The Relation between Marxism and Critical Realism

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11 The Relation between Marxism and Critical Realism

11.1 Realism and the Materiality of Value

It has often been claimed that Marx, when writing *Capital*, followed critical realist principles before critical realism even existed. The present article looks at the evidence to indicate whether this claim is justified. It examines Marx's famous derivation leading from the commodity to congealed abstract labor, as one can find it, e.g., at the very beginning of *Capital*, but that exists in somewhat different versions also in the *Contribution to the Critique of Political Economy* and *Value, Price, and Profit*. Marx's derivation has always been controversial. But if this derivation is viewed in critical realist terms, many of the criticisms and doubts raised about it can be answered. Some of Marx's steps can be considered almost a schoolbook-type application of things written in the *Realist Theory of Science* [Bha97], *Possibility of Naturalism* [Bha99], and *Dialectic* [Bha93]. A look at Marx through the spectacles of critical realism has three main implications:

- Marx's *Capital* is an example how to do critical realist social research.
- The systematic apparatus provided by critical realism makes Marx's concepts and transitions more precise and accessible.
- The comparison with Marx's method points to areas where critical realism needs development.

Four topics will be investigated in detail: Marx's starting point, the character of the relationship between use value and exchange value, Marx's dialectical method, and his emphasis on the quality of value-creating labor.

11.2 Is There a 'Right' Starting Point for Political Economy?

11.2.1 Marx Does Not Start with the Individual

Most modern economics textbooks begin with individuals and their utility functions, in keeping with the principles of 'methodological individualism' or 'microfoundations.' Marx rejects this starting point. One of Marx's contemporaries, the economist Adolph Wagner, wrote a textbook of economics [Wag79] in which he tried to give a foundation of value based on individuals assigning value to things based on their needs, similarly to the existence of a modern utility function. Marx argues in his *Notes on Wagner* [ME75, p. 538] that these individuals of course live in a society, therefore 'as a starting-point the specific character of this social man must be presented, i.e. the specific character of the community in which he lives, since in that case production, i.e. *the process by which he makes his living*, already has some kind of social character.' This is very similar to the critical realist critique of methodological individualism. Bhaskar writes in the *Possibility of Naturalism* [Bha99, p. 28] that 'the predicates designating properties special to persons all presuppose a social context for their employment.'

The rejection of methodological individualism is one of the main planks of critical realism. Also the proposed alternatives to methodological individualism seem similar between Marxism and Critical Realism. In *Grundrisse*, [Mar86, p. 195], Marx writes: 'Society does not consist of individuals, but expresses the sum of connections, relations, in which these individuals stand with respect to each other.' The *Possibility of Naturalism* [Bha99, p. 26] uses this exact Marx quotation to explain the relational concept of society in the Transformational Model of Social Activity (TMSA). According to the TMSA, the social structure pre-exists any living individual, and although individual actions reproduce and modify this structure, it cannot be considered *the product* of individual activity. Social relations must therefore be studied in their own right before the actions of the individuals filling the relations can be understood.

11.2.2 Starting Point Important for Marx

Marx considered the choice of a starting point to be an important scientific issue. His two methodological manuscripts, the *Introduction to Grundrisse* and the *Notes on Wagner*, pay close attention to the question of where an investigation of capitalist society should begin. See [Car75, p. 89]. Does critical realism share this concern about the starting point?

As far as the *broad lines* of the argument are concerned, the starting point is extremely

important for critical realism as well. Bhaskar revolutionized the philosophy of science with his unique starting point. Departing from the judgement that 'science is possible,' i.e., that the social activities that usually pass for science are successful in uncovering information about the world, Bhaskar addresses the ontological question, What must the world be like for science to be possible, before answering any epistemological question such as, How should science be done in order to give us information about the world? Marx's broad approach in *Capital* is similar. Departing from the unspoken presupposition that capitalism is possible, i.e., that an economy mediated by market relations can lead to the concentration of wealth, Marx investigates the character of the underlying social relations that must be in place for this outcome to occur. Only after these underlying relations are known does it make sense, according to Marx, to look in greater detail at the market transactions themselves, i.e., at the 'sphere of competition.' For instance, in chapters 4–6, he investigates systematically how the buying and selling of commodities at their values can be used to turn money into more money; in chapter 12, he asks how capital can continue to increase profits even if the length of the working-day is fixed; and in chapter 25, he looks for economic mechanisms enabling capital to grow at a greater rate than the population without being stifled by labor shortages.

