

Abstractions: between ideology and science¹

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- 1 From: MORAES, João Quartim de. **As abstrações, entre a ideologia e a ciência.** *In: Crítica Marxista*, n.44, p. 43-56, 2017. Translated by V. S. Conttren, November 2022. DOI
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Chaotic representations

Few of Marx's texts occupy such a singular position in his work as "*The Method of Political Economy*," the third of four subjects in the "*Introduction to the Critique of Political Economy*" (*Einleitung zur Kritik der Politischen Ökonomie*), more simply known as the *1857 Introduction*, the most remarkable (alongside the study on "*Forms which preceded capitalist production*") of the writings included in the *Grundrisse der Kritik der Politischen Ökonomie*, a collection of economic manuscripts written by Marx in London during the two-year period 1857-1858 and published for the first time in Moscow in 1939.

Since it was a draft, the author's preoccupation was to record ideas, to schematize arguments, to comment on and criticize doctrines in preparation for the larger work on the critique of political economy. The literary composition *stricto sensu* and rhetoric (positively understood as the art of argumentation) were kept on the sidelines: a draft is a draft. Perhaps this helps explain the somewhat paradoxical character of the argument which opens the text:

When considering a given country from the standpoint of political economy, we begin with its population, the division of the population into classes, town and country, sea, the different branches of production, export and import, annual production and consumption, commodity prices, etc. It would seem right to start with the real and concrete, with the actual presupposition, e.g., in political economy to start with the population, which forms the basis and the subject of the whole social act of production [*die Grundlage und das Subjekt des ganzen gesellschaftlichen Produktionsakts*']. Closer consideration shows,

however, that this is wrong. Population is an abstraction if, for instance, one disregards the classes of which it is composed.³

For the attentive reader, such a statement that it is false to begin with the real and the concrete provokes a certain perplexity. Should we begin with the ideal and the abstract? That is not exactly what Marx says, rather that “if we begin with the population, there would be at first a chaotic representation of the whole.” The population of a given country is a real and concrete fact, but *as a representation* it is a chaotic notion.

The fact that, in its first occurrence in the text, *representation* comes as-associated with chaos (“*eine chaotische Vorstellung*”) and assimilated to “an abstraction” deserves a comment. Every common noun is a universal and, as such, the necessarily abstract result of a generalization operated in and by the practice of social communication. Transposed from everyday language to theoretical discourse, nouns like light, force, body, etc. maintain a basic semantic core on which the effort of scientific knowledge is levied. In both political economy and biology, *population* is understood as a collectivity made up of individuals living in a determined area. Evidently, at this level of generality, the notion does not designate a knowledge, but an object to be known which, nevertheless, is susceptible to being gradually determined with precision. Thus, in Marx's example, the population of a country refers to its division into classes, its distribution in the city, the countryside and the coast, the various branches of production, exports and imports, annual production and consumption, the prices of goods, etc. These new representations are more precise, for they

3 MARX, Karl. **Einleitung zur Kritik der Politischen Ökonomie**. In: *Karl Marx-Friedrich Engels Werke* (MEW), Berlin: Dietz Verlag, 1969, v. 13, p. 630. Our emphasis.

analytically determine the content of the initial chaotic representation, but they continue to be abstract, as Marx insists:

These classes in turn remain an empty phrase if one does not know the elements on which they are based, e.g., wage labour, capital, etc. These presuppose exchange, division of labour, prices, etc. For example, capital is nothing without wage labour, without value, money, price, etc.⁴

An expression cannot be simultaneously chaotic and empty (or null). By distinguishing *chaotic representations*, such as population, from *empty expressions*, such as classes or capital (which, considered in isolation, is nothing), Marx underscores a difference in theoretical status between these general notions. He notes that seventeenth-century economists “always started with the living whole [*dem lebendigen Ganzen*],” which is designated by the terms population, nation, state, etc.⁵ The content of these terms is vast, obscure, “chaotic,” but real and concrete. Whereas *classes* and *capital* only acquire a determined significance if inscribed in the conceptual system of political economy (or some other theoretical field).⁶ It is clear, for example, that the historical-materialist thesis on the absence of classes amongst stone age populations presupposes a theory on the evolution of human societies.

