The Case Against Capital

Chapter 4

Qualifications and Clarifications (of Labor Theory)

A Preliminary Qualification

With the portion of Marx's text we have examined so far, the exposition of his labor theory is for the most part complete. Some additional qualifications do however remain to be added to it.

Marx introduces the first qualification like this:

Nothing can have value, without being an object of utility. If the thing is useless, so is the labor contained in it; the labor does not count as labor, and therefore creates no value.

The point made here seems to be a valid one: useless things have no market value. But if we examine the course of reasoning by which Marx arrives at the conclusion, we may observe some interesting anomalies.

The first question to be asked in this matter is, What kind of statement is Marx making? What is the source of the statement's authority; on what is it founded? Or, more simply, *Why* do things without utility have no value? Is Marx's qualification a statement of something that happens in the real world, some characteristic of people, or goods, or markets, that prevents useless goods from having market value? Or is it a syllogistic statement, a theorem produced to maintain the logical self-consistency of his theoretical system?

The classical view is this: useless goods have no value, and the reason they have no value is that people do not desire them and will not knowingly part with money for them; that is, the demand for useless products is nil.*

This is an observable phenomenon, and a line of cause and effect can be established connecting the particular phenomenon (the fact that useless goods have no value) to basic realities or axioms of human economic nature. One of the most basic facts we can know about people in general, starting with ourselves, is that we want to get as much as we can for our money, preferably at least an equal or commensurate exchange. We don't want to get absolutely nothing for it; and a useless product is as close to absolutely nothing as we come.

^{*} Some quibbles might be made, about fads like "pet rocks." Perhaps there is simply no analyzing such fads, or perhaps the "utility" of those was for a jokebook packaged with the rock.

(That is: ultimately, *utility* is the source of exchange value or demand.) And all this can be established by normal observation and inquiry, and without the necessity of trick definitions of words like "value" and without first constructing an interlocking theoretical system of axioms and definitions and phony proofs. In other words, we learn it from the real world, not from convoluted sophistries.

In sum, the fact that useless goods have no (market) value is blatantly obvious and almost axiomatic; yet it does present a problem to Marx's theory. The problem, and the factor compelling Marx to derive the qualification in question, is that in its original form Marx's theory would *not* lead to the conclusion that useless goods have no value. Within the context of his theory in its original, unaltered form, useless goods should have value; it is not their utility or lack of it that creates value, after all, but the labor that has been expended on them and that thus has congealed in them; labor in congealed form is Value.

In Marx's theory as originally stated, there is no basis for making any distinction between goods in which "human labor in the abstract" has been embodied and which have utility, and those in which labor has been embodied and which have no utility. The whole thrust of his argument centers around one thing only, labor; two goods have equal value (he proves) because they contain equal amounts of this common substance. We cannot allow him to retract his proof. To refer to use-value as in some way a prior necessity of value, is to bring the judgment of the marketplace into his theory, which means bringing in the wishes of buyers, supply and demand, and all such considerations. Such a move would destroy Marx's closed, theoretical system. So we are stuck with this result: all goods in which labor has been invested have value; this is a direct logical consequence of Marx's labor theory.

Thus, for example, if someone thinks it is a good idea to chip large boulders into smaller boulders, and to bring these small boulders to market as patio furniture, Marx's system says that they have value equal to the labor embodied in them. Someone will presumably pay the price for them, as logically predetermined.

But we know this is, factually speaking, nonsense, and that it is contrary to the workings of the real world. To avoid such contradictions between the real world and his system, contradictions effectively disproving his system, Marx had to adjust and modify his system; the above qualification thus had to be added.

The questions we then must address are, Is Marx's qualification logically consistent with the rest of his theory stated up to the point? And could the explanation he gives really be the reason why useless goods have no value? Some considerable discussion must be devoted to these questions.

One thing that could first be said is that the question of what goods are useless is not a clear-cut one, and it may even represent circular logic on Marx's part. Of course, the example of chipped boulders would seem clear-cut, but we don't often see such offerings of patently useless goods on the market. Most capitalists produce goods which they consider to be useful, and they offer them on the market in that belief and in the hope that the public will agree and will pay enough for them to recompense production costs and return a profit. The question is not so much whether the goods are useful, but whether they are useful and desirable enough to command the full, profitable price level on the market.

For example, at the time of this writing there are in a local department store some miniature staplers, marked down from \$3.99 to \$2.00 (half-price). Their package bills them as "The smallest stapler made using #10 [standard] staples." They're tiny, and of some novel interest; but apparently few people feel the need for a miniature stapler – there is quite a stock of them on sale.

So this stapler has utility – it staples. And the manufacturer produced it with the expectation that his estimation of the stapler's utility would be matched by the public's. But that has not happened. Now, in Marx's system, these staplers have utility, and thus value, and that value should be the full complement of the embodied homogeneous human labor – for him it is either yes or no, the goods have value or they do not. (Thus for this reason too his reductionist and simple-minded theoretical system cannot account for the real world.) His theory in not borne out in practice.

In sum, it is not a simple yes-or-no question of whether the goods have utility, but whether the degree of that utility is perceived by buyers as sufficient to give the goods a full, profitable exchange value. And in fact, the method of telling which goods are useless and which are not is not a straightforward one. It is not always a matter of goods that absolutely don't work. Using Marx's system, the way to identify "useless" goods (like the stapler above) would be to identify those that don't sell: these have no market value, and thus we know they are useless. (It is not from the fact that it won't staple that we know it, in other words; for it does staple.) Thus what we are really doing is allowing the market to first have its say. We know which goods are "useless" because they have no value (don't sell); not the other way around, as Marx represents. It isn't that they have no value because they are first (logically) identified as useless. We can identify them as useless because they have no value, or not enough to sell at full price. In any but the most simple cases, like cars with no motors and machines that don't work, that is all Marx's qualification amounts to -a case of circular reasoning, in which he represents the line of cause and effect as going one way when it is actually going the other way.

