BADIOU & MARX

a political interlude

1. General introduction to the project

1.1 Main objectives

- Bridge the division between political subject and economic structure
  - What can a body do within an economic world?

- Specify the problem of value from a phenomenological standpoint
  - Atomic logic as applied to the commodity form

- Locate capitalism as a particular solution to the value problem
  - Find distinctions between “capitalist” and a “communist” transcendental functors

1. General introduction to the project

1.2 Previous work

Freeing Thoughts from Thinkers (2016)

- Can we conceive of organizations as better "thinkers" of social reality than individuals?
- If so, there are a class of thoughts which are not thought by anyone
- By experimenting and engaging with organizational structures (forms of life), we can expose such thinking

Value as Appearance (2016)

- Fetishism is not illusion, but a being-there, it is the way things really are in a particular world
- The role of the equivalent form of value is the same as that of Badiou's object-component
- Production and circulation involve separate indexing of labor, and Marx locates surplus value by finding their envelope

Mismeasure of Thought (2018)

- A notion of mapping proper to the sciences is played by the modeling relation between causal and implicative systems (and not between reality and the minds of scientists)
- To require that "cognitive maps" map to individual cognition is too restrictive for certain problems (such as value)
- Money functions as "cognitive mediation" for social reality, but it works by organizing individuals in a particular way
- A new political goal is proposed: impersonal emancipation, which amounts to formulating new autonomous social forms

From Cognitive Mappings to Sheaves (2018)

- The capitalist world relies on a consistent price assignment, namely, a sheaf
- This sheaf does not occur naturally but is a result of politics (sheafification)
- Value is a space, and exhibits non-trivial topological features

2. Conditions for a badiouian interpretation of Marx

2.1 Beyond Badiou's politics

- There seem to be historical and contextual reasons capable of explaining why Badiou only explores political examples in his philosophy where the autonomy of politics is posited against the structure of economy: both the French context of the 70's as well as Mao's struggle with Stalin's economicism.

- This does not mean that Badiou's project cannot accommodate a different approach to politics than his own.

- Badiou gives a comprehensive theory of (evental) change in worlds via the notion of body. But how are bodies organized? Can there be an economy within a body? What are Communist solutions to the problem of allocating resources?

2. Conditions for a badiouian interpretation of Marx

2.2 Marx as an objective phenomenologist

- For Marx, the capitalist world has unique phenomena which were not treated properly by the political economists of his time
- Marx uses a new logic and predicates that he extracts from the commodity form to describe this world's global features
- He identifies the reality of capitalist relations not as an illusion or psychological defect, but as a real abstraction
- See presentation *The Logics of Historical Worlds*

2. Conditions for a badiouian interpretation of Marx

2.2 Marx as an objective phenomenologist

Every beginning is difficult, holds in all sciences. To understand the first chapter, especially the section that contains the analysis of commodities, will, therefore, present the greatest difficulty. That which concerns more especially the analysis of the substance of value and the magnitude of value, I have, as much as it was possible, popularised. **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. To the superficial observer, the analysis of these forms seems to turn upon minutiae. It does in fact deal with minutiae, but they are of the same order as those dealt with in microscopic anatomy.

With the exception of the section on value-form, therefore, this volume cannot stand accused on the score of difficulty. I presuppose, of course, a reader who is willing to learn something new and therefore to think for himself. **The physicist either observes physical phenomena where they occur in their most typical form and most free from disturbing influence, or, wherever possible, he makes experiments under conditions that assure the occurrence of the phenomenon in its normality. In this work I have to examine the capitalist mode of production, and the conditions of production and exchange corresponding to that mode. Up to the present time, their classic ground is England.** That is the reason why England is used as the chief illustration in the development of my theoretical ideas.

Preface to Capital, vol. 1

2. Conditions for a badiouian interpretation of Marx
2.2 Marx as an objective phenomenologist

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.

A commodity is, in the first place, an object outside us, a thing that by its properties satisfies human wants of some sort or another. The nature of such wants, whether, for instance, they spring from the stomach or from fancy, makes no difference. Neither are we here concerned to know how the object satisfies these wants, whether directly as means of subsistence, or indirectly as means of production. (...) T**he utility of a thing makes it a use value.** But this utility is not a thing of air. Being limited by the physical properties of the commodity, it has no existence apart from that commodity. (...)

Exchange value, at first sight, presents itself as a quantitative relation, as the proportion in which values in use of one sort are exchanged for those of another sort, a relation constantly changing with time and place. Hence exchange value appears to be something accidental and purely relative, and consequently an intrinsic value, i.e., an exchange value that is inseparably connected with, inherent in commodities, seems a contradiction in terms. Let us consider the matter a little more closely.

A given commodity, e.g., a quarter of wheat is exchanged for x blacking, y silk, or z gold, &c. – in short, for other commodities in the most different proportions. Instead of one exchange value, the wheat has, therefore, a great many. **But since x blacking, y silk, or z gold &c., each represents the exchange value of one quarter of wheat, x blacking, y silk, z gold, &c., must, as exchange values, be replaceable by each other, or equal to each other.** Therefore, first: the valid exchange values of a given commodity express something equal; secondly, exchange value, generally, is only the mode of expression, the phenomenal form, of something contained in it, yet distinguishable from it.

Let us take two commodities, e.g., corn and iron. The proportions in which they are exchangeable, whatever those proportions may be, can always be represented by an equation in which a given quantity of corn is equated to some quantity of iron: e.g., **1 quarter corn = x cwt. iron. What does this equation tell us? It tells us that in two different things – in 1 quarter of corn and x cwt. of iron, there exists in equal quantities something common to both. The two things must therefore be equal to a third, which in itself is neither the one nor the other. Each of them, so far as it is exchange value, must therefore be reducible to this third.**

A simple geometrical illustration will make this clear. In order to calculate and compare the areas of rectilinear figures, we decompose them into triangles. But the area of the triangle itself is expressed by something totally different from its visible figure, namely, by half the product of the base multiplied by the altitude. **In the same way the exchange values of commodities must be capable of being expressed in terms of something common to them all, of which thing they represent a greater or less quantity.**

This common "something" cannot be either a geometrical, a chemical, or any other natural property of commodities. Such properties claim our attention only in so far as they affect the utility of those commodities, make them use values. Bu**t the exchange of commodities is evidently an act characterised by a total abstraction from use value.** Then one use value is just as good as another, provided only it be present in sufficient quantity.

Chapter 1, section 1, Capital vol 1

2. Conditions for a badiouian interpretation of Marx

2.3 Karatani as a mediator of the transcendental analysis

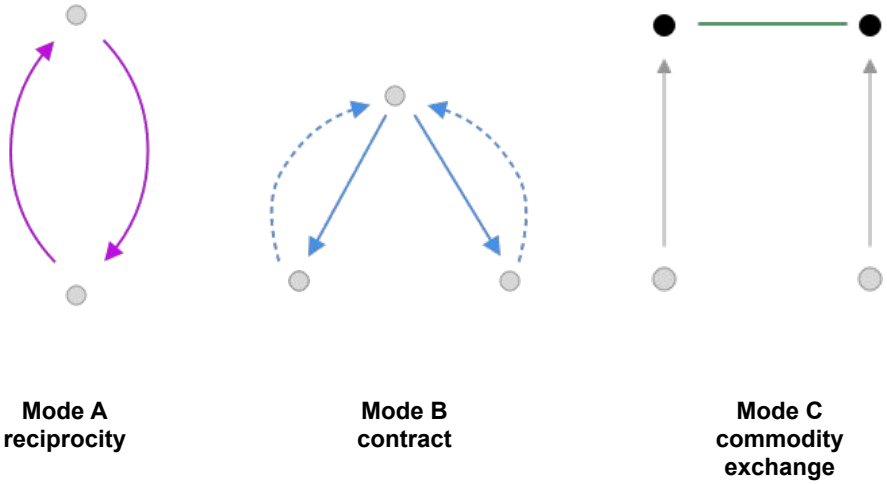
- Karatani allows us to locate the capitalist world in the sequence of other worlds, and forces us to consider how several economic forms are imbricated in any single one.
- He also introduces the problem of scale of exchange networks which rely on certain intermediary forms (the gift, the State, money).

Today's advanced capitalist nations are characterized by a triplex system, the Capital- Nation- State trinity. In its structure, there is first of all a capitalist market economy. If left to its own devices, however, this will inevitably result in economic disparities and class conflict. To counter this, the nation, which is characterized by an intention toward communality and equality, seeks to resolve the various contradictions brought about by the capitalist economy. The state then fulfills this task through such measures as taxation and redistribution or regulations. **Capital, nation, and state all differ from one another, with each being grounded in its own distinct set of principles, but here they are joined together in a mutually supplementary manner**. They are linked in the manner of a Borromean knot.

Introduction, The Structure of World History

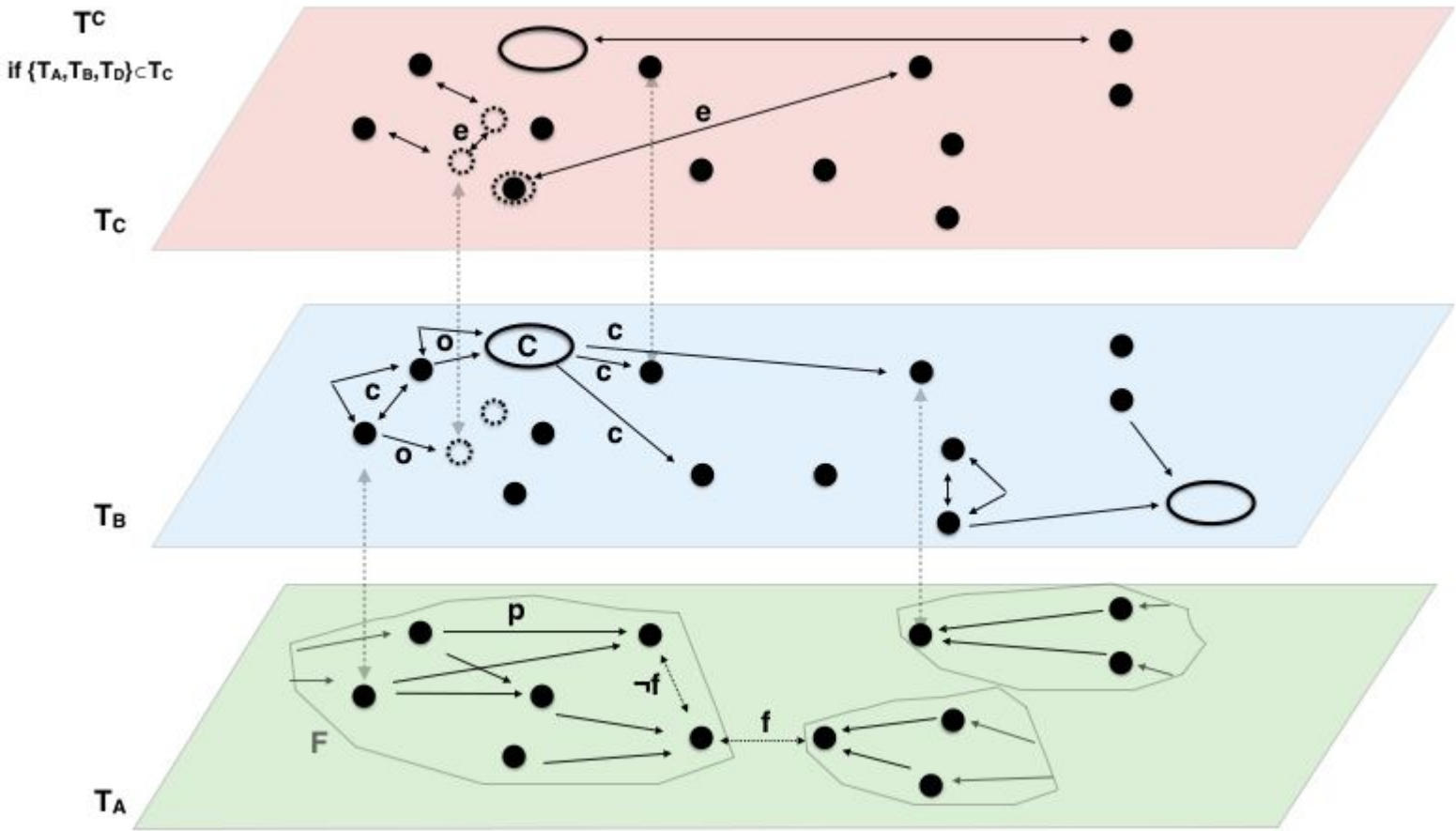
3. Reading Capital, vol 1

3.1 A multi-layered transcendental



3. Reading Capital, vol 1

3.1 A multi-layered transcendental



3. Reading Capital, vol 1

3.1 A multi-layered transcendental

Preliminary hypotheses:

1. The transcendental of a social world is composed of several modes of exchange — A, B, C, D – under dominance of one of them. We can write $\mathbf{T_A}$,$\mathbf{T_B}$,$\mathbf{T_C}$,$\mathbf{T_D}$ the transcendental subsystem of each mode, and $\mathbf{T^C}$ the transcendental lattice under domination of **C**.

2. Following Karatani, we define dominance in terms of space and integrational capacity: a mode of exchange is dominant if its limits coincide with the limits of the world in question. In Badiou's terms, we can say that a mode of exchange is dominant if it guarantees the universal exposition of all relations - which entails the logical completeness of the world.

3. The theory of multilayered networks can be used as basis for formalizing the transcendental of social worlds since the latter implies the existence of several real atoms capable of localizing multiples in different ways — and multilayered networks depart from that very principle.

4. In the following analysis, we will bracket the influence of the subsystems $\mathbf{T_A}$,$\mathbf{T_B}$,$\mathbf{T_D}$ unless where otherwise relevant — since this is Karatani's description of Marx's own method.

3. Reading Capital, vol 1

3.2 Value and appearance

Commodities come into the world in the shape of use values, articles, or goods, such as iron, linen, corn, &c. This is their plain, homely, bodily form. They are, however, commodities, only because they are something two-fold, both objects of utility, and, at the same time, depositories of value. They manifest themselves therefore as commodities, or have the form of commodities, only in so far as they have two forms, a physical or natural form, and a value form.

The reality of the value of commodities differs in this respect from Dame Quickly, that we don't know "where to have it." **The value of commodities is the very opposite of the coarse materiality of their substance, not an atom of matter enters into its composition. Turn and examine a single commodity, by itself, as we will, yet in so far as it remains an object of value, it seems impossible to grasp it. If, however, we bear in mind that the value of commodities has a purely social reality, and that they acquire this reality only in so far as they are expressions or embodiments of one identical social substance, viz., human labour, it follows as a matter of course, that value can only manifest itself in the social relation of commodity to commodity.** In fact we started from exchange value, or the exchange relation of commodities, in order to get at the value that lies hidden behind it. We must now return to this form under which value first appeared to us.

Every one knows, if he knows nothing else, that commodities have a value form common to them all, and presenting a marked contrast with the varied bodily forms of their use values. I mean their money form. Here, however, a task is set us, the performance of which has never yet even been attempted by *bourgeois* economy, the task of t**racing the genesis of this money form,** of developing the expression of value implied in the value relation of commodities, from its simplest, almost imperceptible outline, to the dazzling money-form. By doing this we shall, at the same time, solve the riddle presented by money.

Capital vol.1, section 3 ***The form of value or exchange value***

A. Elementary or Accidental Form Of Value

x commodity A = y commodity B, or
x commodity A is worth y commodity B.
20 yards of linen = 1 coat, or
20 Yards of linen are worth 1 coat.

$$xA = yB$$

Relative form Equivalent form

"The value of xA is yB"
Subject - Predicate

The whole mystery of the form of value lies hidden in this elementary form. Its analysis, therefore, is our real difficulty.

Here two different kinds of commodities (in our example the linen and the coat), evidently play two different parts. **The linen expresses its value in the coat**; the coat serves as the material in which that value is expressed. The former plays an active, the latter a passive, part. The value of the linen is represented as relative value, or appears in relative form. The coat officiates as equivalent, or appears in equivalent form.

The relative form and the equivalent form are two intimately connected, mutually dependent and inseparable elements of the expression of value; but, at the same time, are mutually exclusive, antagonistic extremes – i.e., poles of the same expression. They are allotted respectively to the two different commodities brought into relation by that expression. It is not possible to express the value of linen in linen. 20 yards of linen = 20 yards of linen is no expression of value. On the contrary, such an equation merely says that 20 yards of linen are nothing else than 20 yards of linen, a definite quantity of the use value linen. The value of the linen can therefore be expressed only relatively – i.e., in some other commodity. The relative form of the value of the linen presupposes, therefore, the presence of some other commodity – here the coat – under the form of an equivalent. On the other hand, the commodity that figures as the equivalent cannot at the same time assume the relative form. **That second commodity is not the one whose value is expressed.** Its function is merely to serve as the material in which the value of the first commodity is expressed.

A. Elementary or Accidental Form Of Value

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x commodity A is worth y commodity B.
20 yards of linen = 1 coat, or
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"The value of xA is yB"
Subject - Predicate

The equivalent form

For instance, 40 yards of linen are worth – what? 2 coats. Because the commodity coat here plays the part of equivalent, **because the use-value coat, as opposed to the linen, figures as an embodiment of value, therefore a definite number of coats suffices to express the definite quantity of value in the linen**. Two coats may therefore express the quantity of value of 40 yards of linen, but they can never express the quantity of their own value. A superficial observation of this fact, namely, that in the equation of value, the equivalent figures exclusively as a simple quantity of some article, of some use value, has misled Bailey, as also many others, both before and after him, into seeing, in the expression of value, merely a quantitative relation. **The truth being, that when a commodity acts as equivalent, no quantitative determination of its value is expressed.**

The first peculiarity that strikes us, in considering the form of the equivalent, is this: **use value becomes the form of manifestation, the phenomenal form of its opposite, value**.