That these economists have *always* begun with such representations expresses the ideological limitations of the historical horizon under which they were embedded. They set out from the notion of the living whole, as it

4 Ibid., p. 631.

5 Ibid., p. 632.

6 Certainly, such nouns, as they are defined in dictionaries, have a basic, but weakly determined (*class*) or largely polysemous semantic content (*capital* is one of many derivatives of the Latin adjective *capitalis*, in turn derived from *caput*).

was expressed in ordinary language, for they had no other starting point. This did not prevent them, as Marx himself points out, analysis always led them in the end to the discovery of a few determining abstract, general relations, such as division of labour, money, value, etc.”⁷ (Marx, 1969, p.632). Resulting from a theoretical work of abstraction, not to be confused with the spontaneous abstractions of current language, these “determinate, abstract, general relations” constituted the basic conceptual instruments of political economy in formation.

The old Roman juridical adage applies here: *impossibilium nulla est obligatio*. If there was no other way, for the 17th century economists, to advance in economic analysis, there is no reason to classify as false the inevitable path they followed. This is what Marx (implicitly) recognizes in the immediate continuation of the text:

As soon as these individual moments were more or less clearly deduced and abstracted, economic systems were evolved which from the simple [concepts], such as labour, division of labour, need, exchange value, advanced to the State, international exchange and world market. The latter is obviously the correct scientific method.⁸

Marx's argument is not easy to comprehend. It seems obvious that far from opposing the first way, the second presupposes it. The first starts from the representations of everyday language to dissolve representation into abstract determinations. The second uses them to forge the analytical tools to reproduce the “concrete in thought.”⁹ Then, why declare the first one to be false? It seems to us that Marx artificially segments the history of

7 Ibid., p. 632.

8 Ibid., p. 632.

9 Ibid., p. 632.

the formation of economic theory, portraying as two paths (one ending, the other beginning in the “abstract determinations”) the three moments of the same process.

To explain the complexity of a text by invoking the argument that it is merely a draft may be a manifestation of intellectual laziness. However, the difference between writing annotations and preparing a text destined for publication is obvious. Indeed, the *Introduction of 1857* is neither exactly one nor the other. Marx at first intended to publish it, but abandoned the idea and left the text incomplete. Therefore, we consider it to be neither a mere draft nor a text destined for publication. It is, however, with appropriate precaution that we advance our hypothesis to explain the paradox of the two paths. Contrary to what the opening argument of the “Method of Political Economy” suggests, if the first path (which actually constitutes the first moment of a single process) is a mistake, it was not the first economists who committed it. It is probable that Marx understood the mistake consisted in starting from the obscure representation of a living whole *in the 19th century*, when the simple elements, identified by analysis, had already allowed economic systems to rise up to “the State, the exchange between nations and the world market.” The great theoretical task which had to be carried out in the second half of the nineteenth century was the critique of political economy as elaborated by Adam Smith in the last third of the eighteenth century and by David Ricardo and others in the first decades of the nineteenth.

The ideological horizon of slavery

We find to be instructive the comparison between the inevitable path followed by the seventeenth-century economists and the well-known

remarks contained in the third section of the first chapter of *Capital*, concerning the Aristotelian discovery that the money form of commodities results from the development of the simple value form ($xMa = yMb$). There, Marx celebrates “the brilliance of Aristotle's genius” for discovering in the value expression of commodities a relation of equality. The argument, considered to be genius, is found in book V of the *Nicomachean Ethics*. Only what is qualitatively different can be exchanged. It is useful for an architect to exchange the product of his work for that of the cobbler, but not for that of another architect. It is of interest to exchange A for not-A. But exchange presupposes an equality underlying the difference which renders it useful. The equivalences “five beds = one house” and “five beds (or one house) = ten mines”¹⁰ presuppose that there is a common support that confers commensurability to their terms, which are qualitatively distinct.¹¹⁻¹² However, according to him, there is no substance that can serve as a common support for the equivalence of the value of commodities. It is by convention (*ex hypotheseos*) that currency performs the function of measuring all things (Aristotle, 1960, 1133b21). An etymological argument, often present in the rhetoric of the Hellenes, corroborates this conclusion: “money (*nómisma*) comes from law (*nómos*).”¹³ Marx goes on to explain that Aristotle could not grasp that “in the form of market values all labour is expressed as equal human labour and therefore as equivalent,” because