But all this is more or less incidental; it says only that the category of "useless" goods may not be as clear-cut or as objectively identifiable as Marx seems to assume. Taking the term at face value, however, and considering it as identifying absolutely non-functional goods like cars that don't run, machines

that don't work, magical arthritis cures, etc., let us examine the logic of Marx's qualification concerning useless goods.

Why can nothing have value, without having utility? Because "If the thing is useless, so is the labor contained in it; the labor does not count as labor, and therefore creates no value."

This rationale has two basic parts: first, there is the logical interconnection or deduction that if an object is useless, the labor expended in making it is useless; second, the proviso that useless labor creates no value. Here again we may reflect on what *kind* of statements these are; neither could be said to be exactly a matter of objective fact. The first assertion, that labor exerted in creating a useless object is useless labor, might be seen as a logical deduction with a certain amount of validity to it; or it might be seen as one way of defining useless labor. If labor doesn't produce a useful product, it's useless labor – that might be a definition we could be convinced to accept under certain circumstances. But it is essentially an arbitrary statement, a matter of personal choice on Marx's part; certainly it is not a self-evident or irrefutable statement of fact.

For example, work is often considered useful for therapeutic value, even if no good product is produced. Some people clear weeds or cut wood even if there is no need to do so. It could be said that hard work is intrinsically virtuous, or that it helps one lose weight or sleep better. In times of economic depression people sometimes get jobs doing things which produce little of objective utility, just so they can get a paycheck and help "prime the pump" of economic activity. Convicts have at times, or so the popular image has it, been set to work breaking rocks for little reason but the rehabilitative effects of hard labor. For all these reasons labor might be considered useful, even if the product produced is not. The connection is not as direct and self-evident as Marx presumes.

The second part of the rationale, that "useless" labor creates no value, is an entirely new thesis which makes its first appearance here. There is no basis for it in Marx's labor theory as derived; no reason to suppose that "useless" labor does not congeal as readily as useful labor, and no reason to suppose that congealed "useless" labor cannot, as readily as congealed "useful" labor, constitute the "common something" which lies hidden in all commodities and accounts for their exchange values. The entire logic or rationale of Marx's labor theory has nothing which would justify any distinction between "useless" labor and "useful" labor in creating, or congealing into, value. This, despite the apparent bland assumption of Marx that the point has already been discussed and made before he ever got to his qualification. He writes as if this new stipulation he is adding were already a foregone conclusion. "[T]he labor does not count as labor, and therefore creates no value"; thus he writes not as one adding a new, arbitrary

stipulation, but as one making a logical inference from some already-established premise.

Marx's qualification, or his rationale explaining why useless goods have no value, is by no means the real reason for that phenomenon. His qualification is an *ad hoc* rationalization added to his theory after the fact, in an attempt to bring his theory (meaning the results predicted by his theory) into accord with certain inescapable facts of the real world. The real reason useless goods have no value is that there is no demand for them, i.e., people won't buy them. On the principle of Occam's Razor, these simple and adequately explanatory facts should have been given some credence by Marx.

Marx, however, has a weird theory of value in which value is mechanistically created as a static, actually a physical, substance, by the congealing or precipitation of labor. And by this weird theory useless things should have value; thus Marx was compelled to come up with yet more arbitrary stipulations and definitions in order to bar useless goods from having value, and thus bring his theory back into some semblance of accord with reality. Thus we have, "Useless goods imply useless labor, and useless labor (Marx decrees) has no value."

But again let us look at Marx's rationale: Why does useless labor not create value? "[T]he labor does not count as labor, and therefore creates no value." This is surely not a statement of any objective fact of nature; there is no such category or relationship in objective reality as "A *counts* as A." Marx is writing here as someone creating arbitrary categories, which categories are completely subject to his authoritative power and can be created at his whim. He is not describing an independently existing reality, but constructing the rules for an arbitrary, purely theoretical system. This is in accord with the arbitrary nature of Marx's theorizing. In short, Marx is writing like someone making up the rules for a new game: "If the ball goes outside the blue line, it doesn't count." What Marx is really saying is, "No fair asking why useless goods have no value within my system!"

He wants to arbitrarily remove the difficulty, like someone defining a new game. But people who are making up games are not describing the objective laws of the physical universe. The rules of baseball are a different kind of thing from the laws of physics.

That brings us to the fundamental distinction between what Marx is writing and genuine science or genuine economics. Marx is not describing the real world and the forces, motivations, pertinent phenomena, and so on that obtain in it. Rather, Marx has a separate, imaginary world which he has created from arbitrary assumptions, questionable deductions, redefined terms and various other elements. He has a theoretical system built up from axioms, elementary defined entities, and prescribed or deduced interrelationships; but it is a

completely fictive or imaginary system. (More precisely, it is what we might call a "formal" system – formal as opposed to actual; it exists "for the sake of argument" and is built of theoretical, or formal components, much as a mathematical model or a field of mathematics is built up from axioms, definitions and added theorems.)

This theoretical system has no objective existence; it is something Marx has partly defined, partly "proved" (by fractured logic) into existence. And Marx takes it to be the real world, and deals with it as if it were the real world. His entire text, in fact, will be based on it and will refer to it, explaining every new phenomenon in terms of it. Yet it is the fictional world composed of Marx's collection of definitions, assumptions, axioms theorems, and so on; it is a logical entity referring only to itself, not by any means an accurate picture of the real world.

Most of the time Marx can simply work within the context of his fictive world, without ever referring to the real one. He puts a desired question or input into his fictional system, and from its axioms and theorems he derives the appropriate answer or output (freely inventing as he goes along). The real world doesn't intrude into his reasonings.