But Marx is also very picky regarding his *specific* starting point. He is adamant that one has to begin with the commodity in order to properly understand capitalism. Such a narrowing-down to a specific point of departure can also be found in Hegel, but not in critical realism. Let us therefore see what can be said about this particular starting point from a critical realist perspective.

11.2.3 Why Does Marx Begin with the Commodity?

The reason why Marx begins with the commodity is often misunderstood. To someone steeped in methodological individualism, the famous remark in *Capital*, [Mar96, p. 7], about the commodity being the cell-form, and Marx's emphasis on the *prevalence* of the commodity in capitalism on pp. 45 and 179, suggest that the commodity is studied first because it is the atom that everything else is composed of. This would be methodological individualism starting with the individual commodity instead of the human individual, and it is not Marx's reason for studying the commodity.

Marx's own reasons for starting with the commodity (as I understand them) are, by contrast, very compatible with critical realism. He looks at the everyday practical activity of the economic agents on the surface in order to make inferences, through second-order arguments, about the invisible social relations enveloping these agents that both enable and necessitate the observed surface activity. This is exactly the method for social sciences recommended in the *Possibility of Naturalism* [Bha99, p. 26]. Material commodities are Marx's

specific point of departure because they play a prominent role in this practical activity. Commodities are ubiquitous in capitalism. People living in capitalism handle them every day.

Marx does not explicitly declare that this is his procedure, but a Critical Realist reading Marx cannot fail to notice that many of his conclusions are second-order arguments of the type just described. The clearest explanation of the character of this starting point can perhaps be found in Marx's *Notes on Wagner*, [ME75, p. 544]: 'What I proceed from is the simplest social form in which the product of labor presents itself in contemporary capitalist society, and this is the "*commodity*." This I analyze, initially in the *form in which it appears*' (emphasis in original).

The original meaning of the word 'analyze' is 'decompose into its parts.' But since the commodity is already simple, there is nothing to decompose. What Marx really does is to use a series of second-order arguments to draw conclusions from the practical surface activity with commodities. But since Marx does not have the *concept* of second-order argument, he mislabels this procedure as an *analysis* of the commodity.

Of course, if prevalence in practical activity were the only criterion, Marx would have to begin with money, like the post-Keynesians. Marx chose the material commodity instead of money because of its *simplicity*. A material commodity is easy to define: it is something produced for exchange. To the readers of *Capital*, who are as immersed in capitalist society as the surface agents themselves, it is immediately obvious what the individuals have to do with their commodities. Money cannot be a starting point because it is not immediately clear why it has the properties that make it so indispensable for practical activity. Profits or capital cannot be starting points because they cannot even be defined if one does not know what money is.

A third point that can be adduced in favor of starting with the commodity is the *centrality* of the commodity relation: money under the gold standard, wage-labor, and capital are commodities, and Marx argues that some properties of the latter can already be found, in undeveloped form, in the former; he says for instance in *Capital*, p. 102 (all references to *Capital* use [Mar96]):

> 'The difficulty lies not in comprehending that money is a commodity, but in discovering how, why and through what a commodity is money.'

However, this centrality cannot be obvious at the beginning; it is an after-the-fact confirmation that the commodity was the right starting point.

11.2.4 What Can Critical Realism Learn from Marx's Starting Point?

If one looks at this specific starting point through the lenses of critical realism, certain omissions in critical realism become apparent:

1. With its stratification of reality, critical realism knows that certain things are more basic than others. It has the concept of 'vertical' causality or emergence, and it also knows that reductionism is a fallacy. Every critical realist would nod and smile knowingly when reading the following passage from *Grundrisse*, [Mar86, p. 190]:

> 'In order to develop the concept of capital, it is necessary to begin not with labor but with value or, more precisely, with the exchange-value already developed in the movement of circulation. It is just as impossible to pass directly from labor to capital as from the different human races directly to the banker, or from nature to the steam engine.'