10 The *mnā* [in Latin: *mina*] was a coin worth one hundred drachmas. Probably because he quotes this text from memory, Marx does not refer to the ten mines; he writes “so much money” (Marx, 1887, p. 39); in German “*soundso viel Geld.*”

11 The quotations from Aristotle obey the international scholarly reference: the E. Bekker edition of 1831, by the Academia Regia Borusica. We use the reprint by Olof Gigon, Berolini, apud W. de Gruyter et socios, 1960.

12 Aristotle, 1960, 1133b23-26.

13 Aristotle, 1960, 1133a30-31. [T. N.: BARNES, Jonathan (ed.). **The complete works of Aristotle**. Volume II. Princeton: Princeton University Press, 1995, p. 1789].

Greek society was founded upon slavery, and had, therefore, for its natural basis, the inequality of men and of their labour powers. The secret of the expression of value, namely, that all kinds of labour are equal and equivalent, [...] cannot be deciphered, until the notion of human equality has already acquired the fixity of a popular prejudice. This, however, is possible only in a society in which the great mass of the produce of labour takes the form of commodities, in which, consequently, the dominant relation between man and man, is that of owners of commodities.¹⁴

Ideological conditioning is a universal historical phenomenon. The ideological conditioning of Aristotelian analysis is expressed here negatively, namely, through the incapacity to decipher the secret of the expression of value. It does not come, however, from a chaotic representation, but from the impossibility of representing that which does not manifest itself within the mental horizon of a society whose predominant relation of production was slave labour. But what is important to stress in Marx's celebration of the genius of Aristotle's theoretical discoveries is the recognition that ideological barriers are neither opaque nor impenetrable. Although it may have remained frozen for two millennia, the requirement of an equality for the expression of value, as pointed out by Aristotle, constitutes a precious piece of the treasury of ideas that he bequeathed to posterity.

It is therefore essential to distinguish, on the historically determined field of ideology, the ideas that are mere reflections of the prevailing thinking and those that, although limited by the horizon of a given epoch,

14 Marx, 1887, p. 39-40. We refer to the English translation by Samuel Moore and Edward Aveling, revised by Friedrich Engels, London: Lawrence and Wishart, 1887. It was reprinted several times in the USSR, beginning in 1954, by Progress Publishers of Moscow.

open breaches for knowledge. Slavery prevented Aristotle from recognizing that the amount of labour contained in each product constitutes the substantial basis of value. Yet, it would be a simplification to suppose that the recognition of equality exerted automatic effects on economic theory. The relations between ideology and science, recognizably complex, do not correspond to linear schemas of antecedent to consequent. In seventeenth-century European societies, slave labour was residual, albeit not in their colonies, where it constituted the largely dominant mode of wealth production. Moreover, the immense gains from the trafficking of Africans to the colonial plantations of the New World accelerated the accumulation of mercantile capital in the metropolises. Thus, slavery remained present on the European ideological horizon until the end of the 18th century, when the principle of human equality was recognized by the Enlightenment thinkers and the most advanced political forces.