But there are difficulties at times, when certain facts are painfully obvious, that is, when the real world cannot be ignored. Marx's theoretical system is a sort of parallel world, a distorted image of the real one. His theoretical world is invisible. That is, it is derived from or based on observable facts but on rarefied logic, and no one can expect to see his theory actually work in the objective world; it functions invisibly, and for example no one can actually see labor congeal into value: it's a matter of logical proof.

At some points however his theory may be said to touch the ground, where certain actual real-world results are to be anticipated. In these cases Marx must try to make his theory square with the facts and indeed seem to be the valid explanation for those facts. In such cases his theory must be adjusted and brought into line with reality, so that events do not patently refute it. But Marx's theory is never the real explanation for those facts; he brings it seemingly in line with the facts, but it remains a fictional theory and an imaginary world, and the adjustments to his theory are always *ad hoc* rationalizations, sophistries added on after the fact to preserve his theory. The theory itself is never the true picture.

Thus in the present instance: in the matter of useless goods, the facts are too well-known to be distorted, and Marx's theory cannot remain purely theoretical and unverifiable with regard to them. The results predicted by his theory must be the facts as they actually obtain (namely, useless goods have no value, rather than the contrary, as his theory would naturally predict).

Thus to twist his theory just enough to make it seem to be in accord with the real world, Marx has to introduce his qualification - consisting of new

stipulations and added sophistries to achieve the desired outcome. While this makes the result of his theory consistent with the real world – that is, we cannot argue with the assertion that useless goods have no value – the picture, the rationale he presents, follows after the facts. It is part of the abstract, theoretical, imaginary world represented by his theory, just a sophistry referring to that picture and aimed at salvaging it; it is not the real *explanation* of the phenomenon, not the real reason why useless goods have no value. (That reason is, to reiterate: there is no demand for useless products; people won't buy them; exchange value, or at least demand, is predicated on utility.)

As an overview of the sophistry Marx devises for this qualification, we might suggest this characterization: Marx displaces the uselessness of the product onto the labor. That is, the real reason useless goods have no value is that the *goods* are useless; that's why people won't buy them. But to find a loophole to make this fit his system, Marx says this: useless goods imply useless labor, and useless labor is hereby declared to create no value. Thus he shifts the responsibility for the lack of value, from the shoulders of the useless product onto that of the (now-declared) useless labor. This makes his system work, but it is not the real reason. No one thinks, "I don't want to buy useless labor, so that useless product with its useless labor is not for me." The real reason is more simple and direct: people will not buy useless goods; there is no demand for them. The theory or explanation must be put in accord with these facts, *expressed in these terms*; the facts cannot be redefined to fit Marx's theory.

His own explanation begins with the uselessness of the product, and since that is sufficient explanation for the lack of value of the product, i.e., for its inability to sell, by the principle of Occam's Razor he should not have attempted to go beyond it. In descending to new levels of abstruseness and proceeding on to the uselessness of the labor, Marx went from open facts to tendentious assumptions and hypothetical assertions. The pertinent reality is the uselessness of the commodity. The question of how useful the labor may have been never enters anyone's mind – certainly not that of the potential consumer. It is the character of the product, and its usefulness or lack thereof, not any supposed concomitant uselessness of the *labor*, that accounts for the product's success or failure. Added theoretical complexities like Marx's, where not needed to explain the matter at hand, are nearly always sophistries. (That is the principle of Occam's Razor.)

In displacing the uselessness from the product to the labor, Marx is compelled by something he has done in a previous part of his text. The displacement is necessary because he has already dismissed use-value (utility) as a pertinent consideration in determining exchange value. Exchange is characterized by "a total abstraction from use-value," he has informed us. Thus

when, right here, Marx comes up against a case where quite plainly utility *is* related to exchange value, Marx is unable to record that simple, unadulterated fact. (He has eliminated use-value as a factor in determining exchange value, presumably because it is too closely related to demand, and thus too close to classical theory; and besides, it makes people seem in control of value, rather than a mechanistic formula or process. Anyway, his interest was to eliminate everything except labor alone.)

Thus he cannot simply report that useless goods give rise to no demand, cannot be sold, and have no value. Yet useless goods as treated by his theory must be shown to have no value for *some* reason; his theory must be brought into accord with the real world in that instance.

Thus use-value or utility reappears, but in a sublimated or repressed form as the usefulness of the *labor*, not as what it really is, the usefulness (or lack thereof) of the commodity itself. In this way, by clever use of *ad hoc* sophistries, Marx can have it both ways; he can eliminate utility in general from his theory, eliminating all such factors as demand and consumer willingness to buy the product, replacing them with his mechanistic and unary principle of "value as congealed labor." At the same time, however, when his theory runs into difficulties from the real world, he can evade those difficulties and invent a plausible-sounding rationalization for bringing utility back into his theory, but in transformed guise, as the utility of the labor, not of the product. Thus he adds sophistry to sophistry and keeps his theory alive.

If we look at his theory only as a "black box," that is, if we consider only what "input" goes into it and what "output" comes out, without regard for the actual functioning of the box (or theory) itself, it seems to square with reality. The "output" it predicts seems to be in line with the real world – that is, by the terms of Marx's redefined theory, useless goods now are seen to have no value. That is what actually occurs in the real world, and so Marx's theory seems to be vindicated again. But if we pay a little attention to Marx's description of the actual mechanism of the box, and of how his theory works in detail, we see that it is in no way a description of the real world; that the real world doesn't work like that; and in fact that Marx's whole theoretical model is a hypothetical, and entirely non-existent abstract system, not a picture of the real world. This applies also to the entirety of his labor theory – while superficially it resembles classical "labor theory," the entire content of Marx's "black box" is actually of a fundamentally different nature from Smith's theory.