B. Total or Expanded Form of value

z Com. A = u Com. B or = v Com. C or = w Com. D or = Com. E or = &c.
(20 yards of linen = 1 coat or = 10 lbs tea or = 40 lbs. coffee or = 1 quarter corn or = 2 ounces gold or = ½ ton iron or = &c.)

xA = yB v zC v wD…

Expanded relative form Particular equivalent form

The value of a single commodity, the linen, for example, is now expressed in terms of numberless other elements of the world of commodities. **Every other commodity now becomes a mirror of the linen's value.** It is thus, that for the first time, this value shows itself in its true light as a congelation of undifferentiated human labour. For the labour that creates it, now stands expressly revealed, as labour that ranks equally with every other sort of human labour, no matter what its form, whether tailoring, ploughing, mining, &c., and no matter, therefore, whether it is realised in coats, corn, iron, or gold. **The linen, by virtue of the form of its value, now stands in a social relation, no longer with only one other kind of commodity, but with the whole world of commodities.** As a commodity, it is a citizen of that world. At the same time, the interminable series of value equations implies, that as regards the value of a commodity, it is a matter of indifference under what particular form, or kind, of use value it appears.

In the first form, 20 yds of linen = 1 coat, it might, for ought that otherwise appears, be pure accident, that these two commodities are exchangeable in definite quantities. In the second form, on the contrary, we perceive at once the background that determines, and is essentially different from, this accidental appearance. The value of the linen remains unaltered in magnitude, whether expressed in coats, coffee, or iron, or in numberless different commodities, the property of as many different owners. The accidental relation between two individual commodity-owners disappears. **It becomes plain, that it is not the exchange of commodities which regulates the magnitude of their value; but, on the contrary, that it is the magnitude of their value which controls their exchange proportions.ite, value**.

B. Total or Expanded Form of value

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xA = yB v zC v wD…

Expanded relative form Particular equivalent form

Defects of the Total or Expanded form of value

In the first place, **the relative expression of value is incomplete because the series representing it is interminable.** The chain of which each equation of value is a link, is liable at any moment to be lengthened by each new kind of commodity that comes into existence and furnishes the material for a fresh expression of value. In the second place, **it is a many-coloured mosaic of disparate and independent expressions of value.** And lastly, if, as must be the case, **the relative value of each commodity in turn, becomes expressed in this expanded form, we get for each of them a relative value form, different in every case, and consisting of an interminable series of expressions of value**. The defects of the expanded relative value form are reflected in the corresponding equivalent form. Since the bodily form of each single commodity is one particular equivalent form amongst numberless others, we have, on the whole, nothing but fragmentary equivalent forms, each excluding the others. In the same way, also, the special, concrete, useful kind of labour embodied in each particular equivalent, is presented only as a particular kind of labour, and therefore not as an exhaustive representative of human labour generally. The latter, indeed, gains adequate manifestation in the totality of its manifold, particular, concrete forms. But, in that case, **its expression in an infinite series is ever incomplete and deficient in unity**.

3. Reading Capital, vol 1

3.2 Value and appearance

C. The General Form of Value

1 coat 10 lbs of tea 40 lbs of coffee 1 quarter of corn 2 ounces of gold ½ a ton of iron x Commodity A, etc.	= 20 yards of linen

$$yB \text{ v } zC \text{ v } wD\ldots = xA$$

General relative form universal equivalent form

All commodities being equated to linen now appear not only as qualitatively equal as values generally, but also as values whose magnitudes are capable of comparison. **By expressing the magnitudes of their values in one and the same material, the linen, those magnitudes are also compared with each other.** (...) **The general form of relative value, embracing the whole world of commodities, converts the single commodity that is excluded from the rest, and made to play the part of equivalent – here the linen – into the universal equivalent. The bodily form of the linen is now the form assumed in common by the values of all commodities**; it therefore becomes directly exchangeable with all and every of them. The substance linen becomes the visible incarnation, the social chrysalis state of every kind of human labour. Weaving, which is the labour of certain private individuals producing a particular article, linen, acquires in consequence a social character, the character of equality with all other kinds of labour. (...) The general value form, which represents all products of labour as mere congelations of undifferentiated human labour, shows by its very structure that it is the social resumé of the world of commodities. That form consequently makes it indisputably evident that in the world of commodities the character possessed by all labour of being human labour constitutes its specific social character.

C. The General Form of Value

1 coat 10 lbs of tea 40 lbs of coffee 1 quarter of corn 2 ounces of gold ½ a ton of iron x Commodity A, etc.	= 20 yards of linen

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General relative form universal equivalent form

The universal equivalent form is a form of value in general. It can, therefore, be assumed by any commodity. On the other hand, if a commodity be found to have assumed the universal equivalent form (form C), this is only because and in so far as it has been excluded from the rest of all other commodities as their equivalent, and that by their own act. And from the moment that this exclusion becomes finally restricted to one particular commodity, from that moment only, the general form of relative value of the world of commodities obtains real consistence and general social validity.

The particular commodity, with whose bodily form the equivalent form is thus socially identified, now becomes the money commodity, or serves as money. **It becomes the special social function of that commodity, and consequently its social monopoly, to play within the world of commodities the part of the universal equivalent**. Amongst the commodities which, in form B, figure as particular equivalents of the linen, and, in form C, express in common their relative values in linen, this foremost place has been attained by one in particular – namely, gold.

3. Reading Capital, vol 1

3.2 Value and appearance

D. The Money-Form

20 yards of linen	=	
1 coat	=	
10 lbs of tea	=	
40 lbs of coffee	=	= 2 ounces of gold
1 quarter of corn	=	
2 ounces of gold	=	
½ a ton of iron	=	
x Commodity A	=	

$$yB \text{ v } zC \text{ v } wD\ldots = xA$$

General relative form — universal equivalent form

Gold is in form D, what linen was in form C – the universal equivalent. The progress consists in this alone, that the character of direct and universal exchangeability – in other words, that the universal equivalent form – has now, by social custom, become finally identified with the substance, gold.

Gold is now money with reference to all other commodities only because it was previously, with reference to them, a simple commodity. Like all other commodities, it was also capable of serving as an equivalent, either as simple equivalent in isolated exchanges, or as particular equivalent by the side of others. Gradually it began to serve, within varying limits, as universal equivalent. So soon as it monopolises this position in the expression of value for the world of commodities, it becomes the money commodity, and then, and not till then, does form D become distinct from form C, and the general form of value become changed into the money form. **The elementary expression of the relative value of a single commodity, such as linen, in terms of the commodity, such as gold, that plays the part of money, is the price form of that commodity.** (...)

The difficulty in forming a concept of the money form, consists in clearly comprehending the universal equivalent form, and as a necessary corollary, the general form of value, form C. The latter is deducible from form B, the expanded form of value, the essential component element of which, we saw, is form A, 20 yards of linen = 1 coat or x commodity A = y commodity B. **The simple commodity form is therefore the germ of the money form.**

<u>The exchange function</u>

e(A,B)= p

- unlike Marx, we treat A and B as extensional multiples with no separation between quality and quantity.
- the exchange function is accidental and defines any form of commodity exchange
- At this point e(x,y) constrains T_C and not T^C - it cannot guarantee more than local consistency to exchanges, and therefore it applies to other social formations
- The degrees of T_C should be understood as open value intervals

<u>The phenomenal identity</u>

v(A) = {A I e(A,A) e(A,B), e(A,C), e(A, D)..}

3. Reading Capital, vol 1
3.2 Value and appearance

The exchange function

$$\boxed{e(A,B)} = \boxed{p}$$

Function **e(x,y)** respects

Symmetry: **e(x,y) = e(y,x)**
-evaluated for a given accidental exchange

Triangular inequality: **e(x,y) ∩ e(y,z) ≤ e(x,z)**
- does not guarantee equivalence between exchanges, but partial order

The set of degrees **p** of $\mathbf{T_c}$ respect the following axioms:

minimum: **e(x,y) = 0**
- the case where x,y are not exchangeable

conjunction: **p ∩ q = r**
- given two degrees of exchangeability, we can ask for the degree of what they have in common

Envelope: **∑(p. q) = p ∪ q**, more generally **∑B=∑{q I P(q)}**
- given a set of degrees of exchange, we can define the least upper bound of that set

Distributivity: **d ∩ ∑B =∑{d∩x I x∈B}**
- the conjunction of a degree with an envelope is the same as the envelope of the conjunctions of that degree with the degrees originally enveloped

Reverse: **¬p = ∑(q I p∩q=0}**
- the reverse of a degree of exchange is the set of all degrees that are disjunct from the original degree

Dependence: **p⇒q = ∑(t I p∩t≤q}**
- we say a degree of exchange implies another to the degree of the enveloped region of the common part between them.

The equivalent form and predication

A(B) = p

- treats commodity A as a predicate that obtains or not for other commodities: commodity B might be more or less like A
- Exchange is not accidental, but still not guaranteed

3. Reading Capital, vol 1

3.3 Money-form and atomic logic

<u>The atom of value</u>

$$A(B) = M$$

- the case of the commodity A which functions as a maximal predicate for the expression of value of any commodity B

<u>The real atom of value</u>

$$M(x) = m(x) = e(m,x)$$

- the postulate of materialism* guarantees that there is a material element that supports the logical consistency of the atom

<u>The expression of another commodity B's place through m(x) is its price</u>

$$m(B) = p$$

- The degree p expresses no longer the likelihood of exchange, but the amount of money needed for the exchange (or better: likelihood becomes a quantity)

Localization

If m(x) is an atom, we can separate all parts of the object which are common with m(x) to the p degree: m(x) ∩ p and this part will also be a real atom (m ⌠ p) (x), itself corresponding to an element of the multiple. The atom of money (money-form of value) measures all commodities. However, a commodity itself consists of parts that can also be measured by this atom. In other words, a commodity is made of other commodities. To localize a commodity on one of its parts is to determine its "price-composition".

Compatibility

Two sets of price assignments m_1(x) and m_2(x) are compatible if they "agree" on the intersection of their domains. This is not necessarily the same as saying they assign the same prices to the same commodities.

Order

The parts of a commodity are ordered by their price. We can partition a commodity by the equivalence relation of price.

Real Synthesis

A commodity's price captures the price of its parts. This also means relevant economic facts. We find parallels here with Hayek.

Real atom and the money-form:

The truth of the proposition that, "although gold and silver are not by Nature money, money is by Nature gold and silver,"is shown by the fitness of the physical properties of these metals for the functions of money. Up to this point, however, we are acquainted only with one function of money, namely, to serve as the form of manifestation of the value of commodities, or as the material in which the magnitudes of their values are socially expressed. **An adequate form of manifestation of value, a fit embodiment of abstract, undifferentiated, and therefore equal human labour, that material alone can be whose every sample exhibits the same uniform qualities. On the other hand, since the difference between the magnitudes of value is purely quantitative, the money commodity must be susceptible of merely quantitative differences, must therefore be divisible at will, and equally capable of being reunited. Gold and silver possess these properties by Nature.**

Chapter 2: The exchange process

Money-form and abstract labour

We have seen that when commodities are exchanged, their exchange value manifests itself as something totally independent of their use value. But **if we abstract from their use value, there remains their Value as defined above. Therefore, the common substance that manifests itself in the exchange value of commodities, whenever they are exchanged, is their value**. The progress of our investigation will show that exchange value is the only form in which the value of commodities can manifest itself or be expressed. For the present, however, we have to consider the nature of value independently of this, its form.

A use value, or useful article, therefore, has value only because human labour in the abstract has been embodied or materialised in it. **How, then, is the magnitude of this value to be measured? Plainly, by the quantity of the value-creating substance, the labour, contained in the article. The quantity of labour, however, is measured by its duration, and labour time in its turn finds its standard in weeks, days, and hours**.

Some people might think that if the value of a commodity is determined by the quantity of labour spent on it, the more idle and unskilful the labourer, the more valuable would his commodity be, because more time would be required in its production. The labour, however, that forms the substance of value, is homogeneous human labour, expenditure of one uniform labour power. The total labour power of society, which is embodied in the sum total of the values of all commodities produced by that society, counts here as one homogeneous mass of human labour power, composed though it be of innumerable individual units. Each of these units is the same as any other, so far as it has the character of the average labour power of society, and takes effect as such; that is, **so far as it requires for producing a commodity, no more time than is needed on an average, no more than is socially necessary.**

Chapter 1, section 1: Two factors of a commodity

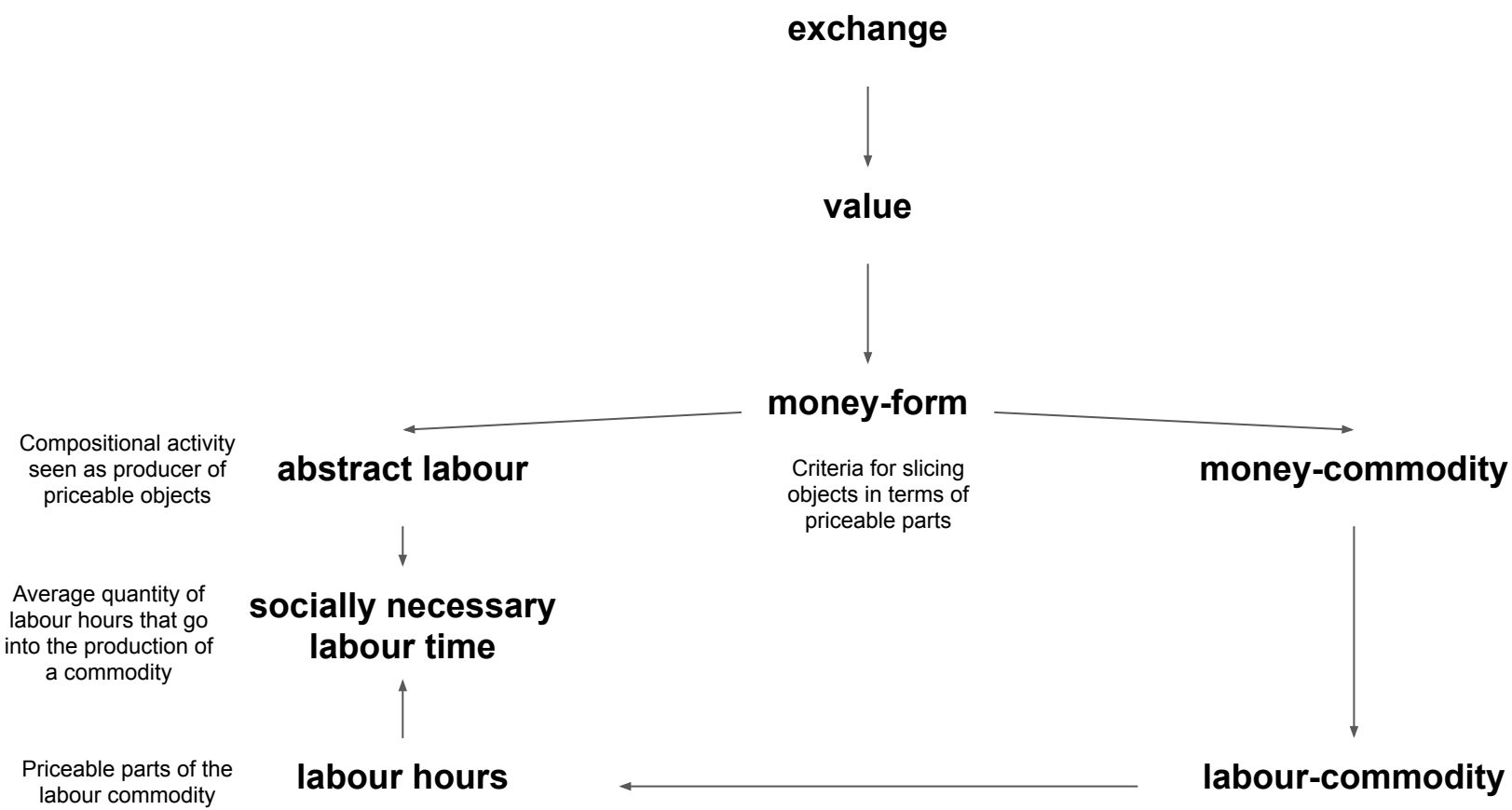
Money-form and abstract labour

Just as, therefore, in viewing the coat and linen as values, we abstract from their different use values, so it is with the labour represented by those values: **we disregard the difference between its useful forms, weaving and tailoring. As the use values, coat and linen, are combinations of special productive activities with cloth and yarn, while the values, coat and linen, are, on the other hand, mere homogeneous congelations of undifferentiated labour, so the labour embodied in these latter values does not count by virtue of its productive relation to cloth and yarn, but only as being expenditure of human labour power**. Tailoring and weaving are necessary factors in the creation of the use values, coat and linen, precisely because these two kinds of labour are of different qualities; but only in so far as abstraction is made from their special qualities, only in so far as both possess the same quality of being human labour, do tailoring and weaving form the substance of the values of the same articles.

Coats and linen, however, are not merely values, but values of definite magnitude, and according to our assumption, the coat is worth twice as much as the ten yards of linen. **Whence this difference in their values? It is owing to the fact that the linen contains only half as much labour as the coat, and consequently, that in the production of the latter, labour power must have been expended during twice the time necessary for the production of the former**.

While, therefore, with reference to use value, the labour contained in a commodity counts only qualitatively, with reference to value it counts only quantitatively, and must first be reduced to human labour pure and simple. **In the former case, it is a question of How and What, in the latter of How much? How long a time? Since the magnitude of the value of a commodity represents only the quantity of labour embodied in it, it follows that all commodities, when taken in certain proportions, must be equal in value**.