The first and rudimentary outline of the labour theory of value, which cracked the wall of the slave ideology, dates back to William Petty (1623-1687)¹⁵, contemporary of the colossal accumulation of monetary wealth propitiated by the slave trade, widely dominated by England since the seventeenth century. Joseph Schumpeter, in his history of economic analysis, presents Petty's contribution in the initial topic ("*Political arithmetick*") of chapter 4, "The econometricians and Turgot." His assessment is complimentary, but contains ironic comments, for example, regarding the phrase "repeated ad nauseam:" "labour is the father and the land the mother of wealth." This means "that he [Petty] set up the two

15 Petty's main works are: *Treatise of Taxes and Contributions* (1662), *Verbum Sapienti* (1665), *Political Arithmetick* (1676) and *Quantulumcunque Concerning Money* (1682). The dates indicate when each work was written.

'original factors of production', as later theorists would say."¹⁶ He then qualifies him as "illogical" because he "abandons the mother" by declaring that capital "is the product of past labour."¹⁷ Unlike Schumpeter's theoretical focus, which is the historical construction of economic concepts, we care less about Petty's "political arithmetic" and his difficulty to explain the land rent's relation to the interest rate than about the ideological unfolding of the labour theory of value.

A century later, English capitalists continued to extract opulent profits from the slave trade. But the ideological change corresponding to the bourgeois revolutions of the 17th century had favoured the progress of the idea of equality (although not as much as that of freedom). With the publication of Adam Smith's *The Wealth of Nations* (1776), the principle that all labour can be expressed as equal human labour acquired its theoretical status in bourgeois political economy. The adoption of this principle by Adam Smith corresponded not only to a theoretical motivation (to determine the basis of the relation of equality in the expression of the value of commodities), but also, for this representative of the "Scottish Enlightenment," to a philosophical and moral option.

These ideas were taken to radical consequences when the insurrection of the *sans-culotte*, on 2 June 1793, broke the monarchic-liberal limits of the French Revolution of 1789, allowing the so-called Mountain (which grouped the Jacobin deputies) to take control of the National Convention. On June 24, the Convention promulgated a new constitution, preceded by an equally new declaration of natural and inviolable rights of man and citizen. Signalling a democratic departure from the Declaration of 1789 and the Constitution of 1791, which, while remaining within the

16 Schumpeter, 1954, p. 213-214.

17 Schumpeter, 1954, p. 214.

framework of the English liberal institutions dear to Montesquieu, had placed freedom at the forefront of ethical-legal values, the constitutional text of 1793 assigned equality such an eminent position.

Meanwhile, under the influx of revolutionary dynamics in the metropolis, the slaves of the French Caribbean colonies rebelled. The commissioners sent from Paris in 1792 supported the slaves' cause, but the plantation colonists resisted; in 1793, after Louis XVI's execution, they were able to count on the support of England and Spain, warring against the French Republic. On 21 June 1793, the republican commissioners Polverel and Sonthonax offered freedom to any black person who fought against the coalition of the kings and the slave-owning plantation owners. The slaves threw themselves passionately into the liberating struggle. Faithful to the commitment of its commissioners, the National Convention decreed on 16 Pluviôse, an II (4 February 1794), the abolition of slavery in all the French colonies. A memorable date for the struggle over the historical construction of the idea of humanity. But soon afterwards, with the fall of Robespierre and the demise of the Revolution, the emancipating decree was abrogated and slavery re-established, except in Haiti, where Toussaint Louverture and then Jean-Jacques Dessalines led the Haitian resistance, who became the first enslaved people to win independence, proclaimed on January 1st, 1804. Elsewhere, throughout the colonial world, a long and cruel struggle between abolitionists and slave owners would continue until the end of the 19th century: in Brazil, slavery was only abolished in 1888.

Marx was, therefore, somewhat optimistic when he supposed that, when the expression of value was deciphered, the concept of human equality had already acquired "the firmness of a popular prejudice." Even today, the poison of racism, whose philosophical presupposition is the thesis of inequality between humans, contaminates an important (and in

some countries growing) part of the population. Racism and colonialism are not to be confused, though they are complementary components of the reactionary syndrome of our time. The majority consensus which considers slavery an abomination is historically very recent. England, the paragon of liberal institutions, only banned the slave trade in the first quarter of the nineteenth century and France only abolished slavery in its colonies again in the middle of the same century. Yet, if the slave trade was eradicated, slavery, euphemistically labelled as forced labour, persisted in the European colonies until the victory of the national liberation struggles in the second half of the last century.