On the other hand, there is a difference between 'basic' categories and 'simple' categories, and critical realism does not have the concept of 'simple' categories. The tension between those social relations that are simple, and can therefore serve as starting point for the theoretical appropriation of the subject, and those social relations that are basic in reality, is discussed at length in Marx's methodological *Introduction to Grundrisse*, [Mar86, p. 39]. Marx observes that historically, often the simpler concepts come first—for instance, money and commodity production preceded capital for a long time. But it can also happen that the simple concepts come last, that a long historical evolution is necessary to distil a concept down to its essentials. For instance, labor has always been the expenditure of human brain, muscle, nerves etc., see *Capital*, p. 82 and 68, but the mode of production that turned almost every product into a commodity, and therefore bases its relations of production on labor in the abstract instead of specific kinds of labor, comes late. In the introduction to *Grundrisse*, Marx summarizes that the simpler category may express predominant relations in an immature entity, or subordinate relations in a more advanced entity. This necessary lack of isomorphism between the real world and its appropriation by the human mind, which leads in Marxism to the tri-partition between the so-called logical development, the historical development, and the structure of the capitalist system at any given point in time, constitutes a circle of problems that critical realism, as far as I can tell, has not addressed specifically.

2. Critical realism lacks the concept of abstraction, which is often considered the main ingredient of Marx's method. The starting point for Marx's critical representation of capitalism is not *any* kind of practical activity of the individual agents in capitalism. Instead, he uses his powers of abstraction to cut away all those behaviors which cannot yet be explained

at the beginning and only asks what practical agents do with *commodities*. For instance, although he knows that even a weakly developed commodity production immediately leads to the development of money, he disregards money altogether in his beginning pages of *Capital* and acts as if commodities were directly bartered against each other. His starting point is therefore not the raw empirical experience with capitalism, but this empirical experience is first boiled down to its simplest elements. Since critical realism does not have the concept of 'simplicity,' it has also not thematized the concept of abstraction.

(3) Marx uses dialectical and developing categories right from the beginning. Critical realism, by contrast, started with the *Realist Theory of Science* [Bha97] and *Possibility of Naturalism* [Bha99], which were implicitly but not explicitly dialectical, and were dialecticized only later. The late arrival of dialectic shifts the internal development of categories into what Bhaskar calls the 'second edge' (2E), although the non-static nature of categories should have been part of realist philosophy from the very beginning. In critical realism, therefore, dialectics and development can only take off from an already complex system, while Marx gives the example of a simple starting point evolving dialectically into a rich totality.

11.3 The Relation between Use-Value and Exchange-Value

The first thing the practical agents need to know about commodities is that commodities have a double character: use-value and exchange-value. Marx begins with this double character. But this double character is more than only a starting-point. It is apparent from Marx's further development that the separation between use-value and exchange-value goes very deep. It is like a crevasse immediately visible from the surface that goes all the way down to the bottom of the glacier.

11.3.1 One of Them Cannot be Reduced to the Other

This separation between use-value and exchange-value implies that one cannot be reduced to the other, i.e., exchange-value does not depend on use-value. Marx does not always present this as an explicit step, although a very early version of his beginning arguments in *Grundrisse*, [Mar87b, p. 252], does. In *Capital*, he makes occasional remarks to this effect, for instance on p. 48. Whether or not spelled out explicitly, this independence is built into the very structure of Marx's derivation. Use-value as such is dismissed as not relevant at the beginning, and Marx proceeds to analyze exchange-value independently of use-value.

However, specific use-values that have an impact on economic relations, notably the use-value of the commodity labor-power, will be discussed later.