Further Qualifications

A few more qualifications remain to be added to Marx's labor theory of value. We have already seen one, namely, that the commodity produced must be a useful one, in order for the labor to "count" as labor and thus to create value. Marx now introduces another qualification, as follows:

Some people might think that if the value of a commodity is determined by the quantity of labor spent on it, the more idle and unskillful the labor, the more valuable would the commodity be, because more time would be required in its production.

Exactly so; that would follow from Marx's labor theory. The labor performed on the commodity, measured by its duration, that is, in units of time, constitutes the congealed "common something" which Marx has proven to be identical with value. We have been given no basis for supposing anything except that all labor congeals alike; or to put it another way, one man's labor of half an hour should produce just as much value as another's. We might consider this reasonable because it is not the slow laborer's fault (let us assume) that he is clumsy. But whether that consideration is relevant or not, within the context of the system Marx has presented for us, there seems to be no basis for saying that less "congealed labor-time" would result from a half-hour of one laborer's efforts than from another's.

Viewed in this context, the internal logic of Marx's system is like the old joke about a newly-hired workman: on being hired, he demands a higher wage than the more experienced, skilled hands, on the grounds that, "I don't know the job and it's harder for me." This same kind of inverted or anti-economic logic is at the core of Marx's system: the slower laborer adds more value to the product by virtue of being less efficient. He is paid the same per hour, thus costing the entrepreneur more per unit of production. But the only relevant factor in the value of his product is the time he spends working (not what he accomplishes).

The logic of Marx's system could be said to be the same as the joke's: it derives from a habit of considering matters only from the viewpoint of labor and the laborer, and never from the viewpoint of the employer, *his* needs, and the value of the labor *to him*. Marx often writes as if he thought labor were the only meritorious factor in "capitalist" economies, and as if labor deserved a financial return purely as a reward for that intrinsic virtue, apart from any economic considerations – that is, apart from objective economic conditions and the capitalist's determination of what the labor is worth, in practical terms, to him. Thus the laborer-employee relationship is another coin which, for Marx, has only one side.

Of course no economic system could really function for long in the real world on the basis of Marx's kind of inverted logic. Certainly real "capitalist" economics do not function that way; we don't see goods with a higher price, i.e. a higher market value (corresponding to a higher internal, transcendent "Value") selling successfully alongside identical goods produced at lower cost by a more efficient workforce. People don't pay more for goods produced by "idle and unskillful" laborers just because the internal logic of a theoretical system somehow requires it. They don't pay more as a reward to the laborers for their efforts, or for the satisfaction of owning a certain number of hours of embodied labor, idle and unskillful as it may be. Rather, they try to pay less.

If there are cheaper goods of the same quality for sale, people will buy the cheaper goods. The manufacturer whose labor force is idle and unskillful, or hampered by antiquated machinery or some other difficulty, cannot automatically expect to recover the full "embodied labor-time" in his selling price; not if there is any competition at all in the market at all for that product. He will have to produce the good at a competitive price, or go broke.

That is, he would have to do so in a real-world market environment. Once again the logic of Marx's labor theory, in its original form, is at odds with the nature of real "capitalist" economies. That is, if the inference we draw from his theory, as it applies to the case of "idle and unskillful" labor, stands, his theory is not borne out by market events. However, if there is some convincing reason why that inference does not follow and is not a necessary conclusion from his theory, his theory may be defensible.

Marx is thus at some pains to dispel the notion of his theory as we have described it. He continues,

The labor, however, that forms the substance of value is homogeneous human labor, expenditure of one uniform labor-power. The total labor-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 labor 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 labor-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 time than is socially necessary.

^{*} Here it appears Marx uses the term "value" in its normal sense; that is, he refers to the value *of* a commodity, rather than using "value" to mean the commodity itself. This is a rare occurrence.

Thus we have a new distinction to deal with: not just any old labor "counts" as value, or congeals as value; but only a particular, pre-eminent kind of labor, "homogeneous human labor." "Idle and unskillful" labor, falling short as it does of the standard of this "homogeneous" labor, does not create value, or at least not as much of it as it should create, based on the duration of the labor.

One obvious question that arises is, on what authority does Marx make this qualification? What is his justification for it? Is there some objective characteristic of real-world economies that justifies him in making this modification of his theory, or is he just adding an arbitrary stipulation aimed at preserving his system? The answers to these questions will tell us whether the qualification is warranted.

Preliminary Investigation

Paraphrasing the current qualification, we could say this: to determine the value of a commodity, we don't simply measure in a straightforward way what might be called the *actual* labor embodied in it. That is, we don't simply observe the production process, time the labor actually performed on a particular article, and declare this actual amount of embodied labor to be the value of the product. Rather, we must by some means (it turns out to be a mathematical means) determine the amount of a *special* kind of labor embodied in the commodity. We must evaluate the commodity's content of "homogeneous human labor," parenthetically identified by Marx as "expenditure of one uniform labor-power," rather than measuring its content of actual, ordinary labor.

This process is an abrupt reversal of what we had been led to believe about value. If there is one conclusion we could have drawn from Marx's exposition of his labor theory to this point, it is that "labor is labor," that it is not differentiated into different kinds and degrees and types. The entire gist of Marx's text so far draws a picture of labor as a straightforward mechanistic entity, embodying itself or "congealing" within the body of the commodity, with no differentiation on the basis of what kind of labor it is. We would no more expect there to be differences and distinctions to be made as to particular *types* of labor, than to find out that some kinds of steam don't yield the proper amount of water when they condense. Straightforward physical processes don't behave so capriciously.

Marx's proven equivalence of embodied labor (the "common something") and value gives no basis for supposing anything other than that all labor is equal in its power to constitute value. We don't expect to see some kinds of labor more "valuable" or more value-creating than others. So we can conditionally say, at this point we can see no justification for making distinctions between one worker's labor and another's.

For further insight into this question, let us turn to the question of how to calculate a commodity's content of "homogeneous" labor. This can perhaps best be approached by paraphrasing Marx's exposition, and then extrapolating from it somewhat.