It is worth noting a commentary by Jules Barthélemy-Saint-Hilaire—who, besides being an erudite Hellenistic scholar, held, among other high political functions, that of Minister of Foreign Affairs of the III French Republic—in which he makes clear the ideological proximity of racism, colonialism and slavery. In his translation of Aristotle's *Politics*, referring to the laborious search for a criterion to distinguish between slaves by nature and slaves by law,¹⁸ he notes that:

Nature [...] served the modern masters much better than the ancients. The colour of the skin is a sign to which no one can be mistaken and which offers in the best part of the New World the infallible criterion [whose lack] Aristotle seems to lament [...]¹⁹

It is worth adding that, as Minister of Foreign Affairs, Saint-Hilaire organized the conquest of Tunis, an important stage in the formation of the French colonial empire. The racist criterion of skin colour, which was used to determine who was susceptible to being enslaved, was extended to

18 Aristotle, 1960, 1254a16-1255b30.

19 Barthélemy-Saint-Hilaire, 1874, p.17, note 4.

identify the peoples that could be colonized: besides black people, also Arab and Asian peoples. (The conquest of Indochina and the sack of China are included in the “civilizing mission” of Saint-Hilaire and his consorts).

As far as the ideological conditioning of the labour theory of value is concerned, the effect of objective economic relations weighed more heavily than the moral recognition of human equality. In societies where the wealth produced by labour assumes the commodity form, where, consequently, men relate to each other predominantly as possessors of commodities, and, above all, in which capital has appropriated the means of production and labour power has also become a commodity, the principle of the equal validity of all labour imposes itself on the economic calculation of capitalists.

Althusser’s non-solution

It is well-known the importance of the concept of “theoretical practice” presented in *For Marx* and *Reading Capital*, the two books that bring together Louis Althusser’s studies (the latter with contributions from the group he gathered together at the seminar about Capital at the École Normale Supérieure de Paris) published in 1965.²⁰ It must be stressed that these works introduced a new way of analysing and understanding Marx’s legacy. Of course, one cannot forget the self-critical revisions made later, mainly by Althusser and Étienne Balibar, concerning those main theses sustained in 1965. Without entering into a discussion about the scope of these self-criticisms, we consider that they do not diminish the importance

²⁰ It is worth recalling that *For Marx* combines articles published by Althusser years earlier, notably “*Contradiction and over-determination*” (1962) and “*On materialist dialectics*” (1963).

of studying an original and innovative thesis in and of itself, in its own consistency.

The concept of “theoretical practice,” to which Althusser devoted the third topic of *“On materialist dialectics,”* is explicitly inspired by the analysis of Marx's text that we are here studying. The passage cited in the epigraph²¹ synthetically explains the way in which thought produces knowledge:

The concrete totality as a totality of thought, as a thought concretum, is in fact a product of thought and conception; but in no sense a product of the concept thinking and engendering itself (*“denkenden und sich selbst gebären-den Begriffs”*), outside or over intuitions or conceptions, but on the contrary, a product of the elaboration of intuitions and conceptions into concepts. (*“der Verarbeitung von Anschauung und Vorstellung in Begriffe”*)²²

Althusser draws inspiration from this text to identify the abstractions comprising theoretical labour, distinguishing those that serve as raw material, those that function as instruments of labour, and those that convey the knowledge produced. He designates the concepts of theoretical practice as “generalities,” indicating with Roman numerals the three functionally articulated moments that constitute it. Regarding *Generality I*, which corresponds to the raw material of theoretical labour, he clarifies that the “employment of general concepts (examples: the concepts 'production', 'labour', 'exchange') [...] is indispensable to theoretical scientific practice,” with the caveat that “this first generality does not coincide with the product of scientific labour: it is not its result, but its prerequisite.” Later, he emphasizes that “science always works on existing