The *evidence* for the independence of exchange-value from use-value is mixed. Some evidence seems to support independence: water is cheaper than diamonds, although it is more useful than diamonds. Other evidence seems to deny independence: in practical life, the more desirable things often have higher prices, and prices rise if demand exceeds supply. With his assertion that exchange-value is independent of use-value, Marx therefore disregards an important part of empirical evidence. But he comes back to the conflicting evidence later. On pp. 111–112 he explains why it is a necessity in capitalism that prices deviate from values if the prices determined by labor-values do not clear the market.

As long as Marx is able to *eventually* explain the conflicting evidence, his disregard of this evidence *at the beginning* should not bother us. The subject of his investigation is a totality complex enough that it can easily generate contradictory evidence. Only one side of the contradictory evidence allows the researcher to understand the underlying mechanisms; the other side is "out of phase" with them, as Bhaskar would say, and therefore misleading. It is part of scientific education to learn which evidence is relevant and which evidence leads to dead ends. In the first footnote of chapter Eleven of *Capital*, p. 309, for instance, Marx denounces the law of demand and supply as a misleading entry point into political economy.

11.3.2 They Are Not Two Sides of the Same Thing

The separation of use-value and exchange-value also has a second implication. Despite a terminology that might suggest otherwise, use-value and exchange-value are *not* two sides of the same thing. There is no category 'value' of which they are special cases.

In *Grundrisse* [Mar86, p. 197] Marx devotes a long footnote to the question, 'Is not *value* to be conceived as the unity of use value and exchange value?' He argues that in simple exchange, use-value, however important it may be to the individual making the exchange, is not thematized in the social exchange-relations: 'Use value presupposed even in simple exchange or barter. But here, where exchange takes place only for the reciprocal use of the commodity, the use value, i.e. the content, the natural particularity of the commodity has as such no standing as an economic form. Its form, rather, is exchange value. The content apart from this form is irrelevant; is not a content of the relation as a social relation.' Similarly, he says in *Capital*, p. 47, that 'it is exactly the abstraction from the use-values of the commodities which evidently characterizes their exchange relation.' Something similar can also be found in *Contribution*, [Mar87b, p. 283]. Not only does use-value not enter the exchange relation, but commodities must be non-use values for the traders in order to be exchangeable.

Whenever Marx uses the word 'value,' he understands it therefore to be the underlying relation of which exchange-value (but not use-value) is the form, and does *not* consider it as the general concept of which both use-value and exchange-value are particulars.

11.3.3 Development of Their Relation in the Commodity

Despite the independence of use-value and exchange-value, and the dismissal of use-value at the beginning, the footnote in Grundrisse as well as the *Notes on Wagner* emphasize that use-value can have an important economic role: the use-value of gold mirrors the qualities of value, and labor-power has the use-value to produce more value than its own, etc. That is, there is a relationship between use-value and exchange-value. This relationship does not come from them both being two aspects of the same thing, but it develops only after both are chained together in the *commodity*. In *Capital*, chapter 1, section 3, Marx says that the forms of value are the externalization of the immanent counterposition *(Gegensatz)* between use-value and value in the commodity (p. 71), and the development of the forms of value is also a development of this counterposition (p. 78). In the first edition of *Capital*, [Mar83, p. 51], Marx says, when he gets ready to discuss the exchange process, 'The commodity is *immediate unity of use-value and exchange-value*, i.e., of two opposite moments. It is, therefore, an immediate *contradiction*. This contradiction must develop as soon as the commodity is not, as it has been so far, analytically considered once under the angle of use-value, once under the angle of exchange-value, but as soon as it is placed as a whole into an actual relation with other commodities. The *actual* relation of commodities with each other, however, is their *exchange process*' (emphasis in original).

According to Marx, therefore, the relationship between use-value and exchange-value does not come from an original unity between them, but it only develops after the two originally independent relations are combined in the commodity.

11.3.4 The Error of Central Conflation

Adolph Wagner [Wag79] tries to derive use-value and exchange-value from a general overarching concept of value. In Wagner's theory, products have values because it is a natural striving of humans to make themselves aware of and to measure the relations in which the means to satisfy their needs stand to their needs. This is very close to saying that products have values because humans have utility functions (or naturally strive to build utility functions for themselves). Marx brings three arguments against this approach:

1. As already discussed in connection with methodological individualism, human needs, without reference to the social context in which these humans stand, cannot be a starting

point.

