do not claim to be able to look into Marx's mind. We only know what he has told us. But the methodological parallels with Hegel are unmistakable.

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