21 Althusser, 1965a, p. 186.

22 Marx, 1969, p. 632.

concepts,” which he characterizes as “Vorstellungen” (preferring to use the German term instead of a French term), which constitute the “prior Generality I, of an ideological-logical nature.”²³

Terminological discrepancies often conceal substantive differences. Marx speaks of the “conceptual elaboration of intuition and representation” and not of already existing concepts. Althusser omits intuition and translates “Vorstellung” by “concept,” although the generally accepted translation of the term is “representation;” “concept” corresponds to the German “Begriff.” The change in vocabulary reflects a one-sided emphasis on the concept. Undoubtedly, conceptual elaboration can impinge on theories, thus on previous concepts, but by referring *only* to intuitions and representations of the “living whole,” Marx understood it to operate on the body of ideas accumulated through the social practice of many generations. Hence, in elaborating their doctrines, the 17th century economists conferred upon notions embodied in everyday language a theoretical status that was not without ideology, but which corresponded to an economic knowledge undergoing construction, which dissolved the “chaotic” notions from which they had departed.

Althusser then briefly refers to Generality III, “which is knowledge,”²⁴ to focus on Generality II, formed by “constituted by the corpus of concepts whose more or less contradictory unity constitutes the ‘theory’ of the science at the (historical) moment under consideration.”²⁵ It is science (Generality II) which “works and produces,” operating the transformation of Generality I into Generality III, therefore, from the raw material of

23 Althusser, 1965a, p. 187.

24 Althusser, 1965a, p. 187.

25 Althusser, 1965a, p. 188.

knowledge into the final product.²⁶ It does not escape him, however, that he resorted to a prosopopoeia: scientific theory is an abstract universal that neither labours nor produces. For this reason he asks: "who or what is it that works? What should we understand by the expression: the science works?" But instead of answering, he asks a new question: "What is the moment, the level or the instance which corresponds to the means of production, in the theoretical practice of science?" Neither does he answer, proposing instead to "abstract from men [...] for the time being."²⁷ His usual readers understand perfectly well that when he says "for the time being," he means "*sine die*."

Besides leaving aside the workers (or scientists), whose labour, like that of the tailors, disappears in the finished product, Althusser restricts the concept of means of knowledge production to the *instruments* of labour, which form Generality II, lodging in Generality I the raw material. He thus establishes a clear asymmetry between the structure of scientific production and the structure of material production, as understood by Marx, who distinguishes, but does not separate them, instruments and raw material, which, as a whole, constitute the means of production.

It is worth examining this asymmetry more closely. It should be noted immediately that, far from recognizing it, Althusser once again pushes the very letter of "The Method of Political Economy" and attributes to Marx the thesis that "the raw material of a science always exists in the form of a given generality (Generality I)."²⁸ The expression "raw material" appears only once in the Introduction of 1857, and not in "The Method of Political Economy," but instead in the previous topic (the second: "The general

26 Althusser, 1965a, p. 187.

27 Althusser, 1965a, p. 188.

28 Althusser, 1965a, p. 194.

relation of production to distribution, exchange, and consumption"). A reader who does not take the trouble to consult Marx's original text will have even greater difficulty in understanding the argument of the two paths, especially since, when quoting in a note the text previously commented on,²⁹ he cuts out large passages, which are replaced by reticence and an interpolation between parentheses:

it seems proper to begin with the real and the concrete [...] On a more precise consideration, however, this turns out to be wrong ("*une erreur*") [...] the last way (that of the economic systems which go from general notions to concrete notions) is manifestly the scientifically correct method.³⁰

The citation would be incomprehensible without the interpolation. It substantially alters the original. For Marx, it is the *simple elements, individual aspects isolated by analysis*, that constitute the starting point of a proper method. According to Althusser, it is the *general notions*. The reason for the modification introduced by the Althusserian interpolation should have been made clear: he postulates a functional articulation between the three generalities. We have already pointed out that the structure of material production, as understood by Marx, does not correspond to the structure of theoretical practice as presented by Althusser. If he sections off the concept of means of production to accommodate in two different generalities (I and II) the raw material (in I) and the tools of production (in II), it is because his scheme requires it: Generality II works in I to produce III. But the tools of theoretical production that make up Generality II did not arise by spontaneous generation. They arose from Generality I, that is,

29 Marx, 1969, p. 631-632.

30 Althusser, 1965a, p. 189, note 24.

from intuitions and chaotic representations of the real and the concrete. The creation consisted exactly in dissipating the chaos through analysis, forging the concepts of Generality II. It was mainly the 17th century economists and, well before them, Aristotle (as Marx rightly pointed out), who took on this task.