2. Humans do not first make themselves aware of the relations between their needs and the outside world and then use this awareness to guide their actions, but humans first act (eat, drink, produce) and through this action establish a relationship to the outside things, then make themselves aware of this relationship because they must communicate with other humans about these things.

3. This awareness leads to the distinction between use-values or 'goods' and other outside things, but it is no more the basis for the exchange-values of things as it is the basis for the chemical valence of things.

If one tries to deduce use-value and exchange-value from one original concept of 'value,' i.e., if one commits the error for which critical realism has the coined the term 'central conflation,' see [Bha99, p. 32] and [Arc95], one cannot see the specific role of the commodity but comes to the conclusion that commodity-like relations are the natural state of the economy.

11.4 Seeking Out Contradictions

Marx's *Capital* is a thoroughly dialectical work, although the dialectic is often woven into the substantive development of the subject in such a way that an untrained reader may not even notice it.

11.4.1 The Contradiction Implied in the Exchange Relations

At the beginning, use-value gets only fleeting mention, and Marx quickly concentrates on exchange-value. It is often overlooked that this discussion of exchange-value begins with a contradiction. First, on p. 46, exchange-value is introduced as something attached to the commodities; it is a second property that commodities have in addition to use-value. Marx calls the use-value the 'carrier' of exchange-value, because it is a necessary condition for it—if the commodity falls to the floor and breaks, not only its use-value but also its exchange-value disappears. On the other hand, as was just discussed, exchange-value cannot be derived from use-value.

But in the next paragraph on p. 46, in the very next sentence after the his first use of the term 'exchange-value,' Marx begins his discussion of exchange-value with the observation that exchange-value manifests itself as the proportions in which commodities are exchanged, i.e., it is not attached to one commodity but it is a relation *between* commodities. In addition, this exchange-proportion varies with time and place, a fact that would suggest that these

exchange-proportions depend on the circumstances of the exchange and are not inherent in the commodities.

11.4.2 Sigma Transforms

Although this is a contradiction, it is not a blatant contradiction that would jump out at the reader or the agent in capitalism. Most people spend their whole lives in a commodity society without ever considering the exchange relationship to be contradictory. The contradiction is something that has to be discovered. Bhaskar in *Dialectic* [Bha93] calls the discovery of such contradictions 'sigma-transforms,' as opposed to the dialectical resolution of these contradictions which are 'tau-transforms.' He writes [Bha93, pp. 26] that the real work of the dialectic is done by these two transforms.

Such sigma-transforms, i.e., the uncovering of non-obvious contradictions, can be found in *Capital* several times. For instance, Marx points out contradictions on pp. 49 and 704, among others. They are exactly the places where modern readers, who are trying to follow Marx's arguments closely but who are typically not schooled in dialectical thinking, scratch their heads and wonder, what in the world is Marx doing now?

After pointing out that he has run into a contradiction, Marx makes a new start on p. 46 with the words 'let us consider the matter more closely.' This is a recurrent phrase in *Capital*. On pp. 96 and 203, he uses almost exactly the same phrase 'let us take a closer look.' Marx acts here as if he was following the advice given by Bhaskar over a hundred years later in [Bha93, pp. 378–379]: 'A logical (or other) contradiction is not something to fear and/or to seek to disguise, cover up or isolate. Rather it should be taken as a sign that the existing conceptual field is incomplete in some relevant respect.' Here is another quotation from [Bha93, p. 20]: 'For it is the experience of what in non-dialectical terms would be a logical contradiction which at once indicates the need for an expansion of the universe of discourse or thought and at the same time yields a more comprehensive, richly differentiated or highly mediated conceptual form.' Or 'the contradiction becomes the *signalling* device for the expansion of the conceptual field or the universe of discourse,' [Bha93, p. 31, emphasis in original]. Finally, he remarks that such contradictions are often not obvious: '... is a great advance on the pre-reflective reasonableness of ordinary life, which readily tolerates contradictions without finding anything problematic in them.' [Bha93, p. 21].