Chapter 1, section 1: Two factors of a commodity


exchange
value
money-form
Compositional activity seen as producer of priceable objects
abstract labour
Criteria for slicing objects in terms of priceable parts
money-commodity
Average quantity of labour hours that go into the production of a commodity
socially necessary labour time
Priceable parts of the labour commodity
labour hours
labour-commodity

3. Reading Capital, vol 1

3.4 Commodity and object

A commodity appears, at first sight, a very trivial thing, and easily understood. Its analysis shows that it is, in reality, a very queer thing, abounding in metaphysical subtleties and theological niceties. So far as it is a value in use, there is nothing mysterious about it, whether we consider it from the point of view that by its properties it is capable of satisfying human wants, or from the point that those properties are the product of human labour. It is as clear as noon-day, that man, by his industry, changes the forms of the materials furnished by Nature, in such a way as to make them useful to him. The form of wood, for instance, is altered, by making a table out of it. Yet, for all that, the table continues to be that common, every-day thing, wood. **But, so soon as it steps forth as a commodity, it is changed into something transcendent.** It not only stands with its feet on the ground, but, in relation to all other commodities, it stands on its head, and evolves out of its wooden brain grotesque ideas, far more wonderful than "table-turning" ever was.

The mystical character of commodities does not originate, therefore, in their use value. Just as little does it proceed from the nature of the determining factors of value. For, in the first place, however varied the useful kinds of labour, or productive activities, may be, it is a physiological fact, that they are functions of the human organism, and that each such function, whatever may be its nature or form, is essentially the expenditure of human brain, nerves, muscles, &c. Secondly, with regard to that which forms the ground-work for the quantitative determination of value, namely, the duration of that expenditure, or the quantity of labour, it is quite clear that there is a palpable difference between its quantity and quality. In all states of society, the labour time that it costs to produce the means of subsistence, must necessarily be an object of interest to mankind, though not of equal interest in different stages of development.And lastly, from the moment that men in any way work for one another, their labour assumes a social form.

Whence, then, arises the enigmatical character of the product of labour, so soon as it assumes the form of commodities? Clearly from this form itself. The equality of all sorts of human labour is expressed objectively by their products all being equally values; the measure of the expenditure of labour power by the duration of that expenditure, takes the form of the quantity of value of the products of labour; and finally the mutual relations of the producers, within which the social character of their labour affirms itself, take the form of a social relation between the products.

Capital, vol 1, Section 4, The fetishism of commodities and the secret thereof

3. Reading Capital, vol 1

3.4 Commodity and object

This is the reason why the products of labour become commodities, social things whose qualities are at the same time perceptible and imperceptible by the senses. In the same way the light from an object is perceived by us not as the subjective excitation of our optic nerve, but as the objective form of something outside the eye itself. But, in the act of seeing, there is at all events, an actual passage of light from one thing to another, from the external object to the eye. There is a physical relation between physical things. But **it is different with commodities. There, the existence of the things qua commodities, and the value relation between the products of labour which stamps them as commodities, have absolutely no connection with their physical properties and with the material relations arising therefrom. There it is a definite social relation between men, that assumes, in their eyes, the fantastic form of a relation between things**. In order, therefore, to find an analogy, we must have recourse to the mist-enveloped regions of the religious world. In that world the productions of the human brain appear as independent beings endowed with life, and entering into relation both with one another and the human race. So it is in the world of commodities with the products of men's hands. **This I call the Fetishism which attaches itself to the products of labour, so soon as they are produced as commodities, and which is therefore inseparable from the production of commodities**.

Capital, vol 1, Section 4, The fetishism of commodities and the secret thereof

<u>Commodity-form:</u>

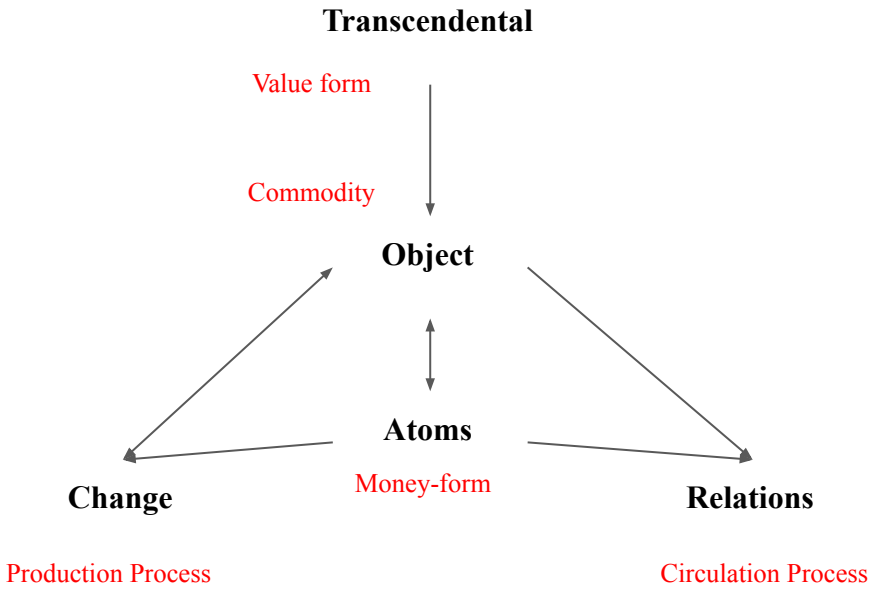
a multiple C, plus an exchange function e(C,x) such that its components are localizable by m(x)

- Defining the commodity-form in terms of the possibility of "seeing" its parts as an amount of money immanently splits the analysis of commodities into two: the analysis of its composition (production-consumption) and relations (circulation)

- The theory of atoms does not define a natural or substantial scale for multiples under analysis - which means it can localize multiples of greater complexity (an important condition for future developments)

3. Reading Capital, vol 1

3.4 Commodity and object



Law of value (Capital 1, chapters 1 to 3)

consistent logical space where objects are seen as commodities, their parts are priceable components and relations between commodities are exposed through the money-commodity

<u>On the relevance of mode B as an auxiliary atomization:</u>

It is plain that commodities cannot go to market and make exchanges of their own account. We must, therefore, have recourse to their guardians, who are also their owners. Commodities are things, and therefore without power of resistance against man. If they are wanting in docility he can use force; in other words, he can take possession of them. **In order that these objects may enter into relation with each other as commodities, their guardians must place themselves in relation to one another, as persons whose will resides in those objects, and must behave in such a way that each does not appropriate the commodity of the other, and part with his own, except by means of an act done by mutual consent. They must therefore, mutually recognise in each other the rights of private proprietors.** This juridical relation, which thus expresses itself in a contract, whether such contract be part of a developed legal system or not, is a relation between two wills, and is but the reflex of the real economic relation between the two. It is this economic relation that determines the subject-matter comprised in each such juridical act.

Chapter 2: The exchange process

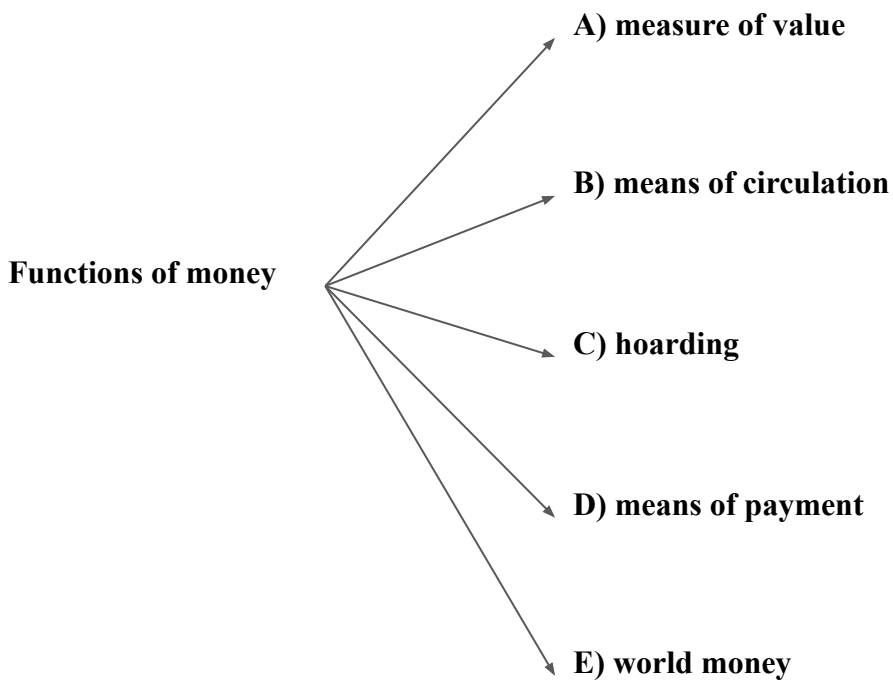
<u>From money-form to money-commodity:</u>

To the owner of a commodity, every other commodity is, in regard to his own, a particular equivalent, and consequently his own commodity is the universal equivalent for all the others. But since this applies to every owner, there is, in fact, no commodity acting as universal equivalent, and the relative value of commodities possesses no general form under which they can be equated as values and have the magnitude of their values compared. So far, therefore, they do not confront each other as commodities, but only as products or use-values. In their difficulties our commodity owners think like Faust: "Im Anfang war die Tat." ["In the beginning was the deed." – Goethe, Faust.] **They therefore acted and transacted before they thought. Instinctively they conform to the laws imposed by the nature of commodities. They cannot bring their commodities into relation as values, and therefore as commodities, except by comparing them with some one other commodity as the universal equivalent.** That we saw from the analysis of a commodity. But a particular commodity cannot become the universal equivalent except by a social act. **The social action therefore of all other commodities, sets apart the particular commodity in which they all represent their values. Thereby the bodily form of this commodity becomes the form of the socially recognised universal equivalent. To be the universal equivalent, becomes, by this social process, the specific function of the commodity thus excluded by the rest. Thus it becomes – money**.

Chapter 2: The exchange process

3. Reading Capital, vol 1

3.5 Circulation (1): money-commodity and relations



3. Reading Capital, vol 1

3.5 Circulation (1): money-commodity and relations

Functions of money

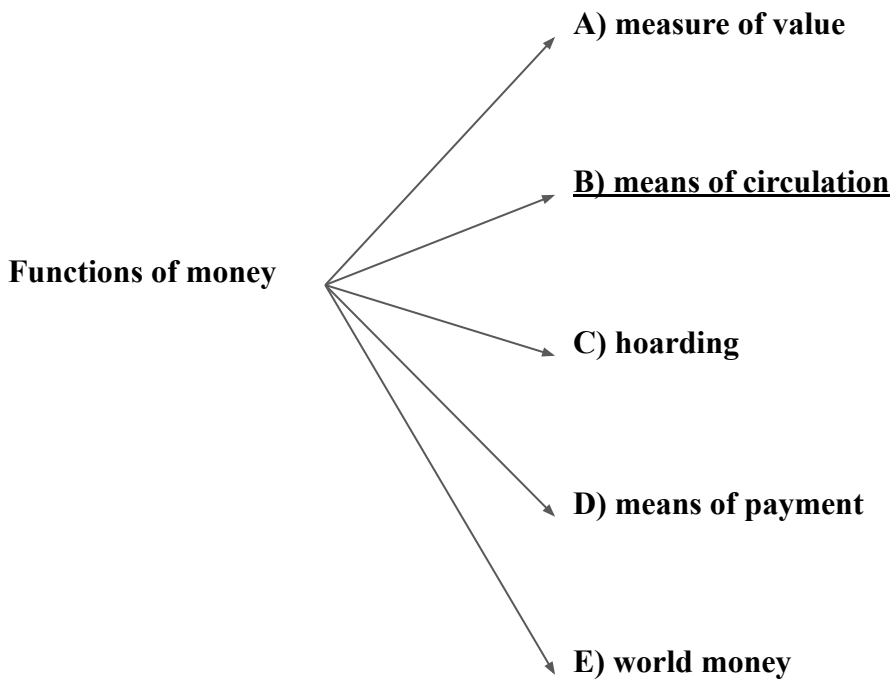
- **A) measure of value**
- **B) means of circulation**
- **C) hoarding**
- **D) means of payment**
- **E) world money**

The first chief function of money is to supply commodities with the material for the expression of their values, or to represent their values as magnitudes of the same denomination, qualitatively equal, and quantitatively comparable. It thus serves as a universal measure of value. And only by virtue of this function does gold, the equivalent commodity par excellence, become money.

It is not money that renders commodities commensurable. Just the contrary. It is because all commodities, as values, are realised human labour, and therefore commensurable, that their values can be measured by one and the same special commodity, and the latter be converted into the common measure of their values, i.e., into money. **Money as a measure of value, is the phenomenal form that must of necessity be assumed by that measure of value which is immanent in commodities, labour-time.**

The expression of the value of a commodity in gold — x commodity A = y money-commodity — is its money-form or price.

Chapter 3: Money or the circulation of commodities

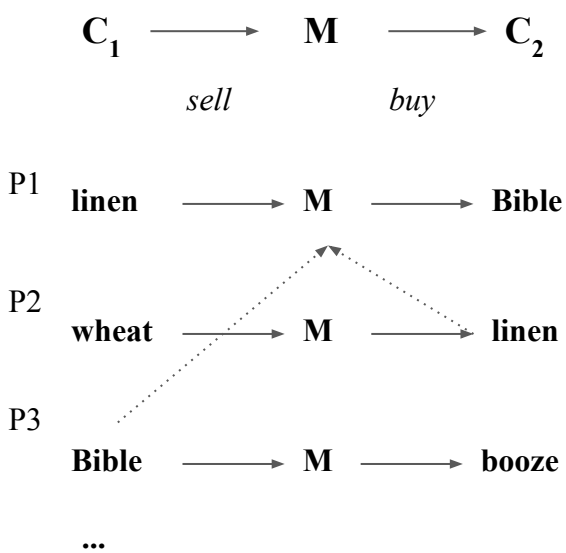


Let us now accompany the owner of some commodity — say, our old friend the weaver of linen — to the scene of action, the market. His 20 yards of linen has a definite price, £2. He exchanges it for the £2, and then, like a man of the good old stamp that he is, he parts with the £2 for a family Bible of the same price. The linen, which in his eyes is a mere commodity, a depository of value, he alienates in exchange for gold, which is the linen's value-form, and this form he again parts with for another commodity, the Bible, which is destined to enter his house as an object of utility and of edification to its inmates. **The exchange becomes an accomplished fact by two metamorphoses of opposite yet supplementary character — the conversion of the commodity into money, and the re-conversion of the money into a commodity.** [16] The two phases of this metamorphosis are both of them distinct transactions of the weaver — selling, or the exchange of the commodity for money; buying, or the exchange of the money for a commodity; and, the unity of the two acts, selling in order to buy.

Chapter 3: Money or the circulation of commodities

3. Reading Capital, vol 1

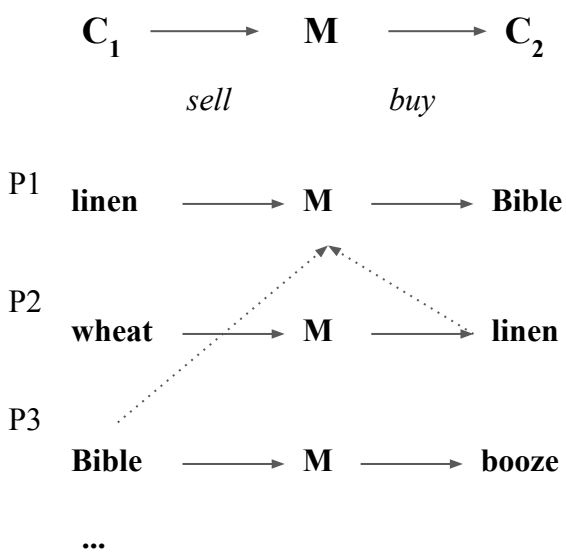
3.5 Circulation (1): money-commodity and relations



T**he circulation of commodities differs from the direct exchange of products (barter), not only in form, but in substance.** Only consider the course of events. The weaver has, as a matter of fact, exchanged his linen for a Bible, his own commodity for that of someone else. But this is true only so far as he himself is concerned. The seller of the Bible, who prefers something to warm him inside, no more thought of exchanging his Bible for linen than our weaver knew that wheat had been exchanged for his linen. B's commodity replaces that of A, but A and B do not mutually exchange those commodities. It may, of course, happen that A and B make simultaneous purchases, the one from the other; but such exceptional transactions are by no means the necessary result of the general conditions of the circulation of commodities. **We see here, on the one hand, how the exchange of commodities breaks through all local and personal bounds inseparable from direct barter, and develops the circulation of the products of social labour; and on the other hand, how it develops a whole network of social relations spontaneous in their growth and entirely beyond the control of the actors**. It is only because the farmer has sold his wheat that the weaver is enabled to sell his linen, only because the weaver has sold his linen that our Hotspur is enabled to sell his Bible, and only because the latter has sold the water of everlasting life that the distiller is enabled to sell his eau-de-vie, and so on.