The passage in which Marx derives his concept of "homogeneous labor" is not very explicit (even less so than his usual prose). But it appears that his concept of "homogeneous human labor" means the following: to find the value of a commodity, first find the *average* amount of labor (i.e., the average amount of *actual* labor) embodied in the commodity, taking into account all of the commodity produced in the entire society. That is, find the nation-wide average (which Marx calls the "social average," meaning the average across the entire society). That is value.

That simple instruction is not given explicitly in Marx's text, but it is implied. He says, first, the "total labour of society," which produces "the sum total" of all the commodities produced, is considered, or "counts," as "one homogeneous mass of human labor-power." (We will restrict ourselves here to dealing with one commodity at a time, not to the "total labour of society.")

That is, as Marx says, we consider all the labor and all the commodities (or the total amount of one commodity, in our case) in the society. And to consider all the labor performed on a commodity as a "homogeneous mass," what we have to do is add it all into one lump sum; that is, we add all the "man-hours" together, without differentiating or making distinctions among any of them, and arrive at a sum representing the total number of labor-hours embodied in the production of the gross amount of the commodity throughout the entire country. This is then a "social," or society-wide, figure.

Then, we consider this lump sum or "homogeneous mass" of labor-hours as composed of "innumerable individual units," that is, we divide it back into parts again. However, this time we want each of the "innumerable individual units" to be "the same as any other," meaning that we divide the lump sum of man-hours into equal parts. Each part or unit must have the characteristic that "it requires for producing a commodity, no more time than is needed on an average."

This calculation produces a quotient which represents a certain amount of labor, namely, a period of labor of that duration which produces one unit of output in the average time. That is, each of these quantities of labor produces a commodity in "no more time than is needed on an average." In short, this mathematical process yields a quotient which is the average amount of labortime needed to produce a certain standard quantity of the commodity. It is the average labor-time embodied in the commodity; and it is this figure which Marx now wants us to take as the value of the commodity.^{*}

This quotient, notice, is a result of dividing the total mass of labor (for one product) into "innumerable" identical pieces, each piece sufficient to produce one unit of the commodity. The size of these pieces is the average amount of time, or the amount of time "socially necessary." If we divide the entire quantity of labor into segments, each of which produces one unit of the commodity in the average time, that is the same as saying each of these segments is equal to the average amount of labor per unit. And "homogeneous labor" then means labor in terms of these homogeneous units, or average units.

It should be added here that Marx may not have envisioned the calculating of "homogeneous" labor quite as presented above; there may be an implied further step. For one thing, Marx complicates the case somewhat by referring to "labour power," not "labour." That is, starting with the two lump sums – the total labor of society and the total amount of the commodity – we could divide in the opposite direction.

That is, we could divide the total amount of the commodity by the total manhours. The resulting figure would represent the average quantity of the commodity produced by a labor-time of one hour. This figure is the average productivity for that commodity, or what Marx calls "one uniform labor-power." And in Marx's terminology, "homogeneous human labor" probably means labor of average productivity – that is, it is "expenditure of one uniform labor-power." It is this labor, he tells us, that constitutes value.

Let us examine this more closely: when Marx divides the two sums (of labor and produced commodity), each of the "innumerable individual units" is supposed to be the same as all the others in that "it has the character of the average labor-power of society." Average labor-power, or productivity, is labor that produces a commodity in "no more time than is needed on an average." The value of a commodity is now defined as the amount of this *average* labor contained in the product; we must somehow calculate it, and then we will know the product's value.

Of course, the average amount of embodied labor *time* is the reciprocal of average *productivity*, or average labor-power. (The word "power" added to a term often denotes a rate, particularly a rate of expenditure of energy or work; for example, the term "horsepower" refers to a certain standard rate of

* We can see from this example why in actual calculations it would be necessary to restrict ourselves to one commodity. It would be impossible to deal with the total number of units of wheat, bicycles, and everything else at once, and get a meaningful figure.

performance of work. Marx seems to envision something like this in using the term "labor-power.")

Thus "expenditure of one uniform labor-power" may mean work performed at the rate of average productivity; and "homogeneous human labor" is then such an expenditure, i.e., the expenditure of labor at the average rate of productivity, or at the rate of "uniform labor power."

Thus it may be that what we first need to do is to find the average rate of labor-power for the commodity, that is, to calculate the average productivity: the average number of units produced per man-hour. This is "expenditure of one uniform labor-power," or "average labor-power." The amount of *this* labor, embodied in this commodity is the value.

But the amount of "labor of average productivity," is identical to the average amount of labor. Average productivity is the reciprocal of the average labor per unit of commodity.

As Marx correctly points out, labor of average productivity, or "average labor-power," is precisely identical to that labor that produces a unit of the commodity in "no more time than is needed on an average" or in the average labor-time. Regardless of which figure one calculates first (that is, which way one divides first), the result is the same. "Homogeneous human labor" is first, the average amount of labor embodied per unit of the commodity; or it is second, the number of units of "uniform labor-power," i.e. the number of units of labor performed at the average rate of productivity, which the commodity contains. The two statements are equivalent.

A little bit of thought on the nature of averages as mathematical entities may give us more certainty about what Marx is referring to. One thing which averages enable us to do is think of diverse quantities as if they were homogeneous; that is, to ignore individual differences and variations in a group of numbers, and arrive at a figure which we can treat as if it were uniformly attained. A series of quantities all equal to the resulting "homogeneous" value would produce the same net result, that is, the same total, as the actual sum of the various differing values.

For example, suppose we have five rocks, weighing respectively 25, 35, 20, 36, and 44 pounds. Their total weight, which we might say "is embodied in the sum total of their weights," is then 160 pounds. Considered as a homogeneous mass, or lump sum, and divided into equal individual units, that yields five individual units, each the same as any other. Each of these five equal units weighs no more than each original rock weighs on an average: 32 pounds. In short, the average is 32 pounds per rock.^{*}

^{*} The "average" being discussed here is the *mean*, rather than the median, a different type of average.