Determined to ground the notion of "scientific practice" in the critique of what he calls the empiricist ideology of abstraction, while bearing in mind that Marx above all refutes the Hegelian conception of the relation between thought and reality, Althusser assimilates Hegel and Feuerbach with empiricism by arguing that both share the same "ignorance (*méconnaissance*) of the primacy of Generality II (which works), that is, of 'theory', over Generality I (worked)."³¹ Strictly speaking, this assimilation works in relation to Feuerbach, who only considers sensation as an *object*, passively, as intuition without practice. This is what he seeks to illustrate with a simple argument:

[...] for example, the concept of 'fruit', is not the product of an 'operation of abstraction' performed by a 'subject' (consciousness, or even that mythological subject 'practice') -- but the result of a complex process of elaboration which involves several distinct concrete practices on different levels, empirical, technical and ideological. (To return to our rudimentary example, the concept of fruit is itself the product of distinct practices, dietary, agricultural or even magical, religious and ideological practices – in its origins.)³²

The realization that the concept of fruit results from a "complex process of elaboration" is obvious: it merely acknowledges the social-

31 Althusser, 1965a, p. 195.

32 Althusser, 1965a, p. 194-195.

historical character of language. Also obvious is that this process has operated on concrete fruits and has varied according to the climates and flora of each region. It was not theoretical practice, as Althusser understood it, but the social practice of countless generations that produced the concept. His chosen example does not, however, strike us as the most fruitful. It is useful for refuting naïve empiricism, but not for understanding Marx's text. Apples, pears, etc. are singular bodies, which can be touched and ingested, whereas population, classes, etc. designate *living totalities*, which though chaotic, constitute the *effectively real presupposition* of political economy.³³

By maintaining that these totalities do not constitute the starting point of the proper method and the concrete thought “is not a product of the concept which thinks and engenders itself, from outside and above intuition [*Anschauung*] and representation [*Vorstellung*],” Marx was obviously not targeting empiricism, but Hegel. The latter “went astray in the illusion of conceiving the real as the result of a thought that concentrates in itself, deepens in itself and moves by itself,” for he considered that the synthesis of abstract determinations (Althusser's Generality II) through thinking *produces* the concrete, when in reality it only *reproduces* it: “the method that consists in rising from the abstract to the concrete is, for thinking, only the way of *appropriating the concrete*, of reproducing it as a concrete thought. But this is in no way the process of formation of the concrete itself.”³⁴

Later on, he again maintains that

33 Marx, 1969, p. 632.

34 Marx, 1969, p. 632. Our emphasis.

the whole, such as it appears in the mind, as a thinking whole, is the product of a thinking head, which appropriates the world in the only way it can, and which differs from the modes of appropriation of the world that are artistic, religious or of the practical spirit (praktisch-geistigen Aneignung).³⁵

Commenting on this passage in *Reading Capital*, Althusser points out the “mystery” of the concept of appropriation (*Aneignung*), which designates “the essence of a fundamental relation, of which knowledge, art, religion and practical-spiritual activity [...] appear as the various distinct and specific modes ['Weise'].”³⁶ Although we do not exactly see a “mystery” in this concept, it is undoubtedly difficult to define the unifying genre of the various modes of appropriation of the world referred to in Marx's text. Especially considering that he does not deal in this context with the *material* appropriation of nature by labour. The metaphor “head” must therefore be understood *stricto sensu*:

While the head proceeds *only speculatively*, i.e., theoretically, the real subject [“das reale Subjekt”] subsists outside it, in its independence, both before and after. Thus, in the theoretical method too, the subject, the society (“das Subjekt, die Gesellschaft”) must always be present as presuppositions.³⁷

After having distinguished the mode of appropriation of the world by the head from the other, let us say, cultural modes of this appropriation, Marx points out that, before and after speculation, its objective presuppositions (“the subject, society”) remain unchanged: pure thought does not change the world. The fundamental way to change it is through

35 Marx, 1969, p. 633.

36 Althusser, 1965b, p. 68.

37 Marx, 1969, p. 633. Emphasis added.

labour, which entails an essential cerebral component, as he explains in a famous passage from *Capital*:

A spider performs operations like those of the weaver, and the bee puts more than a human architect to shame with the construction of the combs of its hives. But what distinguishes beforehand the worst architect from the best bee is that he models the comb in his head before building it in wax.³⁸

This mental modelling of the comb, which consists in the representation of the dynamic scheme of human hive production, is based on technical knowledge accumulated from primordial times when man invented his specific way of working. Its historically determined connection with “theoretical practice” is evident. Euclidean geometry universalized the rules (architectural, agricultural, etc.) for measuring areas; the rudiments of arithmetic and algebraic calculation, as well as the physics of solids, have a similar origin.

Recognition that “the ‘theory’ of science” is constituted by a “body of concepts” at a “(historical) moment,”³⁹ implies that scientific discovery and formulations are (a) affected by the obstacles arising from established dogmas imposed by the dominant ideas and by the prejudices of common sense; (b) limited by the ideological horizon of each epoch and society; (c) conditioned by the knowledge and technical means of investigation available in each historical and cultural situation. The implication (a) refers to the age-old ideological struggle between materialism and idealism; for (b), we have previously reproduced Marx's comment on the ideological limit that Hellenistic slave society imposed on Aristotle's ingenious discovery

38 Marx, 1887, p. 174.

39 Althusser, 1965a, p. 188. “Theory” is in inverted commas in the original; emphasis added.

that the exchange of commodities presupposed an underlying relation of equality.⁴⁰

Yet it is above all implication (c) that offers a critical perspective on the Althusserian concept of 'theoretical practice'. Instead of classifying as 'ideological' all non-scientific knowledge (applying the ideology/science binary schema), it unveils a more fruitful path: the connection of technique with science. This is a vast, complex and difficult exploration, whose main thread is the cognitive component of labour and whose aim is to discern, in the immense field of ideas that make up the collective experience of humanity, which of them are inscribed in the path of scientific knowledge. Evidently, when labour (not only that of slaves, but also of the mass of wage labourers) is reduced to a merely repetitive and strenuous expenditure of energy, its cognitive component trends towards zero; and the intervention of intelligence on production is transferred from the mass of workers to the agents of the exploiting class.

When making a 'provisional abstraction of men' to analyse the 'theoretical practice of science', Althusser⁴¹ overlooked the fact that by appropriating technical knowledge, the exploiting class reserves for its members the possibility of shaping honeycombs within their minds and, therefore, carrying out scientific discoveries. The separation between productive labour and theoretical labour is undoubtedly the most obvious reason for the asymmetry between his conception of the structure of scientific production and the structure of material production as Marx saw it.

This leaves us with a conclusion on the paradox of both paths. It would be inappropriate to criticize Althusser for not having taken an

40 Marx, 1887, p. 39-40.

41 Althusser, 1965a, p. 188.

interest in the hermeneutic difficulties of Marx's text. However, it is worth pointing out that the main focus of his critique is the empiricist conception of abstraction, whereas Marx's is the Hegelian principle of the concept's self-development. Therefore, we reiterate that contrary to what the first paragraphs of the *"Method of Political Economy"* may suggest, the "false path" is not the one historically trodden by the economists of the seventeenth century, but the one that identifies the concrete totality presupposed by the analysis with the real totality reproduced as a concrete thought.

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