3. Reading Capital, vol 1

3.5 Circulation (1): money-commodity and relations



<u>The universal exposition of money:</u>

The process of circulation, therefore, does not, like direct barter of products, become extinguished upon the use-values changing places and hands. **The money does not vanish on dropping out of the circuit of the metamorphosis of a given commodity. It is constantly being precipitated into new places in the arena of circulation vacated by other commodities. In the complete metamorphosis of the linen, for example, linen — money — Bible, the linen first falls out of circulation, and money steps into its place.** Then the Bible falls out of circulation, and again money takes its place. When one commodity replaces another, the money-commodity always sticks to the hands of some third person. **Circulation sweats money from every pore.**

3. Reading Capital, vol 1

3.5 Circulation (1): money-commodity and relations

Functions of money

- **A) measure of value**
- **B) means of circulation**
- **C) hoarding**
- **D) means of payment**
- **E) world money**

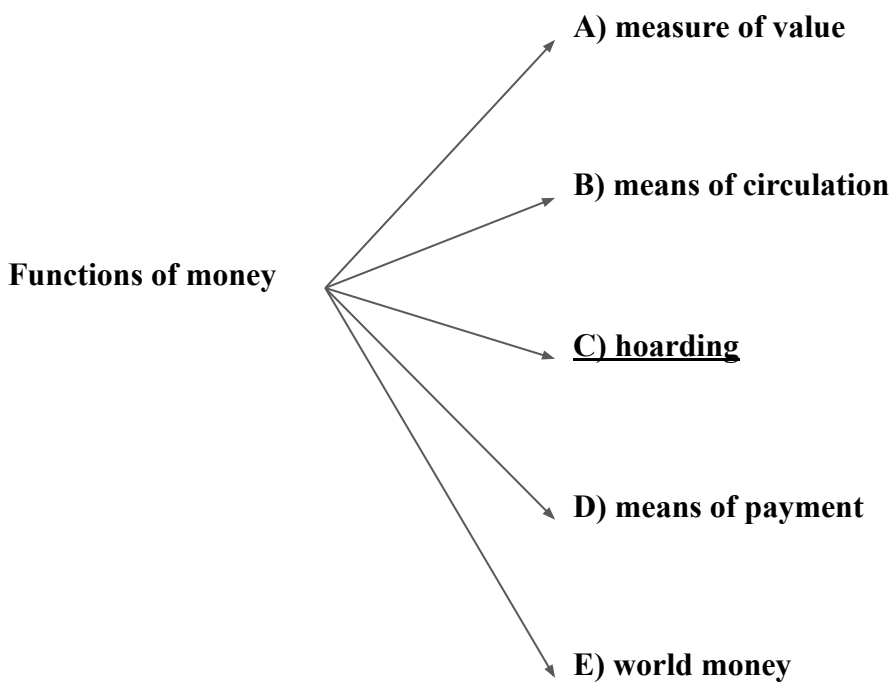
With the very earliest development of the circulation of commodities, there is also developed the necessity, and the passionate desire, to **hold fast the product of the first metamorphosis. This product is the transformed shape of the commodity, or its gold-chrysalis**. [39] Commodities are thus sold not for the purpose of buying others, but in order to replace their commodity-form by their money-form. **From being the mere means of effecting the circulation of commodities, this change of form becomes the end and aim.** The changed form of the commodity is thus prevented from functioning as its unconditionally alienable form, or as its merely transient money-form. The money becomes petrified into a hoard, and the **seller becomes a hoarder of money**.

By the side of the gross form of a hoard, we find also its aesthetic form in the possession of gold and silver articles. This grows with the wealth of civil society. “Soyons riches ou paraissons riches” (Diderot).

Chapter 3: Money or the circulation of commodities

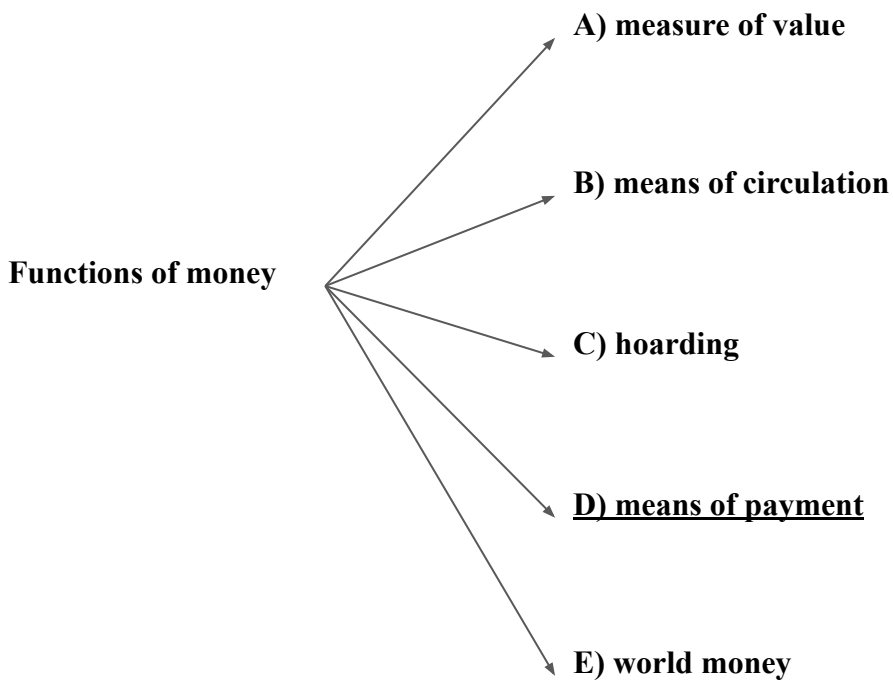
3. Reading Capital, vol 1

3.5 Circulation (1): money-commodity and relations



A commodity, in its capacity of a use-value, satisfies a particular want, and is a particular element of material wealth. But t**he value of a commodity measures the degree of its attraction for all other elements of material wealth, and therefore measures the social wealth of its owner.** To a barbarian owner of commodities, and even to a West-European peasant, value is the same as value-form, and therefore to him the increase in his hoard of gold and silver is an increase in value. It is true that the value of money varies, at one time in consequence of a variation in its own value, at another, in consequence of a change in the values of commodities. But this, on the one hand, does not prevent 200 ounces of gold from still containing more value than 100 ounces, nor, on the other hand, does it hinder the actual metallic form of this article from continuing to be the universal equivalent form of all other commodities, and the immediate social incarnation of all human labour. **The desire after hoarding is in its very nature unsatiable. In its qualitative aspect, or formally considered, money has no bounds to its efficacy, i.e., it is the universal representative of material wealth, because it is directly convertible into any other commodity. But, at the same time, every actual sum of money is limited in amount, and, therefore, as a means of purchasing, has only a limited efficacy.** This antagonism between the quantitative limits of money and its qualitative boundlessness, continually acts as a spur to the hoarder in his Sisyphus-like labour of accumulating. It is with him as it is with a conqueror who sees in every new country annexed, only a new boundary.

Chapter 3: Money or the circulation of commodities



With the development of circulation, conditions arise under which the alienation of commodities becomes separated, by an interval of time, from the realisation of their prices. It will be sufficient to indicate the most simple of these conditions. One sort of article requires a longer, another a shorter time for its production. Again, the production of different commodities depends on different seasons of the year. One sort of commodity may be born on its own market place, another has to make a long journey to market. Commodity-owner No. 1, may therefore be ready to sell, before No. 2 is ready to buy. When the same transactions are continually repeated between the same persons, the conditions of sale are regulated in accordance with the conditions of production. On the other hand, the use of a given commodity, of a house, for instance, is sold (in common parlance, let) for a definite period. Here, it is only at the end of the term that the buyer has actually received the use-value of the commodity. **He therefore buys it before he pays for it. The vendor sells an existing commodity, the purchaser buys as the mere representative of money, or rather of future money. The vendor becomes a creditor, the purchaser becomes a debtor. Since the metamorphosis of commodities, or the development of their value-form, appears here under a new aspect, money also acquires a fresh function; it becomes the means of payment.**

Chapter 3: Money or the circulation of commodities

3. Reading Capital, vol 1

3.5 Circulation (1): money-commodity and relations

Functions of money

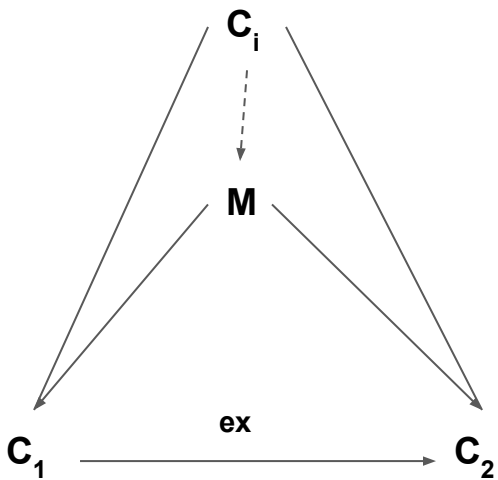
- **A) measure of value**
- **B) means of circulation**
- **C) hoarding**
- **D) means of payment**
- **<u>E) world money</u>**

When money leaves the home sphere of circulation, it strips off the local garbs which it there assumes, of a standard of prices, of coin, of tokens, and of a symbol of value, and returns to its original form of bullion. In the trade between the markets of the world, the value of commodities is expressed so as to be universally recognised. Hence their independent value-form also, in these cases, confronts them under the shape of universal money. It is only in the markets of the world that money acquires to the full extent the character of the commodity whose bodily form is also the immediate social incarnation of human labour in the abstract. **Its real mode of existence in this sphere adequately corresponds to its ideal concept.**

Chapter 3: Money or the circulation of commodities

3. Reading Capital, vol 1

3.5 Circulation (1): money-commodity and relations



A) measure of value

The money commodity M is an object that in a certain quantity, preserves the atomic logic of value.

B) means of circulation

For every relation between commodities C_1 and C_2 there exists an amount of M which exposes this relation, while also being exposed to a singular amount of another commodity C_i

C) hoarding

M expresses something about the infinity of exchange, while being of a finite quantity - it touches on the aesthetic synthesis of the world of commodities

D) means of payment

The commodity M guarantees the spatial as well as the temporal closure of the world of commodity exchange

E) world money

Even though M can acquire specific forms when interacting with specificities of other atomic subsystems, when crossing frontiers beyond them it resorts back to its support on a material multiple that obeys atomic logic.

3. Reading Capital, vol 1

3.6 Circulation (2): circuit of capital and the valorization functor

<u>From C-M-C' to M-C-M':</u>

In simple circulation, C-M-C, the value of commodities attained at the most a form independent of their use-values, i.e., the form of money; but that same value now in the circulation M-C-M, or the circulation of capital, suddenly presents itself as an independent substance, endowed with a motion of its own, passing through a life-process of its own, in which money and commodities are mere forms which it assumes and casts off in turn. Nay, more: instead of simply representing the relations of commodities, it enters now, so to say, into private relations with itself. It differentiates itself as original value from itself as surplus-value; as the father differentiates himself from himself qua the son, yet both are one and of one age: for only by the surplus-value of £10 does the £100 originally advanced become capital, and so soon as this takes place, so soon as the son, and by the son, the father, is begotten, so soon does their difference vanish, and they again become one, £110.

Value therefore now becomes value in process, money in process, and, as such, capital. It comes out of circulation, enters into it again, preserves and multiplies itself within its circuit, comes back out of it with expanded bulk, and begins the same round ever afresh. M-M', **money which begets money,** such is the description of Capital from the mouths of its first interpreters, the Mercantilists.

Buying in order to sell, or, more accurately, buying in order to sell dearer, M-C-M', appears certainly to be a form peculiar to one kind of capital alone, namely, merchants' capital. But industrial capital too is money, that is changed into commodities, and by the sale of these commodities, is re-converted into more money. The events that take place outside the sphere of circulation, in the interval between the buying and selling, do not affect the form of this movement. Lastly, in the case of interest-bearing capital, the circulation M-C-M' appears abridged. We have its result without the intermediate stage, in the form M-M', "en style lapidaire" so to say, money that is worth more money, value that is greater than itself.

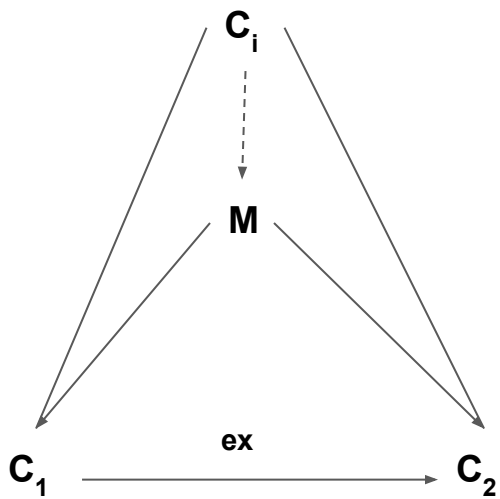
M-C-M' is therefore in reality the general formula of capital as it appears prima facie within the sphere of circulation.

Chapter 4: Transformation of money into capital

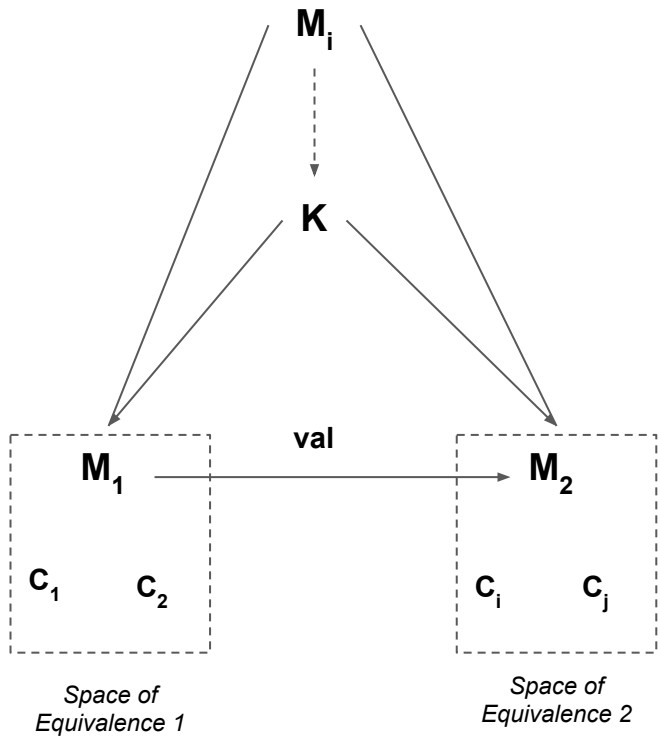
3. Reading Capital, vol 1

3.6 Circulation (2): circuit of capital and the valorization functor

C-M-C'



M - C - M'



Merchant capital (crosses frontiers)

$M - (T_B) - M'$

Interest capital (crosses debt)

$M - (T_A) - M'$

Industrial capital

$M - (T_C) - M'$

3. Reading Capital, vol 1

3.6 Circulation (2): circuit of capital and the valorization functor

The form which circulation takes when money becomes capital, is opposed to all the laws we have hitherto investigated bearing on the nature of commodities, value and money, and even of circulation itself. What distinguishes this form from that of the simple circulation of commodities, is the inverted order of succession of the two antithetical processes, sale and purchase. How can this purely formal distinction between these processes change their character as it were by magic? (...) **We have shown that surplus-value cannot be created by circulation, and, therefore, that in its formation, something must take place in the background, which is not apparent in the circulation itself. But can surplus-value possibly originate anywhere else than in circulation, which is the sum total of all the mutual relations of commodity-owners, as far as they are determined by their commodities?** Apart from circulation, the commodity-owner is in relation only with his own commodity. So far as regards value, that relation is limited to this, that the commodity contains a quantity of his own labour, that quantity being measured by a definite social standard. This quantity is expressed by the value of the commodity, and since the value is reckoned in money of account, this quantity is also expressed by the price, which we will suppose to be £10. But his labour is not represented both by the value of the commodity, and by a surplus over that value, not by a price of 10 that is also a price of 11, not by a value that is greater than itself. **The commodity owner can, by his labour, create value, but not self-expanding value. He can increase the value of his commodity, by adding fresh labour, and therefore more value to the value in hand, by making, for instance, leather into boots. The same material has now more value, because it contains a greater quantity of labour. The boots have therefore more value than the leather, but the value of the leather remains what it was; it has not expanded itself, has not, during the making of the boots, annexed surplus-value. It is therefore impossible that outside the sphere of circulation, a producer of commodities can, without coming into contact with other commodity-owners, expand value, and consequently convert money or commodities into capital.**

It is therefore impossible for capital to be produced by circulation, and it is equally impossible for it to originate apart from circulation. It must have its origin both in circulation and yet not in circulation. We have, therefore, got a double result.

The conversion of money into capital has to be explained on the basis of the laws that regulate the exchange of commodities, in such a way that the starting-point is the exchange of equivalents. Our friend, Moneybags, who as yet is only an embryo capitalist, must buy his commodities at their value, must sell them at their value, and yet at the end of the process must withdraw more value from circulation than he threw into it at starting. His development into a full-grown capitalist must take place, both within the sphere of circulation and without it. These are the conditions of the problem. Hic Rhodus, hic salta!

Chapter 5: The contradictions in the formula of capital

3. Reading Capital, vol 1

3.6 Circulation (2): circuit of capital and the valorization functor

Labour-commodity, condition for industrial capital:

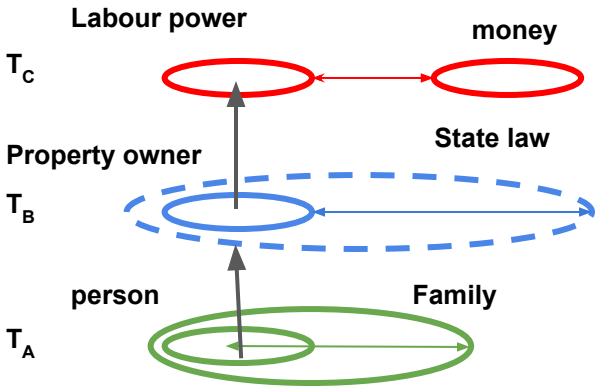
The change of value that occurs in the case of money intended to be converted into capital, cannot take place in the money itself, since in its function of means of purchase and of payment, it does no more than realise the price of the commodity it buys or pays for; and, as hard cash, it is value petrified, never varying. **Just as little can it originate in the second act of circulation, the re-sale of the commodity,** which does no more than transform the article from its bodily form back again into its money-form. The change must, therefore, take place in the commodity bought by the first act, M-C, but not in its value, for equivalents are exchanged, and the commodity is paid for at its full value. **We are, therefore, forced to the conclusion that the change originates in the use-value, as such, of the commodity, i.e., in its consumption. In order to be able to extract value from the consumption of a commodity, our friend, Moneybags, must be so lucky as to find, within the sphere of circulation, in the market, a commodity, whose use-value possesses the peculiar property of being a source of value, whose actual consumption, therefore, is itself an embodiment of labour, and, consequently, a creation of value. The possessor of money does find on the market such a special commodity in capacity for labour or labour-power.**

By labour-power or capacity for labour is to be understood the aggregate of those mental and physical capabilities existing in a human being, which he exercises whenever he produces a use-value of any description.