Thus if the "sum total" of the weights are divided into "individual units," each "the same as any other," conceptually what we have is five rocks, each weighing the "homogeneous" weight of 32 pounds. The usefulness of the average as a mathematical entity is that we can consider every rock as weighing 32 pounds, without taking individual differences into account: five rocks each weighing 32 pounds would produce the same net result, or weight, as the total for the actual five rocks.

Similarly, if we know how much milk people drink on an average, we can estimate the requirements for milk of a city of say, 10,000 people. We could multiply the average by the number of people and find out the probable daily requirement for milk. In doing this, we would ignore individual differences in the amount of milk consumed by different individuals, because we are mainly interested in finding the gross amount required, not individual requirements – individual differences don't matter for our purposes. This seems to be just what Marx is referring to in his derivation of the concept of "homogeneous" labor. We can *conceptually* divide the "total labor-power of society" into "innumerable individual units" each "the same as any other."

The "sum total of...all commodities," which was actually produced by quantities of embodied labor performed at diverse rates of productivity, we can treat as having been produced by equal quantities of homogeneous labor all performed at the average, "uniform" rate.

It becomes apparent that there is nothing in Marx's notion of "homogeneous" labor which is not contained in the concept of averages; that is, there is nothing peculiar to the subject of economics, or value, or labor in what he has to say about homogeneous labor, uniform labor-power, and the rest. Marx is just saying, We'll find the average and consider that to be the value.

Averages as a conceptual entity

There is however, this difference: Marx speaks of the average, a merely conceptual or statistical entity, as if it were an actual or concrete thing; he writes as if using the average were not an arbitrary choice but an acknowledgment of something inherent in the phenomena themselves – as if in some manner the average labor were found in nature. He says the total labor of society "counts" as a homogeneous mass – that is, not that he simply chooses to count it as such, but rather that for some implied substantive reason in the nature of things, it necessarily "counts" as such. He speaks of the innumerable divided units as if they were substantive, concrete entities; each of them "*is* the same as any other," that is, each is the same as the result of an automatic or spontaneous process – he doesn't speak of *making* them all the same.

For that matter, he seems to assume that the mass of labor is *automatically* divided into innumerable units. He says the total labor counts as a homogeneous mass, "composed though it be" of many equal units. He neglects to say that we ourselves must do the dividing in order to see it as composed of equal units, i.e., in order to obtain an average.

Thus Marx speaks of a conceptual, statistical process as if it were concrete and actual and occurring in nature. Whereas an average doesn't exist at all until somebody calculates it – only the actual, individual values concretely exist – Marx speaks of the average as if nature itself supplied it, as if it were a concrete phenomenon. (This is not the only case where Marx manifests his inability to distinguish between the actual and the conceptual. In fact, broadly speaking, Marx's whole body of work represents an inability to distinguish between the real world and a conceptual world of his own making.)

The result then is this: value is the amount of "homogeneous human labor" embodied in the commodity. That is, value is the amount of *average* labor, meaning labor of the average rate of productivity ("expenditure of one uniform labor-power"). To the extent or proportion that a laborer's efforts are not "homogeneous" labor, are not equal to the average rate, to that same extent the amount of labor-time he invests in a product must be adjusted. For instance, if his rate of productivity is only half the "uniform" rate of productivity, then each minute of his labor "takes effect" only "as such," or only to that extent – i.e., only to the extent of one-half. Since his rate of productivity is only half of "uniform labor-power," it follows that his labor is only half of "homogeneous labor," and each minute of his labor correspondingly "counts" as only half a minute. It "takes effect as such."

That is, if his rate of productivity is half the "uniform" rate, each unit of his *actual* labor only amounts to half a minute of "homogeneous" labor; it "counts" as only half a minute. In this sense "homogeneous" or average labor is the standard for measuring value; the standard is not the duration of the labor actually performed on the commodity.

Let's see how this works in a concrete example. Suppose the "homogeneous" rate of "uniform labor-power" is three bicycles per hour, or that is, twenty minutes of labor are embodied in each bicycle on an average. (This means, let us say, the figure for one worker's task, for instance painting the frame; this one task adds that amount of value to the final value of the finished product. And notice, we arrived at this figure by calculating an average – that is the first step and the whole basis of Marx's reasoning in this qualification.)

"Homogeneous human labor" is thus labor at a "uniform" rate of productivity of three bicycles per hour. How then do we find the amount of "homogeneous" labor represented by the varying amounts of actual labor invested by individual laborers? Perhaps one worker performs at exactly the "uniform" rate. Since his *labor-power* is uniform labor-power, his *labor* is also homogeneous labor; that is, since his rate exactly equals the average, each minute of his labor "takes effect" as exactly a minute of the standard "labor that forms the substance of value." He invests 20 minutes in each bicycle and the increment of value he adds to each bicycle is 20 minutes. That's simple.

Suppose, however, another worker is somewhat "idle and unskillful," and produces only two bicycles per hour. This worker, at first view, would seem to be adding 30 minutes of value to each bicycle; at least, he invests 30 minutes of actual labor in each.

The "labor that forms the substance of value," however, is not actual labor but "homogeneous human labor." Since this laborer produces at the rate of two bicycles per hour, and the "uniform" rate is three bicycles per hour, his rate of productivity is only two-thirds the "uniform" rate. Each minute of his labor then equals only two-thirds of a minute of "homogeneous" labor. His labor will "take effect as such," or to the extent that it equals "homogeneous" labor. Each minute of it contains or translates into only 2/3 minute of "homogeneous" labor.

Thus: if he embodies 30 minutes of time in the commodity, and each of those minutes only "takes effect" as 2/3 of a minute, the value embodied in the commodity by this laborer is only 2/3 of 30 minutes, or 20 minutes.