11.4.3 Exchange Value is the Expression of a Relation of Production

Reality is stratified, and Marx uses contradictions as indicators that the linear development, which pursues the relations in one given stratum, has reached its limits and that it is necessary to look at the influence coming from other strata. The surface contradiction involving the exchange-value prompts Marx to dig below the surface. The details of this derivation will not be discussed here; they can be found in [Ehr05]. Marx comes up with the following resolution:

1. Exchange-value seems to be *associated with a commodity* because it is the surface expression of some substance, called 'value,' which is inside the commodities, but which is not generated in the sphere of exchange, but in the underlying sphere of production.

2. Exchange-value seems to be *relative* because this surface expression of value takes the form of a relation between different commodities.

In this way, both sides of the contradiction can be satisfactorily explained. In order to get this explanation, Marx had to expand his field of vision; he could no longer limit himself to the sphere of exchange but had to dive into the sphere of production.

11.5 The Material Basis of Value

The double character of labor is, according to *Capital* p. 51, the pivot around which the understanding of the political economy of capitalism revolves. Marxists usually don't question this claim; they don't want to admit that they haven't understood something that Marx considers so basic and important. Critical realism can shed light on the reasons why Marx put so much emphasis on the double character of labor. Since value is real, i.e., value is a causal agent with its own dynamic, Marx was looking for some real object from which value draws its energy.

11.5.1 Ghosts as Metaphors

Since in principle every use-value can be exchanged against every other (as long as the exchange proportions are right), Marx concludes that for the purpose of the exchange relations, each use-value is as good as any other, the only difference being quantitative. In a draft version, published in [Mar87a, p. 4], for a paragraph on p. 48 of *Capital*, Marx writes (my translation): 'One commodity looks now like any other. All that remains is the same ghost-like *materiality* of what? Of *undifferentiated human labor*, i.e., of *expenditure of human labor-power*, without regard to the particular useful determinate form of its expenditure.

These things no longer represent anything at all except that in their production human labor-power has been expended, human labor has been accumulated. As crystals of this social substance that they have all in common they are—*values*' (emphasis in original).

This value materiality is rarely mentioned by modern commentators of Marx. They are too embarrassed. Even Marx himself got in trouble for it. The first edition of *Capital* [Mar83, p. 30], described the quality of this materiality with the following words: 'In order to fix linen as material expression of mere human labor, one must disregard everything that actually makes it an object. The materiality of human labor that is itself abstract, lacking further quality and content, is, of necessity, an abstract materiality, a *thing made of thought*. Thus, cloth woven from flax becomes a phantom spun by the brain' (emphasis in original). This vivid and memorable passage did not make it into the second edition, presumably because, at the GDR-editors of MEGA2 surmised, it might have 'raised doubts about the materialist character of value theory' [Mar87a, p. 23*]. Also Alain Lipietz dismisses Marx's value materiality as 'the major, "substantialist" weakness of vulgar Marxism—which reduced value to a sort of immaterial yet quantifiable product of human labor, incorporated in commodities' [Lip83, p. 4] or in [Lip83, p. 21], he speaks about the interpretation of value as 'a mysterious quantity assigned to the product, which enables it to be exchanged with other products.'

11.5.2 Critical Realism to the Rescue

Ironically, Marx is rejected where he is most realist. The apparatus of critical realism can clarify things, since it allows us to frame Marx's ideas in a more systematic and less metaphorical way than his own original Hegelian formulations. This requires the following steps:

1. If people exchange their commodities following a consistent and predictable pattern of exchange proportions, then they respond to, and also reproduce or transform, an invisible network of social relations involving these commodities. Marx calls this network the 'exchange relations' of the commodities. Of course, the decisions what to exchange for what are individual decisions, but the proportions in which these things can be exchanged are determined by the social exchange relations. The idea that these relations are real and distinct from the individual actions in which they manifest themselves is one of the basic staples of the social ontology of critical realism.