Chapter 6: Buying and Selling of Labour-Power

3. Reading Capital, vol 1

3.6 Circulation (2): circuit of capital and the valorization functor



<u>The appearance of the labour-commodity - auxiliary modes:</u>

But in order that our owner of money may be able to find labour-power offered for sale as a commodity, **various conditions must first be fulfilled. The exchange of commodities of itself implies no other relations of dependence than those which result from its own nature. On this assumption, labour-power can appear upon the market as a commodity, only if, and so far as, its possessor, the individual whose labour-power it is, offers it for sale, or sells it, as a commodity.** In order that he may be able to do this, he must have it at his disposal, must be the untrammelled owner of his capacity for labour, i.e., of his person. **He and the owner of money meet in the market, and deal with each other as on the basis of equal rights, with this difference alone, that one is buyer, the other seller; both, therefore, equal in the eyes of the law.** The continuance of this relation demands that the owner of the labour-power should sell it only for a definite period, for if he were to sell it rump and stump, once for all, he would be selling himself, converting himself from a free man into a slave, from an owner of a commodity into a commodity. He must constantly look upon his labour-power as his own property, his own commodity, and this he can only do by placing it at the disposal of the buyer temporarily, for a definite period of time. By this means alone can he avoid renouncing his rights of ownership over it.

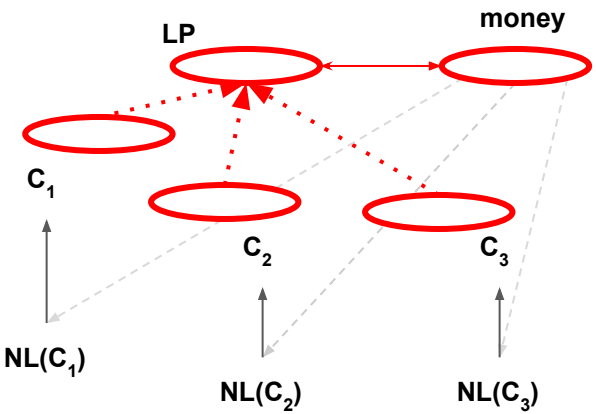
The second essential condition to the owner of money finding labour-power in the market as a commodity is this — **that the labourer instead of being in the position to sell commodities in which his labour is incorporated, must be obliged to offer for sale as a commodity that very labour-power, which exists only in his living self.** In order that a man may be able to sell commodities other than labour-power, he must of course have the means of production, as raw material, implements, &c. No boots can be made without leather. He requires also the means of subsistence. (...)

For the conversion of his money into capital, therefore, **the owner of money must meet in the market with the free labourer, free in the double sense, that as a free man he can dispose of his labour-power as his own commodity, and that on the other hand he has no other commodity for sale, is short of everything necessary for the realisation of his labour-power.**

Chapter 6: Buying and Selling of Labour-Power

3. Reading Capital, vol 1

3.6 Circulation (2): circuit of capital and the valorization functor



<u>The appearance of the labour-commodity - the value of labour power:</u>

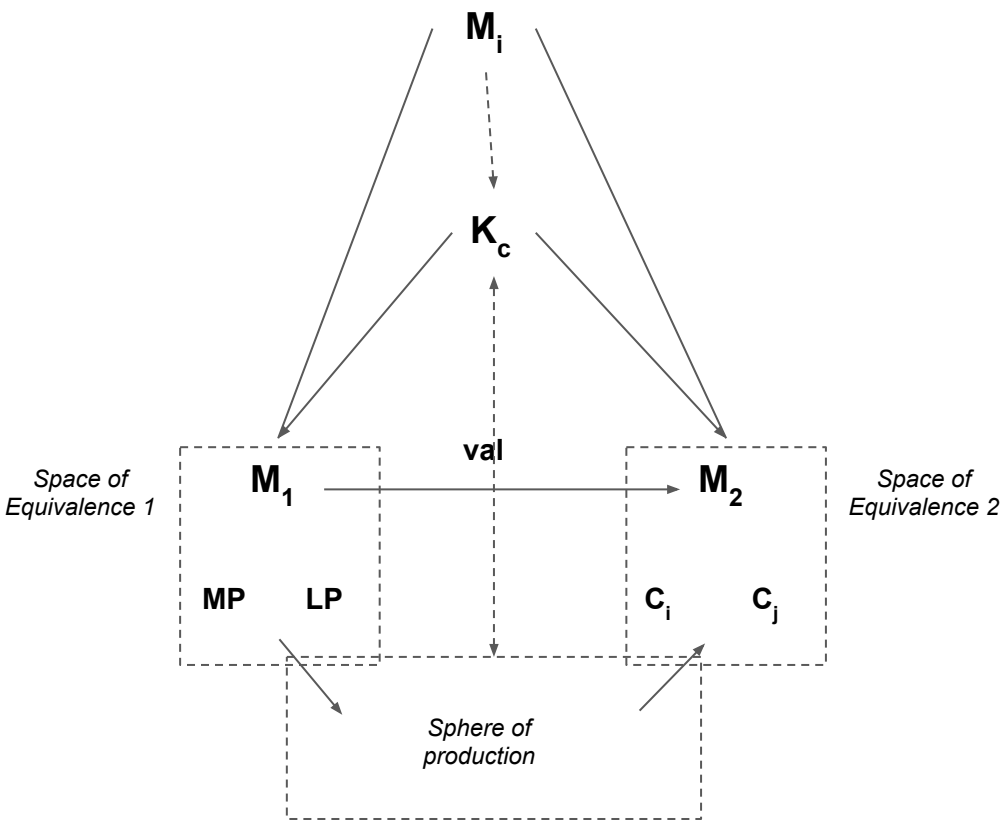
The value of labour-power is determined, as in the case of every other commodity, by the labour-time necessary for the production, and consequently also the reproduction, of this special article. So far as it has value, it represents no more than a definite quantity of the average labour of society incorporated in it. Labour-power exists only as a capacity, or power of the living individual. Its production consequently pre-supposes his existence. **Given the individual, the production of labour-power consists in his reproduction of himself or his maintenance. For his maintenance he requires a given quantity of the means of subsistence. Therefore the labour-time requisite for the production of labour-power reduces itself to that necessary for the production of those means of subsistence; in other words, the value of labour-power is the value of the means of subsistence necessary for the maintenance of the labourer.** Labour-power, however, becomes a reality only by its exercise; it sets itself in action only by working. But thereby a definite quantity of human muscle, nerve, brain, &c., is wasted, and these require to be restored. This increased expenditure demands a larger income. If the owner of labour-power works to-day, to-morrow he must again be able to repeat the same process in the same conditions as regards health and strength. His means of subsistence must therefore be sufficient to maintain him in his normal state as a labouring individual. His natural wants, such as food, clothing, fuel, and housing, vary according to the climatic and other physical conditions of his country. On the other hand, the number and extent of his so-called necessary wants, as also the modes of satisfying them, are themselves the product of historical development, and depend therefore to a great extent on the degree of civilisation of a country, more particularly on the conditions under which, and consequently on the habits and degree of comfort in which, the class of free labourers has been formed. [7] In contradistinction therefore to the case of other commodities, there enters into the determination of the value of labour-power a historical and moral element. **Nevertheless, in a given country, at a given period, the average quantity of the means of subsistence necessary for the labourer is practically known.**

Chapter 6: Buying and Selling of Labour-Power

3. Reading Capital, vol 1

3.6 Circulation (2): circuit of capital and the valorization functor

M - ({Mp+LP}-> C) - M'



3. Reading Capital, vol 1

3.7 Production process (1): composition, generativity and non-evental change

Labour process independently of social conditions:

The capitalist buys labour-power in order to use it; and labour-power in use is labour itself. The purchaser of labour-power consumes it by setting the seller of it to work. By working, the latter becomes actually, what before he only was potentially, labour-power in action, a labourer. In order that his labour may re-appear in a commodity, he must, before all things, expend it on something useful, on something capable of satisfying a want of some sort. **Hence, what the capitalist sets the labourer to produce, is a particular use-value, a specified article. The fact that the production of use-values, or goods, is carried on under the control of a capitalist and on his behalf, does not alter the general character of that production. We shall, therefore, in the first place, have to consider the labour-process independently of the particular form it assumes under given social conditions.** (...)

The labour-process, resolved as above into its simple elementary factors, is human action with a view to the production of use-values, appropriation of natural substances to human requirements; it is the necessary condition for effecting exchange of matter between man and Nature; it is the everlasting Nature-imposed condition of human existence, and therefore is independent of every social phase of that existence, or rather, is common to every such phase. It was, therefore, not necessary to represent our labourer in connexion with other labourers; man and his labour on one side, Nature and its materials on the other, sufficed. **As the taste of the porridge does not tell you who grew the oats, no more does this simple process tell you of itself what are the social conditions under which it is taking place,** whether under the slave-owner's brutal lash, or the anxious eye of the capitalist, whether Cincinnatus carries it on in tilling his modest farm or a savage in killing wild animals with stones

Capital, vol. 1, Chapter 7, Section 1: The Labour-Process or The Production of Use-Values

3. Reading Capital, vol 1

3.7 Production process (1): composition, generativity and non-evental change

Nature and labour process:

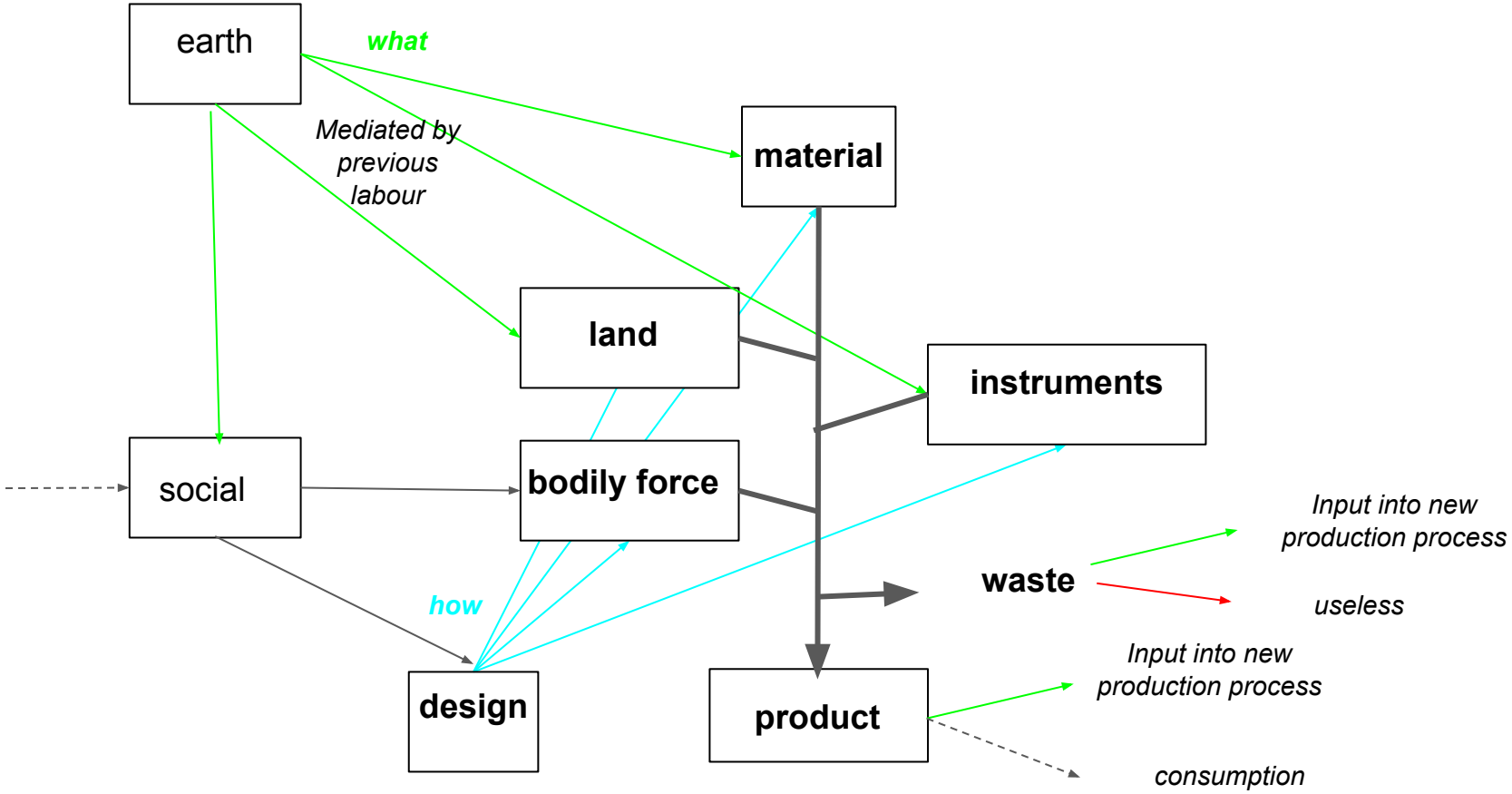
The elementary factors of the labour-process are 1, the personal activity of man, i.e., work itself, 2, the subject of that work, and 3, its instruments.

The soil (and this, economically speaking, includes water) in the virgin state in which it supplies man with necessaries or the means of subsistence ready to hand, exists independently of him, and is the universal subject of human labour. **All those things which labour merely separates from immediate connexion with their environment, are subjects of labour spontaneously provided by Nature.** (...) All raw material is the subject of labour, but not every subject of labour is raw material: it can only become so, after it has undergone some alteration by means of labour. An instrument of labour is a thing, or a complex of things, which the labourer interposes between himself and the subject of his labour, and which serves as the conductor of his activity. He makes use of the mechanical, physical, and chemical properties of some substances in order to make other substances subservient to his aims. **As the earth is his original larder, so too it is his original tool house. It supplies him, for instance, with stones for throwing, grinding, pressing, cutting, &c.** (...) In a wider sense we may include among the instruments of labour, in addition to those things that are used for directly transferring labour to its subject, and which therefore, in one way or another, serve as conductors of activity, all such objects as are necessary for carrying on the labour-process. These do not enter directly into the process, but without them it is either impossible for it to take place at all, or possible only to a partial extent. Once more we find the earth to be a universal instrument of this sort, for it furnishes a locus standi to the labourer and a field of employment for his activity. Among instruments that are the result of previous labour and also belong to this class, we find workshops, canals, roads, and so forth.

In the labour-process, therefore, man's activity, with the help of the instruments of labour, effects an alteration, designed from the commencement, in the material worked upon. The process disappears in the product, the latter is a use-value, Nature's material adapted by a change of form to the wants of man. Labour has incorporated itself with its subject: the former is materialised, the latter transformed. That which in the labourer appeared as movement, now appears in the product as a fixed quality without motion. The blacksmith forges and the product is a forging.

If we examine the whole process from the point of view of its result, the product, it is plain that both the instruments and the subject of labour, are means of production, [6] and that the labour itself is productive labour.

Capital, vol. 1, Chapter 7, Section 1: The Labour-Process or The Production of Use-Values


earth
what
Mediated by previous labour
material
land
instruments
social
bodily force
how
design
waste
Input into new production process
useless
product
Input into new production process
consumption

3. Reading Capital, vol 1

3.7 Production process (1): composition, generativity and non-evental change

We begin with a formal definition of symmetric monoidal posets.

Definition 2.1. A *symmetric monoidal structure* on a poset $(X, \leq)$ consists of two constituents:

(i) an element $I \in X$, called the *monoidal unit*, and

(ii) a function $\otimes\colon X \times X \to X$, called the *monoidal product*.

These constituents must satisfy the following properties:

(a) for all $x_1, x_2, y_1, y_2 \in X$, if $x_1 \leq y_1$ and $x_2 \leq y_2$, then $x_1 \otimes x_2 \leq y_1 \otimes y_2$,

(b) for all $x \in X$, the equations $I \otimes x = x$ and $x \otimes I = x$ hold,

(c) for all $x, y, z \in X$, the equation $(x \otimes y) \otimes z = x \otimes (y \otimes z)$ holds, and

(d) for all $x, y \in X$, the equivalence $x \otimes y \cong y \otimes x$ holds.

A poset equipped with a symmetric monoidal structure, $(X, \leq, I, \otimes)$, is called a *symmetric monoidal poset*.

Anyone can propose a set X, an order $\leq$ on X, an element I in X, and a binary operation $\otimes$ on X and ask whether $(X, \leq, I, \otimes)$ is a symmetric monoidal poset. And it will indeed be one, as long as it satisfies rules a, b, c, and d of Definition 2.1.

Remark 2.2. It is often useful to replace $=$ with $\cong$ throughout Definition 2.1. The result is a perfectly good notion, called a *weak monoidal structure*. The reason we chose equality is that it makes equations look simpler, which we hope aids first-time readers.