(An example for an extra-speedy laborer, with a rate greater than the "homogeneous" rate, would be analogous. The final figure, it should be obvious, will *always* be 20 minutes.)

This line of argument, relating "uniform labor-power" to "homogeneous labor" and so on, (to use a phrase of Marx's) "turns all around in a circle and never leaves the spot." Labor at the "uniform" rate of labor-power is "homogeneous" labor; the amount of labor of the average rate of productivity is the same as the average amount of labor. The entire meaning of the qualification is simply this: For value, take the average amount of labor (-time^{*}) invested in the commodity.

The rate of productivity and the time invested per unit of commodity are reciprocals. Thus to start by calculating the rate of productivity (called "uniform" labor-power) and then to "discount" the labor-time by the ratio between this particular rate and the homogeneous rate, is mathematically identical in every case to just using the average figure for the amount of embodied labor.

Reducing it to algebra: if the "uniform" rate of productivity is denoted by a, then the average amount of labor invested is 1/a. If a particular worker's rate of productivity is then b, he embodies 1/b minutes of labor per unit. However, since

^{*} Since labor is, as we already know, measured in units of duration, the term "labor-time" is redundant.

his rate is not the "homogeneous" rate, we must modify that figure (the labortime). His rate of productivity is to the "uniform" rate as (1/a) is to (1/b), or simply the proportion b/a. His labor-time then must be multiplied by the same proportion, that is, it "takes effect" as b/a*1/b, or that is 1/a. This is the average labor-time; this is the final result from the calculations in every instance, regardless of the individual rates of productivity.

All Marx's qualification means, then, is this: For the value of a commodity, don't use the actual labor-time; use the average.

To say that the value of a commodity is the amount of "homogeneous human labor" embodied in it, where "homogeneous" labor is defined as labor which "requires for producing a commodity, no more time than is needed on an average," is just to say that the value is the average amount of labor. Marx's argument is founded on this average; it works its way out from it in a broad rhetorical circle and then returns to it. This qualification means simply, "For value, take the average." The rest is just detritus.

It may be objected that all this "extrapolation" of Marx's text is highly conjectural and thus of questionable accuracy. That is perhaps a reasonable objection, and anyone who can supply an exegesis which fits Marx's text more closely is welcome to do so. Marx's qualification is not explicit or coherent enough to allow any certainty about the finer details of what he means.

Anyway, some extrapolation or interpretation must in any event be applied. The passage cannot be taken as literally true and complete in itself; it can only be taken as a point of departure, or as a vague, inexplicit intimation of what Marx in a general sense wants to say, and not as a literal explanation. In the first place, labor is not *literally* homogeneous. There is no such thing as "homogeneous human labor"; the term cannot be taken as denoting an actual, existing entity. There are always variations in labor, that is, in the rate of productivity of labor or (what is the same thing) in the amount of time different workers take to perform a particular task. There are variations from workplace to workplace, from worker to worker, and even in one worker from one moment to the next. Labor is irremediably heterogeneous, not homogeneous. "Homogeneous human labor" is a "nominalist fallacy," a name for something that does not exist; or else it is a disguised label for some other concept.

Similarly, the rate of productivity is not uniform. We might consider the average rate as somehow constituting the "uniform" rate, i.e., as a kind of target rate for workers to shoot at, perhaps. The fact remains, though, that labor is not performed at a uniform rate but at innumerable individual, varying rates. "Expenditure of one uniform labor-power" might conceivably refer to a newly-defined unit of productivity equal to the average rate; a sort of imitation of units of measure like horse-power. However, if it is meant to imply that labor is actually performed at a uniform rate, it is entirely unjustified.

Similarly, the "total labor-power of society" may "count" as a "homogeneous mass," but it is in fact *not* a homogeneous mass; and if we consider the individual workers' outputs, each unit is *not* "the same as any other."

In short, in and of itself the phenomenon under consideration does not automatically resolve itself into a homogeneous mass composed of identical units. Marx may choose to consider it so conceptually, and may perform certain mathematical calculations. But the phenomena as they exist in nature do not spontaneously assume the form Marx imputes to them. That is the difference between the actual (or literal) and the conceptual, and that is why this qualification cannot be literally true.

It may be that Marx simply did not understand the difference between the actual and the conceptual. (Certainly he seems not to have understood that science deals in the actual, in what really happens in the physical universe, and not in philosophical speculations that can be imposed on reality.) Or it may be that he regarded the conceptual as having higher validity than the actual, the conceptual being transcendently true (like Hegel's "Ideal"), and the actual being only incidentally true, a matter of pedestrian, merely "phenomenal" facts. In the present instance Marx writes as if, because he can conceive of labor as being homogeneous and composed of equal units – i.e., because he can *conceive* of an average – then the labor is *actually* homogeneous and composed of equal units, and the average is an objective entity. For Marx this average is not something that must be calculated and used by people, but something the labor spontaneously manifests on its own. This a confusion between the conceptual and the actual.

What's the Difference?

The question naturally arises, if Marx's qualification means no more than, "For value, take the average amount of labor," why didn't he just say so plainly? That is, assuming he could tell the difference, and didn't state his qualification as he did just out of philosophical confusion, what is the difference between the qualification as he presents it and the simpler, translated version? This question might be put as follows: If we accept that Marx's concept of "homogeneous labor" is the same as "average labor" (labor of average productivity), then what is the difference between saying value is the "amount of average labor," and saying value is the "average amount of labor"?

The difference between the two alternative formulations, and the apparent reason Marx didn't simply say "Value is the average amount of labor," involves the issue once again of the source of authority for Marx's qualification, or the kind of statement Marx supposes the qualification to be.