2. But Marx's social ontology has an additional twist. Not only are these relations real, but they furthermore have the character of an immaterial substance inside the commodities. The following subpoints (a) and (b) develop the argument for this:

(a) In a conclusion familiar to neoclassical economists it can be shown that these exchange

relations, which prescribe the proportions in which the individual agents can exchange their wares, must be 'transitive' in order to withstand arbitrage attacks, and therefore can be described by a metric or a numeraire. One knows all there is to know about the status of these relations if one knows how many units of a certain fixed numeraire commodity can be exchanged for each given commodity.

(b) So far there is no disagreement between Marx and neoclassical economics. But then Marx takes an additional step that neoclassical economics refuses to take. Marx considers this numeraire not merely as a way to *describe* the many motley pairwise relationships that together form the network of exchange relations, but in Marx's theory, the exchange relations are *generated* by a numeraire-like substance, which Marx calls *Wertgegenständlichkeit* (value materiality). Marx uses his example of the polygons to argue this step.

3. The next step is in tune with one central aspect of critical realism that is often not taken seriously enough. In [Bha97, p. 14] Bhaskar says that generative mechanisms are the ways of acting of *things*. Let us apply this to the present situation. We have found an obviously active generative mechanism—it is the value residing in the commodities, which generates the exchange relations between commodities. But we still have to find the *thing* whose activity drives this generative mechanism. Marx uses the word "value materiality" (Wertgegenständlichkeit) for this thing. The expectation that such a thing exists is expressed in Marx's seemingly simple-minded utterances such as 'So far no chemist has ever discovered exchange-value in pearl or diamond' on p. 94.

4. The search for such a value materiality has mixed success:

- No common substance can be found in the physical bodies of the commodities themselves.
- On the other hand, the production processes from which these commodities spring have a physical, tangible commonality: all such production processes are the expenditures of human labor-power.
- But unlike the concrete labor, which is materialized in the use-value of the product, the abstract labor, i.e., the fact that labor is the expenditure of human labor-power, is not reflected in the physical make-up of the commodity itself.

This is why Marx concludes that this value materiality is purely social. Although one might think that we did not make any progress, since we did not find a material basis, social relations are indeed real enough to do the job. Marx says, for instance, that as value, the commodity represents nothing except that labor is materialized in it. Although this is a social relation rather than a material physically incorporated in the body of the commodity, it is indeed sufficient to explain the causal powers of value. Somebody has produced this

commodity, and that person must watch over it that he or she receives reward for the labor placed in that commodity. That is, society remembers how much abstract labor was placed in that commodity, even if this fact is not inscribed in the physical body of the commodity itself.

5. This is not yet the end of the story. Although the purely social value materiality is sufficient as the causal force that anchors the values of the commodities and therefore keeps their exchange-relations in place, it is insufficient for the practical activity of the commodity producers. These commodity producers are in the following dilemma: they put their labor into a product that they cannot use, and go to the market in order to exchange their product for something they can use. One might say that they try to pull the value materiality out of their product in order to make it useful for them. Since this value materiality is purely social, they must hunt after it in the social relations of commodity to commodity, see p. 57. In section 3 of the first chapter of *Capital*, Marx shows that the inner dialectic of the value relations will not rest until an independent material form of existence has been developed for this social value materiality—in money. In this way, the search for a *tangible* value materiality, which is separate from the use-value of the commodities, comes to fruition: this tangible value materiality is money.

7. With this independent body, namely money, serving as center of attraction and reference point, the causal powers of value evolve into the overwhelming vampire-like self-activity of capital. Marx describes here a process of emergence, in which the needs of circulation unwittingly activate a powerful generative mechanism, which previously lay disarmed for lack of a tangible value materiality.

11.6 Conclusion

A much more detailed interpretation of Marx can be found in [Ehr05]. The highlights given here were chosen to show how Critical Realism can throw light on some of Marx's more obscure arguments in *Capital*, while at the same time rescuing Marx from the Hegelian embrace. It is my hope that this will make Marx accessible to a broader audience than the devotees who have to treat *Capital* like the Bible because they never fully understand it. On the other hand, it seems that Marxism can also give valuable input to critical realism.

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