The notation for the monoidal unit and the monoidal product may vary: monoidal units we have seen include I (as in the definition), 0, 1, `true`, `false`, $\{*\}$, and more. Monoidal products we have seen include $\otimes$ (as in the definition), $+$, $*$, $\wedge$, $\vee$, and $\times$. The *preferred notation* a given setting is whatever best helps our brains remember what we're trying to do; the names I and $\otimes$ are just defaults.

3. Reading Capital, vol 1

3.7 Production process (1): composition, generativity and non-evental change

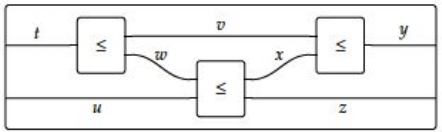
Wiring diagrams are visual representations for building new relationships from old. In a poset without a monoidal structure, the only sort of relationship between objects is $\leq$, and the only way you build a new $\leq$ relationship from old ones is by chaining them together. We denote the relationship $x \leq y$ by

(2.2)

We can chain some number of such relationships—say 0, 1, 2, or 3—together in series as shown here

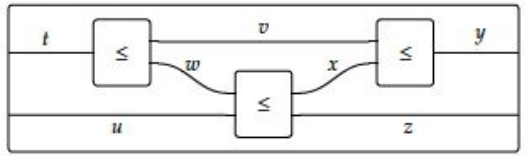
(2.3)

With symmetric monoidal posets, we can combine relationships not only in series but also in parallel. Here is an example:



(2.4)

A wiring diagram is a bunch of interior boxes connected together inside an exterior box. It represents a graphical proof that says: if all of the interior assertions are correct, then so is the exterior assertion.



(2.6)

The inner boxes in Eq. (2.6) translate into the assertions:

$$t \leq v + w \qquad w + u \leq x + z \qquad v + x \leq y \tag{2.7}$$

and the outer box translates into the assertion:

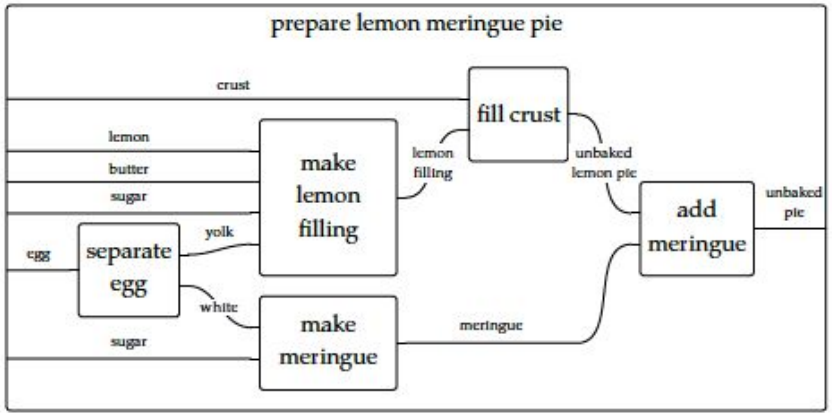
$$t + u \leq y + z. \tag{2.8}$$

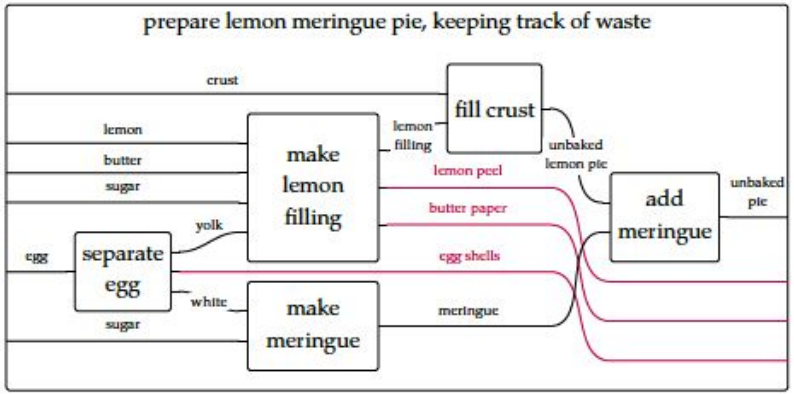
The whole wiring diagram 2.6 says "if you know that the assertions in 2.7 are true, then I am a proof that the assertion in 2.8 is also true." What exactly is the proof that Eq. (2.6) represents?

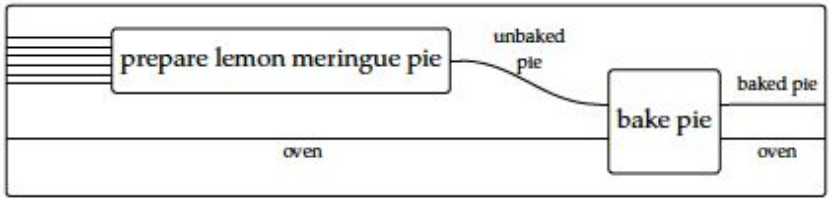
$$t + u \;\leq\; v + w + u \;\leq\; v + x + z \;\leq\; y + z. \tag{2.9}$$

3. Reading Capital, vol 1

3.7 Production process (1): composition, generativity and non-evental change

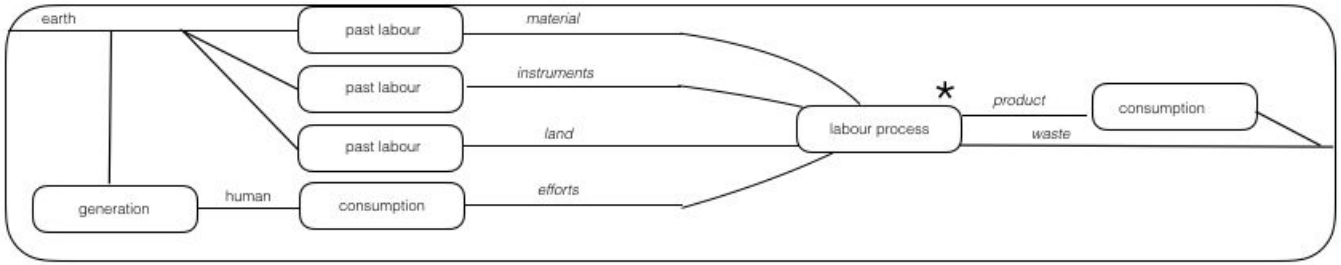


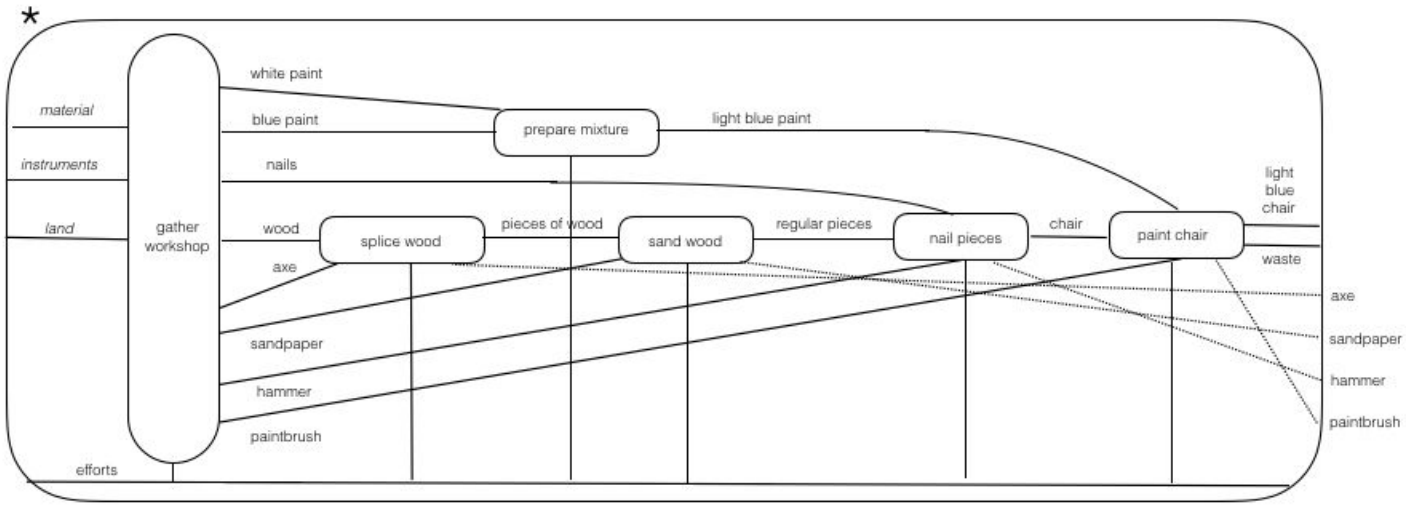




3. Reading Capital, vol 1

3.7 Production process (1): composition, generativity and non-evental change





3. Reading Capital, vol 1

3.7 Production process (1): composition, generativity and non-evental change

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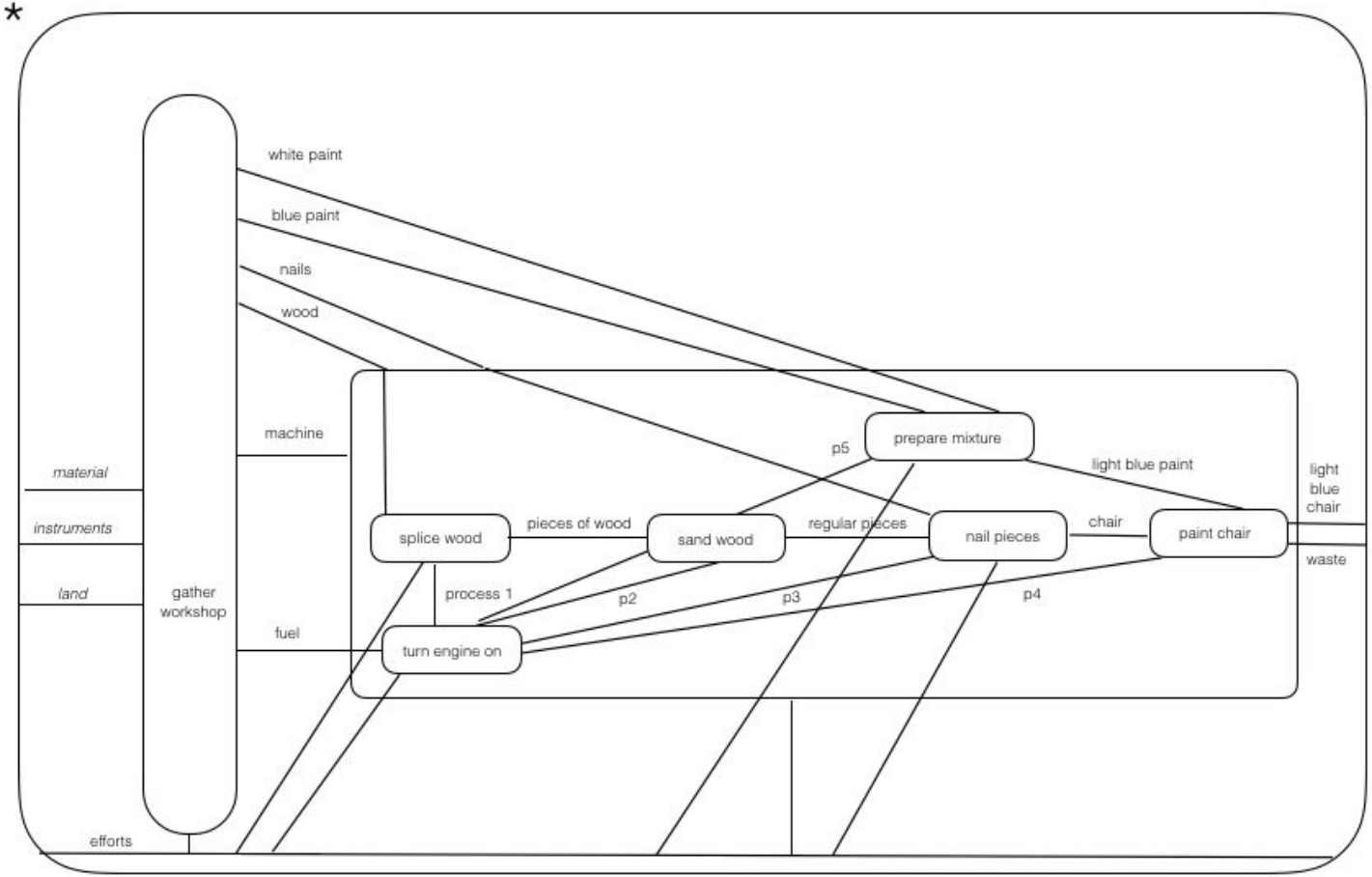


3. Reading Capital, vol 1

3.7 Production process (1): composition, generativity and non-evental change

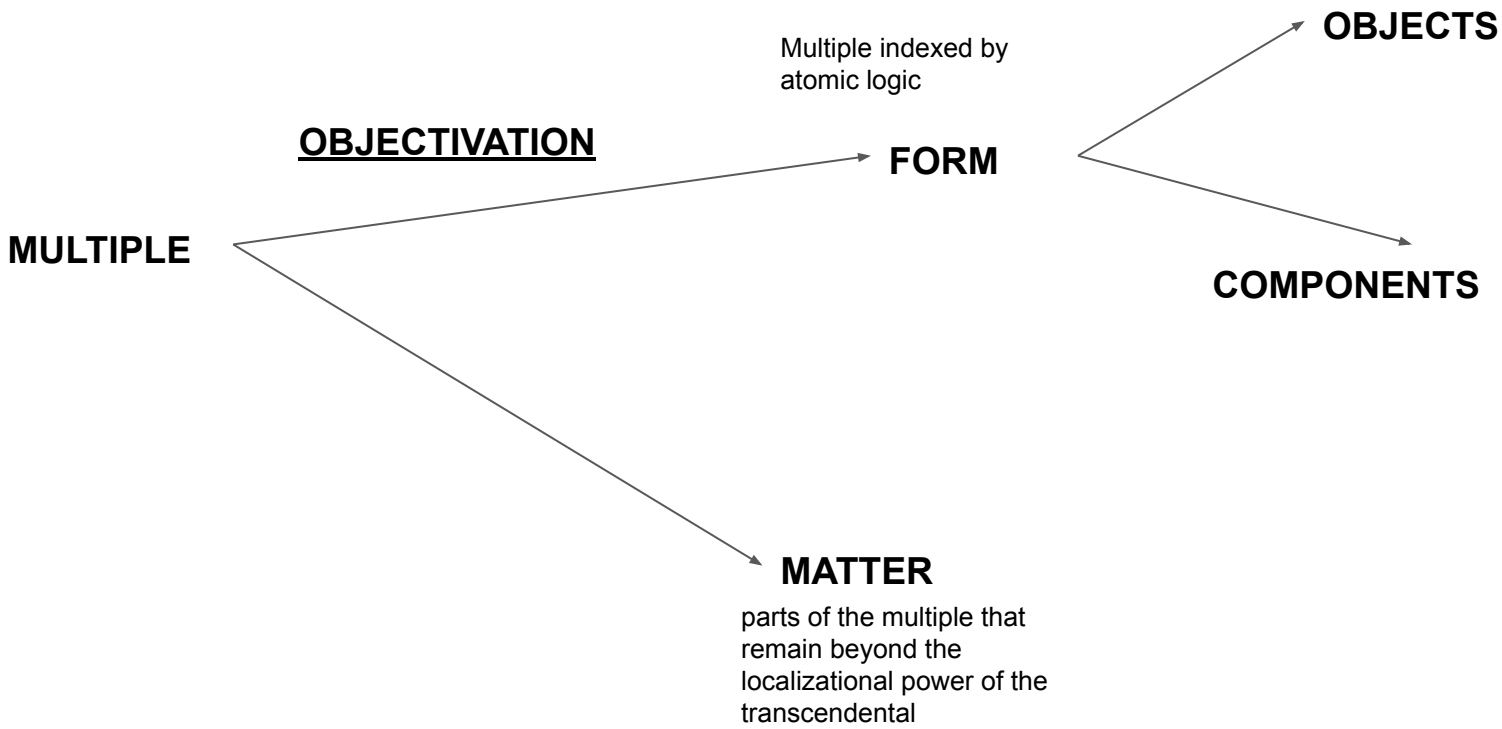
The monoidal poset Cost As we said above, when we enrich in monoidal posets we see them as different ways to structure "getting from here to there". We will explain this in more detail in Section 2.3. The following monoidal poset will eventually structure a notion of distance or cost for getting from here to there.

Example 2.19 (Lawvere's monoidal poset). Let $[0, \infty]$ denote the set of nonnegative real numbers—such as 0, 1, $15.33\overline{3}$, and 2π—together with ∞. Consider the poset $([0, \infty], \geq)$, with the usual notion of $\geq$, where of course $\infty \geq x$ for all $x \in [0, \infty]$.

There is a monoidal structure on this poset, where the monoidal unit is 0 and the monoidal product is $+$. In particular, $x + \infty = \infty$ for any $x \in [0, \infty]$. Let's call this monoidal poset

$$\mathbf{Cost} := ([0, \infty], \geq, 0, +)$$

because we can think of the elements of $[0, \infty]$ as costs. In terms of structuring "getting from here to there", Lawvere's monoidal poset seems to say "getting from a to b is a question of cost". The monoidal unit being 0 will translate into saying that you can always get from a to a at no cost. The monoidal product being $+$ will translate into saying that the cost of getting from a to c is at most the cost of getting from a to b *plus* the cost of getting from b to c. Finally, the "at most" in the previous sentence is coming from the $\geq$. ♦


OBJECTS
Multiple indexed by atomic logic
OBJECTIVATION
FORM
MULTIPLE
COMPONENTS
MATTER
parts of the multiple that remain beyond the localizational power of the transcendental

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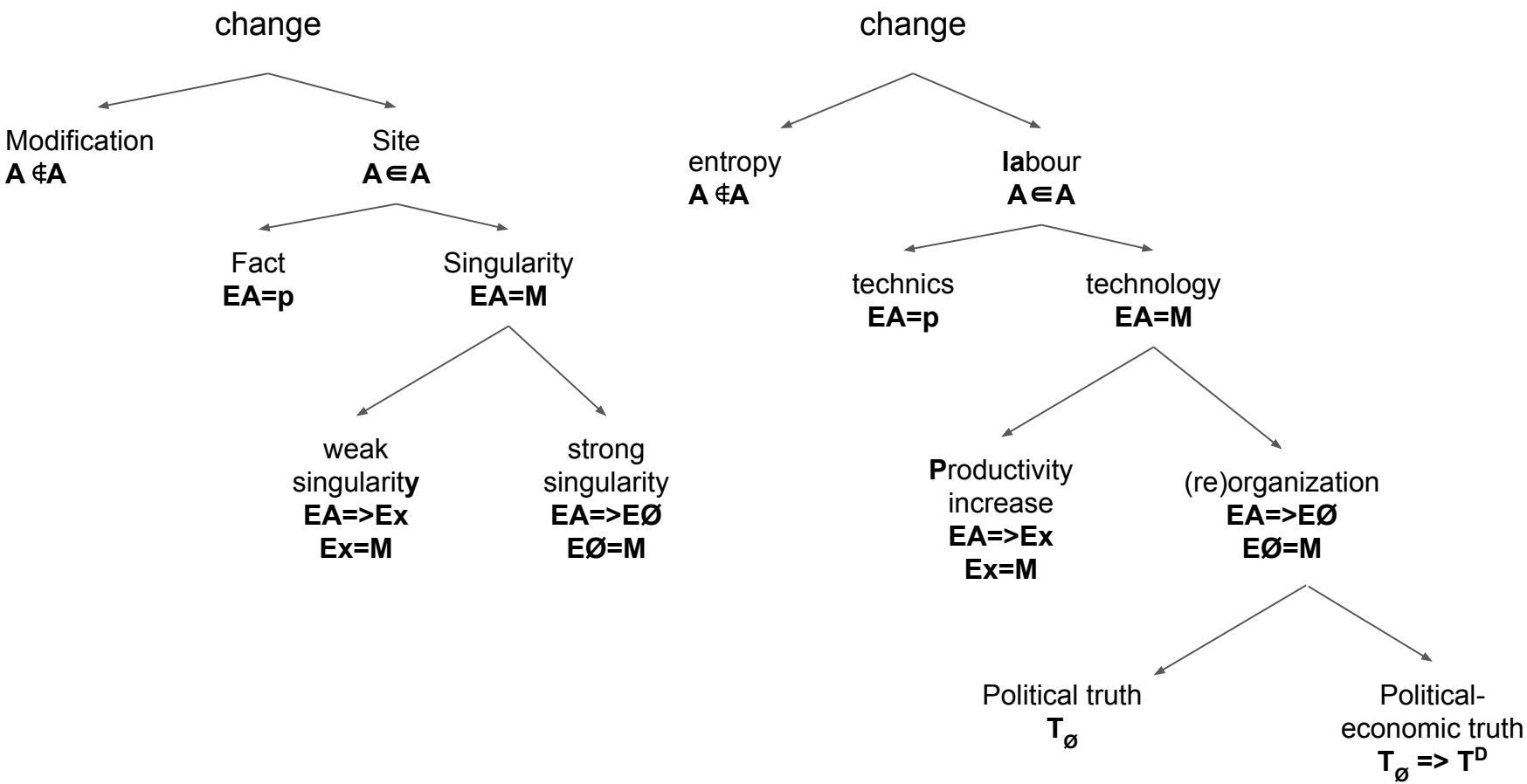
3.7 Production process (1): composition, generativity and non-evental change

Change [for an object (A, **Id**) in a world **m**]	Is A a site? ($A \in A$)	$\mathbf{E}A = ?$	$\mathbf{E}A \Rightarrow \mathbf{E}\emptyset_A = ?$ ($\mathbf{E}\emptyset_A = \mu$)
Modification	No	$\mathbf{E}A$ is not evaluated	Does not have a value
Fact	Yes	$\mathbf{E}A = p$ ($p < M$)	$\mathbf{E}A \Rightarrow \mathbf{E}\emptyset_A = \neg p$ (reverse of p) (because $p \Rightarrow \mu = \neg p$)*
Weak singularity	Yes	$\mathbf{E}A = M$	$\mathbf{E}A \Rightarrow \mathbf{E}\emptyset_A = \mu$ (because $M \Rightarrow \mu = \neg M = \mu$)**
Strong singularity (or event)	Yes	$\mathbf{E}A = M$	$\mathbf{E}A \Rightarrow \mathbf{E}\emptyset_A = M$ (subversion of the rule) ($\mathbf{E}\emptyset_A = \mu$) $\rightarrow$ ($\mathbf{E}\emptyset_A = M$)

* By the definition of dependence $\Rightarrow$, we have $p \Rightarrow \mu = \Sigma(t/t \cap p = \mu)$, which is the definition of $\neg p$, the reverse of p (II.1 and II.3).
** We demonstrated (II.1 and II.3) that the reverse of M is μ. And we saw above that $M \Rightarrow \mu = \neg M$.

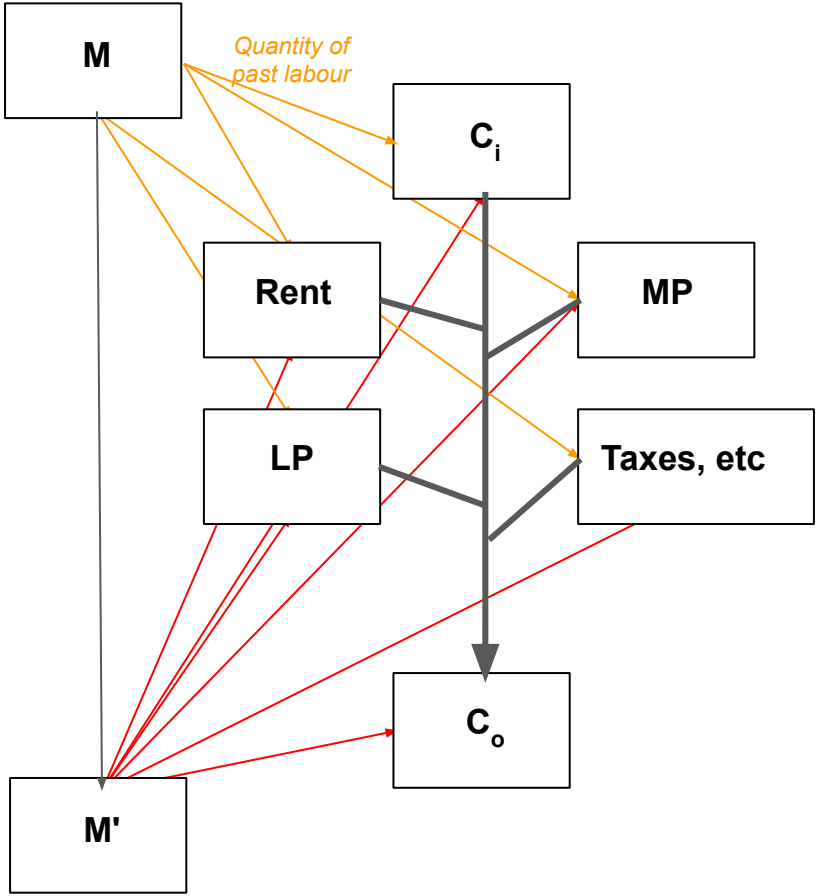
Logics of Worlds, p. 395

- Labour is a commodity which contains the value of past labor. It has the property of self-belonging.
- The self-belonging property is effaced by mode C. Labour is therefore at the edge of the void, a site. Badiou identifies this in *Factory as Event Site* as - behind labour power in general are individual labourers not counted as such.
- The world of commodities, each being a product of labour, therefore contains an isolate.
- Labour is capable of transforming the world. However, Badiou's theory of change distinguishes between weaker and stronger forms of change. Labour in itself is not sufficient for an evental change, because its existence as a site, and its consequences, are not maximal.


change
Modification
A ∉A
Site
A∈A
Fact
EA=p
Singularity
EA=M
weak
singularity
EA=>Ex
Ex=M
strong
singularity
EA=>EØ
EØ=M
change
entropy
A ∉A
labour
A∈A
technics
EA=p
technology
EA=M
Productivity
increase
EA=>Ex
Ex=M
(re)organization
EA=>EØ
EØ=M
Political truth
Tø
Political-
economic truth
Tø => TD

3. Reading Capital, vol 1

3.8 Production process (2): surplus-extraction and veilings



<u>Labour process as valorization process:</u>

It must be borne in mind, that we are now dealing with the production of commodities, and that, up to this point, we have only considered one aspect of the process. Just as commodities are, at the same time, use-values and values, so t**he process of producing them must be a labour-process, and at the same time, a process of creating value. (...)**

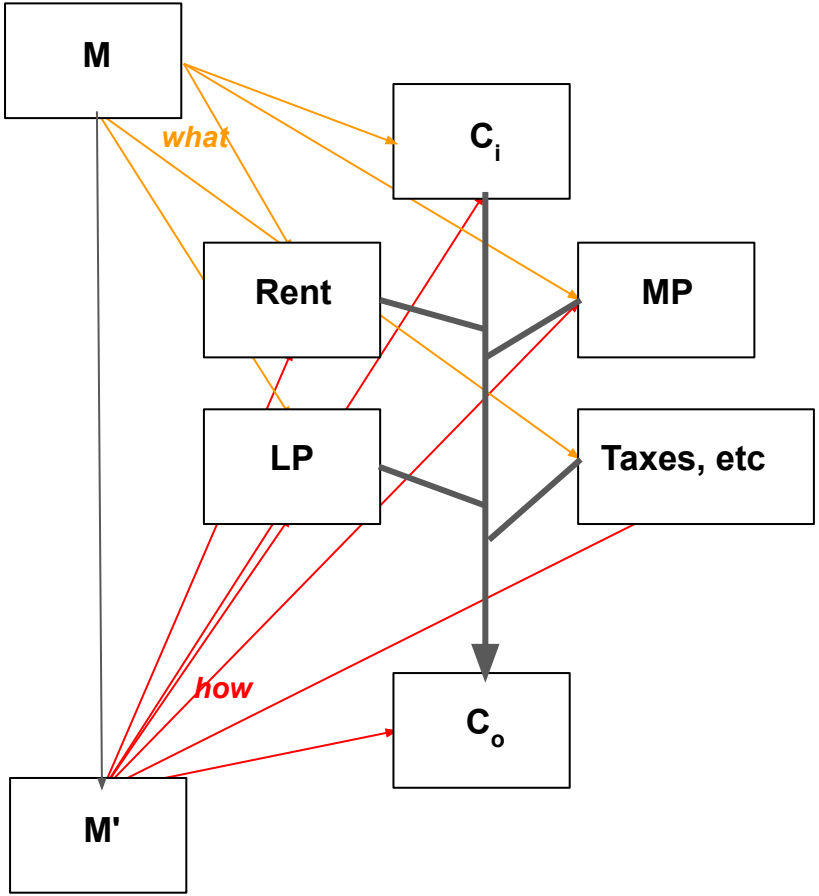
We know that the value of each commodity is determined by the quantity of labour expended on and materialised in it, by the working-time necessary, under given social conditions, for its production. This rule also holds good in the case of the product that accrued to our capitalist, as the result of the labour-process carried on for him. Assuming this product to be 10 lbs. of yarn, our first step is to calculate the quantity of labour realised in it.

For spinning the yarn, raw material is required; suppose in this case 10 lbs. of cotton. We have no need at present to investigate the value of this cotton, for our capitalist has, we will assume, bought it at its full value, say of ten shillings. In this price the labour required for the production of the cotton is already expressed in terms of the average labour of society. We will further assume that the wear and tear of the spindle, which, for our present purpose, may represent all other instruments of labour employed, amounts to the value of 2s. If, then, twenty-four hours' labour, or two working-days, are required to produce the quantity of gold represented by twelve shillings, we have here, to begin with, two days' labour already incorporated in the yarn.

Capital, vol. 1, Chapter 7, Section 2: The Production of Surplus Value

3. Reading Capital, vol 1

3.8 Production process (2): surplus-extraction and veilings



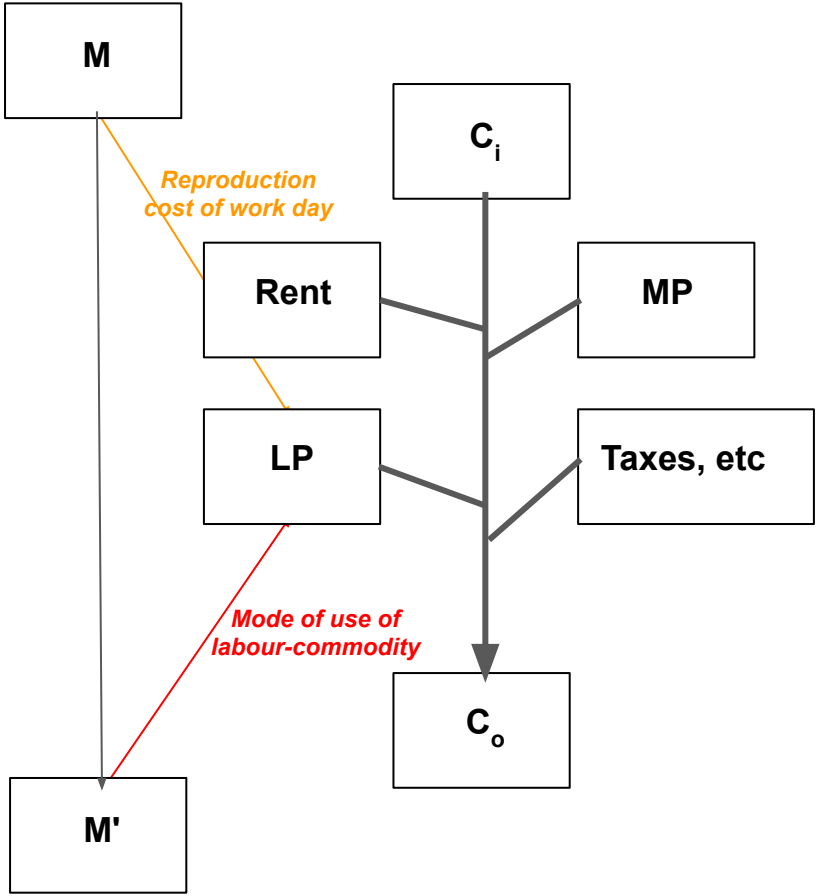
<u>Abstract labour as labour localized through money-form:</u>

We have now to consider this labour under a very different aspect from that which it had during the labour-process; there, we viewed it solely as that particular kind of human activity which changes cotton into yarn; there, the more the labour was suited to the work, the better the yarn, other circumstances remaining the same. The labour of the spinner was then viewed as specifically different from other kinds of productive labour, different on the one hand in its special aim, viz., spinning, different, on the other hand, in the special character of its operations, in the special nature of its means of production and in the special use-value of its product. For the operation of spinning, cotton and spindles are a necessity, but for making rifled cannon they would be of no use whatever. **Here, on the contrary, where we consider the labour of the spinner only so far as it is value-creating, i.e., a source of value, his labour differs in no respect from the labour of the man who bores cannon, or (what here more nearly concerns us), from the labour of the cotton-planter and spindle-maker incorporated in the means of production. It is solely by reason of this identity, that cotton planting, spindle making and spinning, are capable of forming the component parts differing only quantitatively from each other, of one whole, namely, the value of the yarn. Here, we have nothing more to do with the quality, the nature and the specific character of the labour, but merely with its quantity.** And this simply requires to be calculated. We proceed upon the assumption that spinning is simple, unskilled labour, the average labour of a given state of society. Hereafter we shall see that the contrary assumption would make no difference.

Capital, vol. 1, Chapter 7, Section 2: The Production of Surplus Value

3. Reading Capital, vol 1

3.8 Production process (2): surplus-extraction and veilings

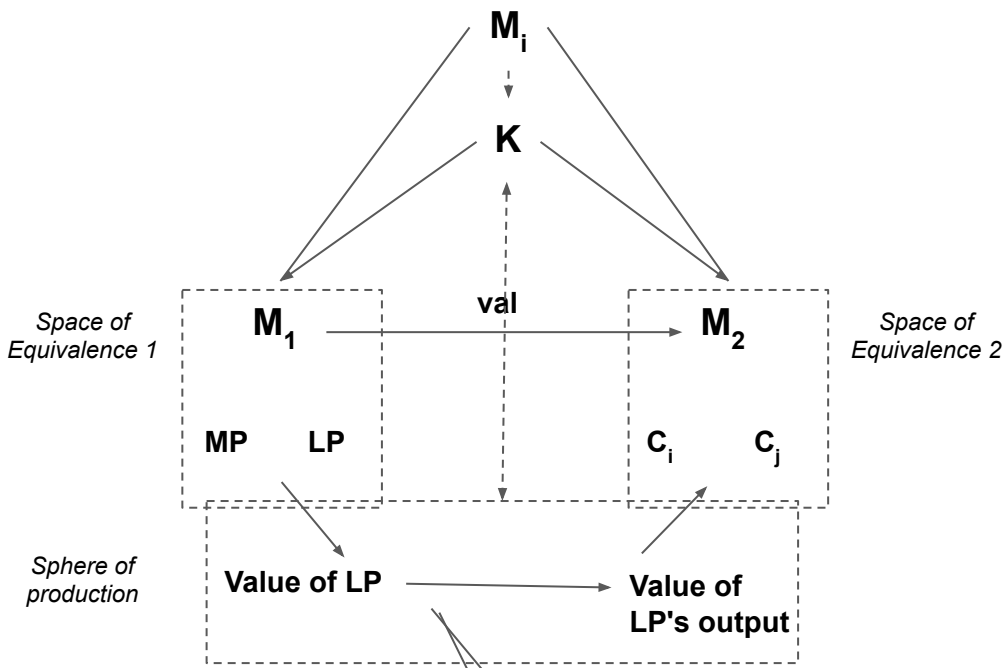


<u>The value of labour and the value of labour's products:</u>

The value of a day's labour-power amounts to 3 shillings, because on our assumption half a day's labour is embodied in that quantity of labour-power, i.e., because the means of subsistence that are daily required for the production of labour-power, cost half a day's labour. But the past labour that is embodied in the labour-power, and the living labour that it can call into action; the daily cost of maintaining it, and its daily expenditure in work, are two totally different things. The former determines the exchange-value of the labour-power, the latter is its use-value. **The fact that half a day's labour is necessary to keep the labourer alive during 24 hours, does not in any way prevent him from working a whole day**. **Therefore, the value of labour-power, and the value which that labour-power creates in the labour-process, are two entirely different magnitudes; and this difference of the two values was what the capitalist had in view, when he was purchasing the labour-power**. The useful qualities that labour-power possesses, and by virtue of which it makes yarn or boots, were to him nothing more than a conditio sine qua non; for in order to create value, labour must be expended in a useful manner. W**hat really influenced him was the specific use-value which this commodity possesses of being a source not only of value, but of more value than it has itself.** This is the special service that the capitalist expects from labour-power, and in this transaction he acts in accordance with the "eternal laws" of the exchange of commodities.

Capital, vol. 1, Chapter 7, Section 2: The Production of Surplus Value

M - ({Mp+LP}-> C) - M'



Absolute surplus extraction:
Increase in labour hours beyond reproduction cost

Relative surplus extraction:
Increase in productivity per labour hour

General remarks on the relation of capitalist production to surplus-value:

1. First level of differentiation: the difference between means of production (which transfer their value to their products) and labour power (which can create more value than its worth) [***chapter 7]***

This difference is seen from the standpoint of **K** as the difference of **constant capital** and **variable capital [chapter 8]**

2. Second level of differentiation: from the standpoint of value, we know that labour-commodities are worth what their reproduction costs is in terms of means of subsistence. The amount of work hours needed to produce the equivalent to the cost of labour itself is called necessary labour (**NL)**. The additional hours of labour which exceed this threshold are called surplus labour (**SL**).

Absolute surplus extraction is defined as the case where **NL** is invariant and **SL** is extensionally increased. That is, more labour hours added, while necessary labour for reproduction remains constant. **Relative surplus extraction** is defined as the cases where the ratio **NL/SL** is itself affected by conditions of production.[***chapter 9 to 12]***

3. Third level of differentiation: **K** sees the **NL - SL** distinction as the product of three variables: duration of work day (**D**), intensity of effort of labour (**I**) and conditions of production (**P**). Absolute surplus concerns the increase in **D**, while keeping **I** and **P** constant, while relative surplus affects the ratio **NL/SL** by changing **I** and **P** as well. [**chapters 16-17-18]**

General remarks on the relation of capitalist production to surplus-value:

4. The minimal structure of surplus extraction requires, then:

A) not only the buying of labour, but the buying of labour under a contract such that it allows the capitalist to transform **D**, **I** and/or **P** - it requires the form of labour to be defined by the capitalist, that is, by the aim of producing surplus value. [***chapter 7 and 8]***

B) that the surplus-value produced be compatible with the money form, that is, that it might be exchanged back into more money-commodity (surplus must be turned into profit)— which requires, to some extent, that at least a good part of the population be included into the consumer market. [**chapter 17]**

C) that, once labor power is bought and decomposed into priceable parts — work hours — that other priceable parts might be generated: work hours become decomposed into minutes or the time of specific gestures and actions, composable back not in terms of individual workers but in terms of the productive system's cycles. **[*chapters 13 to 15]***

Forms of extracting relative surplus [*chapters 13 to 15*]:

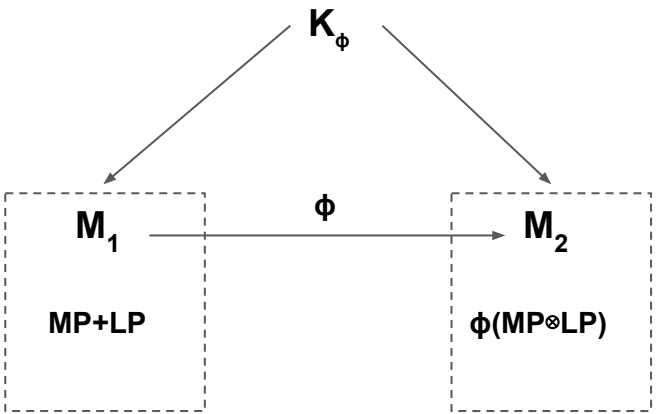
1. Cooperation (1): employing a lot of workers who use the same space and tools (less **CC** spent per **VC**)
2. Cooperation (2): combining the efforts of individual workers to accomplish tasks that cannot be done separately (intensive combination of **VC**)
3. Cooperation (3): combining the form of the actions of workers to reduce useless actions and redundant tasks (organizational composition of **VC**)

4. Division of labour in manufacture: decomposition of work tasks in terms of the production process, not the producers, creating the figure of the **partial worker** who is then recomposed into a **collective worker.**
4.1. Heterogenous composition: each partial worker does a complete product, that is combined later.
4.2 Serial composition: each partial worker does a partial task in an ongoing production process.

5. Industrial labour (1): once workers are seen as a set of inhuman parts - as machine-like parts in a machine — the substitution of labour for machinery becomes a clear possibility, the introduction of machine-systems (and the creation of factories) displaces the quality of the parts of labour onto constant capital itself, so that the localization system between labour and machines is inverted: workers become attachments to their tools of work, while the organization of productive labour becomes attached to the organization of the objective system of production (machines, etc).
6. Industrial labour (2): the appearance of the factory as a productive unit affects the previous forms of labour organization, which need to become compatible with it, since the productive chain includes both factory and non-industrial productive units, like domestic labour and manufactures, which are themselves recomposed in terms of factory-like production.

A theory of surplus extraction: (**MP**, **LP**, **ϕ, +, ⊗**)

MP : means of production
LP : labor power
ϕ : commodity production
+ : coproduct of commodities
⊗ : combining commodities under regimes of surplus extraction



We can conceive of different variations of ⊗ starting from simple cooperation all the way to modern industrial methods. This is not a simple adjoining of labor with machines, but transforms the form of labor itself. For example: *"The technical subordination of the workman to the uniform motion of the instruments of labour, and the peculiar composition of the body of workpeople, consisting as it does of individuals of both sexes and of all ages, give rise to a barrack discipline, which is elaborated into a complete system in the factory, and which fully develops the before mentioned labour of overlooking, thereby dividing the workpeople into operatives and overlookers, into private soldiers and sergeants of an industrial army."*

Capital, vol. 1, Chapter 15, Section 4: The Factory

In manufacture, as well as in simple co-operation, t**he collective working organism is a form of existence of capital.** The mechanism that is made up of numerous individual detail labourers belongs to the capitalist. **Hence, the productive power resulting from a combination of labours appears to be the productive power of capital.** Manufacture proper not only subjects the previously independent workman to the discipline and command of capital, but, in addition, **creates a hierarchic gradation of the workmen themselves.** While simple co-operation leaves the mode of working by the individual for the most part unchanged, **manufacture thoroughly revolutionises it, and seizes labour-power by its very roots.** It converts the labourer into a crippled monstrosity, by forcing his detail dexterity at the expense of a world of productive capabilities and instincts; just as in the States of La Plata they butcher a whole beast for the sake of his hide or his tallow. Not only is the detail work distributed to the different individuals, **but the individual himself is made the automatic motor of a fractional operation, and the absurd fable of Menenius Agrippa, which makes man a mere fragment of his own body, becomes realised.** If, at first, the workman sells his labour-power to capital, because the material means of producing a commodity fail him, n**ow his very labour-power refuses its services unless it has been sold to capital. Its functions can be exercised only in an environment that exists in the workshop of the capitalist after the sale.** By nature unfitted to make anything independently, the manufacturing labourer develops productive activity as a mere appendage of the capitalist's workshop. **As the chosen people bore in their features the sign manual of Jehovah, so division of labour brands the manufacturing workman as the property of capital.**

Capital, vol. 1, Chapter 14, Section 5: The Capitalistic Character of Manufacture

3. Reading Capital, vol 1

3.10 The formula of capital (2): constant and variable capital as coherent projections

While productive labour is changing the means of production into constituent elements of a new product, their value undergoes a metempsychosis. It deserts the consumed body, to occupy the newly created one. But this transmigration takes place, as it were, behind the back of the labourer. He is unable to add new labour, to create new value, without at the same time preserving old values, and this, because the labour he adds must be of a specific useful kind; and he cannot do work of a useful kind, without employing products as the means of production of a new product, and thereby transferring their value to the new product. The property therefore which labour-power in action, living labour, possesses of preserving value, at the same time that it adds it, is a gift of Nature which costs the labourer nothing, but which is very advantageous to the capitalist inasmuch as it preserves the existing value of his capital.

Capital, vol. 1, Chapter 8: Constant Capital and Variable Capital

To split up in this manner the product into different parts, of which one represents only the labour previously spent on the means of production, or the constant capital, another, only the necessary labour spent during the process of production, or the variable capital, and another and last part, only the surplus-labour expended during the same process, or the surplus-value; to do this, is, as will be seen later on from its application to complicated and hitherto unsolved problems, no less important than it is simple.

In the preceding investigation we have treated the total product as the final result, ready for use, of a working-day of 12 hours. We can however follow this total product through all the stages of its production; and in this way we shall arrive at the same result as before, if we represent the partial products, given off at the different stages, as functionally different parts of the final or total product.

Capital, vol. 1, Chapter 9, Section 2: The Representation of the Components of the Value of the Product by Corresponding Proportional Parts of the Product itself

4. From production to collective organization

4.1 Labour as a type of organization

- In our theoretical approach, "labour" is defined as part of a continuum that goes from entropy to the transcendental reorganization of social worlds — it is defined, therefore, both in terms of a capacity of transformation (structured as a site) and a constraint on the limit of these transformations (it is constrained by the money form)..
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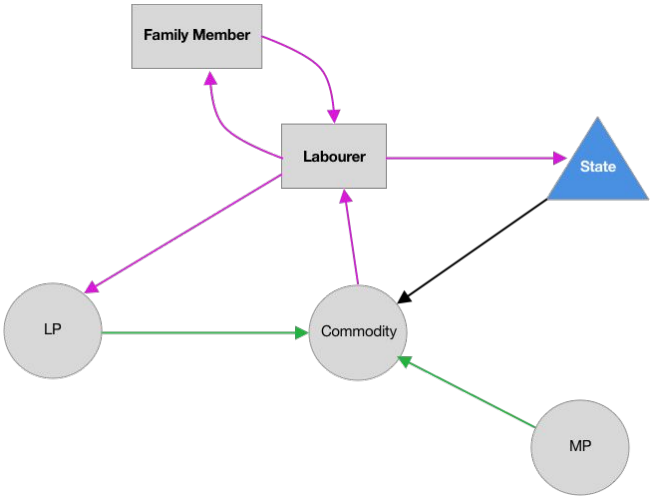
4. From production to collective organization
4.2 Multi-scalar sites and points



- A point in Badiou maps the transcendental of a world to the classic transcendental {F, T}. In other words, it *filters* the world.
- Each point captures a particular scale of the world. Within each particular mode, there can be multiple scales.
- A site can touch on multiple scales and modes at once. An event would have maximal consequences throughout. But this might not appear "as political", depending on the scale in question.

Hypothesis: an economy is a body where the set of positive points includes intransitive resolutions, so that the body cannot be situated from the standpoint of its localized organs

The combined working-day produces, relatively to an equal sum of isolated working-days, a greater quantity of use-values, and, consequently, diminishes the labour-time necessary for the production of a given useful effect. Whether the combined working-day, in a given case, acquires this increased productive power, because it heightens the mechanical force of labour, or extends its sphere of action over a greater space, or contracts the field of production relatively to the scale of production, or at the critical moment sets large masses of labour to work, or excites emulation between individuals and raises their animal spirits, or impresses on the similar operations carried on by a number of men the stamp of continuity and many-sidedness, or performs simultaneously different operations, or economises the means of production by use in common, or lends to individual labour the character of average social labour whichever of these be the cause of the increase, the special productive power of the combined working-day is, under all circumstances, the social productive power of labour, or the productive power of social labour. This power is due to co-operation itself. When the labourer co-operates systematically with others, he strips off the fetters of his individuality, and develops the capabilities of his species

...

As co-operation extends its scale, this despotism takes forms peculiar to itself. Just as at first the capitalist is relieved from actual labour so soon as his capital has reached that minimum amount with which capitalist production, as such, begins, so now, he hands over the work of direct and constant supervision of the individual workmen, and groups of workmen, to a special kind of wage-labourer. An industrial army of workmen, under the command of a capitalist, requires, like a real army, officers (managers), and sergeants (foremen, overlookers), who, while the work is being done, command in the name of the capitalist. The work of supervision becomes their established and exclusive function.

Capital, vol. 1, Chapter 13: Co-operation

3. Reading Capital, vol 1

3.8 Production process (2): surplus-extraction and veilings

The labour realised in value, is labour of an average social quality; is consequently the expenditure of average labour-power. Any average magnitude, however, is merely the average of a number of separate magnitudes all of one kind, but differing as to quantity. In every industry, each individual labourer, be he Peter or Paul, differs from the average labourer. These individual differences, or "errors" as they are called in mathematics, compensate one another, and vanish, whenever a certain minimum number of workmen are employed together.

Capital, vol. 1, Chapter 13: Co-operation

The value of commodities is in inverse ratio to the productiveness of labour. And so, too, is the value of labour-power, because it depends on the values of commodities. Relative surplus-value is, on the contrary, directly proportional to that productiveness. It rises with rising and falls with falling productiveness. The value of money being assumed to be constant, an average social working day of 12 hours always produces the same new value, six shillings, no matter how this sum may be apportioned between surplus-value and wages. But if, in consequence of increased productiveness, the value of the necessaries of life fall, and the value of a day's labour-power be thereby reduced from five shillings to three, the surplus-value increases from one shilling to three. Ten hours were necessary for the reproduction of the value of the labour-power; now only six are required. Four hours have been set free, and can be annexed to the domain of surplus-labour. **Hence there is immanent in capital an inclination and constant tendency, to heighten the productiveness of labour, in order to cheapen commodities, and by such cheapening to cheapen the labourer himself.**

Capital, vol. 1, Chapter 12: The Concept of Relative Surplus Value

The collective labourer, formed by the combination of a number of detail labourers, is the machinery specially characteristic of the manufacturing period. The various operations that are performed in turns by the producer of a commodity, and coalesce one with another during the progress of production, lay claim to him in various ways. In one operation he must exert more strength, in another more skill, in another more attention; and the same individual does not possess all these qualities in an equal degree. After Manufacture has once separated, made independent, and isolated the various operations, the labourers are divided, classified, and grouped according to their predominating qualities. If their natural endowments are, on the one hand, the foundation on which the division of labour is built up, on the other hand, Manufacture, once introduced, develops in them new powers that are by nature fitted only for limited and special functions. The collective labourer now possesses, in an equal degree of excellence, all the qualities requisite for production, and expends them in the most economical manner, by exclusively employing all his organs, consisting of particular labourers, or groups of labourers, in performing their special functions. **The one-sidedness and the deficiencies of the detail labourer become perfections when he is a part of the collective labourer.** The habit of doing only one thing **converts him into a never failing instrumen**t, while his connexion with the whole mechanism compels him to work **with the regularity of the parts of a machine.**

Capital, vol. 1, Chapter 14, Section 3: The Two Fundamental Forms Of Manufacture Heterogeneous Manufacture, Serial Manufacture

Different operations take, however, unequal periods, and yield therefore, in equal times unequal quantities of fractional products. If, therefore, the same labourer has, day after day, to perform the same operation, there must be a different number of labourers for each operation; for instance, in type manufacture, there are four founders and two breakers to one rubber: the founder casts 2,000 type an hour, the breaker breaks up 4,000, and the rubber polishes 8,000. Here we have again the principle of co-operation in its simplest form, the simultaneous employment of many doing the same thing; only now, this principle is the expression of an organic relation. **The division of labour, as carried out in Manufacture, not only simplifies and multiplies the qualitatively different parts of the social collective labourer, but also creates a fixed mathematical relation or ratio which regulates the quantitative extent of those parts i.e., the relative number of labourers, or the relative size of the group of labourers, for each detail operation.** It develops, along with the qualitative sub-division of the social labour-process, a quantitative rule and proportionality for that process.

Capital, vol. 1, Chapter 14, Section 3: The Two Fundamental Forms Of Manufacture Heterogeneous Manufacture, Serial Manufacture

In handicrafts and manufacture, the workman makes use of a tool, in the factory, the machine makes use of him. There the movements of the instrument of labour proceed from him, here it is the movements of the machine that he must follow. In manufacture the workmen are parts of a living mechanism. In the factory we have a lifeless mechanism independent of the workman, who becomes its mere living appendage.

Capital, vol. 1, chapter 15, section 4