The reason for Marx's formulation, briefly put, is this: Marx purports to write as a scientist, and he has presented his labor theory as more or less a statement of scientific fact. His theory is purportedly a naturalistic description of the behavior of certain material phenomena; not a matter of arbitrary definition or speculative theorizing. Marx's labor theory is based (we are to understand) on the observed objective fact that labor congeals or condenses physically in a commodity, where it constitutes "Value" (as proven logically by Marx; Marx allows logical proofs into his "science").

Given this scientific nature of Marx's labor theory, in which its status is that of a factual report of the generalized "laws" of behavior of objective phenomena, Marx could not qualify his theory with arbitrary stipulations or definitions. But an average is something arbitrary (and even worse, it's statistical). It is an entirely man-made phenomenon: it doesn't even exist until someone calculates it. Any qualification based on an average would thus have an arbitrary nature and would inextricably be a matter of human choice or definition. This arbitrary nature would conflict with the supposedly factual and scientific nature of the theory as a whole; the two parts would be logically inconsistent.

Thus Marx presents his qualification (which in essence stipulates that value must henceforth be considered as the average amount of labor) not in those bold and arbitrary terms, but as if it were also a matter of objective fact, a matter of the substantive, physical nature of the phenomena in and of themselves.

Thus we see that Marx's authority for making his qualification, the purported basis for its validity, is that it is a statement of objective fact about the behavior of physical entities; it is part of the natural and spontaneously-occurring behavior of the phenomena themselves. Marx purports to find a naturalistic imperative, something in the real world itself that causes only the average labor to constitute itself as value. The value, i.e. the embodied labor in the commodity, *on its own* turns out to equal the amount of "homogeneous" labor, for reasons in the nature of the physical universe itself, and not just because Marx stipulates it to be so. Such is the light in which Marx presents the qualification; or at least, that is the most plausible inference concerning Marx's source of justification or authority.

Alternative Views

Other possible sources of authority for his qualification do present themselves, however. Perhaps Marx means for us to take the qualification as an act of definition. He has already defined value as labor, and perhaps he is now further refining that definition by telling *what* labor has been defined as value. This is self-contradictory (though perhaps no more self-contradictory than Marx's method of simultaneously defining, proving, and demonstrating by an objective physical process that labor equals value). The contradiction would be this: objective quantities cannot arbitrarily be *defined* equal to a given magnitude or amount. They can't be made by force of definition to equal a certain desired or arbitrarily-arrived at figure. Value, or at least market value, can't be defined as a given amount; it is an objective, i.e. market, quantity; it is not subject to definition. One can no more define value equal to a certain quantity than one can define the distance to the sun as 50,000 miles. Or to give another example, we know Newton's law, F=ma; we cannot arbitrarily define the force as F=ma². Objective, independently-existing quantities are not subject to arbitrary definition. (But that is only a drawback from *our* viewpoint.)

Moreover, such a procedure would be a re-definition; his initial definition centered around labor, i.e., the *actual* labor, and gave no indication of any valid reason for defining the labor as "homogeneous" labor.

Another possible source of validity for the qualification is the concept of "social necessity." We are informed that the labor that constitutes value is labor "that requires for producing a commodity, no more time than is needed on an average, no more time than is socially necessary."

The phrase "socially necessary" combines two of Marx's favorite allpurpose conceptual shibboleths, "social" and "necessity." The appearance of either of these terms is generally presumed by Marx to be automatic proof, with no further reasoning or justification needed. There is however a lot less to this term than meets the eye. The "social" part means that the average is a "social average" - a nationwide average; that is, every workplace nation-wide is figured in when calculating the average. And as for "necessary," it doesn't mean logically necessary, or necessary in an *a priori* sense; it just means the average amount of labor necessary or required, in other words actually expended, to produce the commodity today. The "necessary" labor is not a separate concept from the actually-embodied labor (except in a couple of special circumstances). The necessary amount is the amount required, or just the actual amount (on an average) embodied in the commodity; it is not an amount decided on by society as the necessary amount, for instance. If tomorrow the average amount of labor goes up or down, then that is the new amount of labor "socially necessary." There is no sense of logical or *a priori* or even social necessity in it; it is just a report of current conditions as to the amount of labor actually invested. The amount "socially necessary" is indistinguishable from the "social (or national) average."

Although any or all of these justifications of Marx's theory might have been envisioned by Marx, the initial view is by far the most plausible.

"Homogeneous" As Qualitatively Different

One subject that might be mentioned in passing is the transcendent or superior authority imputed to "homogeneous" labor, above that of labor of other rates of productivity. That is, it is only labor at this one particular, "uniform" rate that constitutes, or "forms the substance of," value. Other "labors," labor at other rates, only create value in proportion to this uniform rate, that is, to a degree corresponding to the ratio of their respective rates of productivity. "Homogeneous" labor forms the standard, and is the pre-eminent or valid form, of labor.

Yet there is no rational basis for imputing a difference of kind to labor of average productivity as against other labors; nor for making the average a standard which all labor is expected to meet. Average labor is just one value on a continuum, no different in kind from labor above it or below it. In fact, all the "labors" are added together on an equal basis in finding the average; all the labor "counts" toward making up the homogeneous mass from which the average is calculated. No qualitative distinction among the varying labors is made in finding the average. One could say the rates of labor higher than the average and those lower than the average are just as necessary and just as valid as labor of average productivity, for calculating the average; and which particular "labor" turns out to be the average is a matter of statistical accident.

Marx's qualification implies that labor of less than the average productivity somehow falls short of an objective, absolute standard, and thus fails to create value fully and properly; but that suggestion is untenable. As a practical matter, the average rate cannot serve as an absolute standard for measuring each laborer's work; nor as a theoretical matter is there any justification for it. For one thing, as a goal or a "standard," it is impossible to meet; it is in any case impossible for *every* laborer's efforts to either meet or exceed the average. Marx's preference for the average is an unjustified, arbitrary choice on his part.

For all the reasons discussed above, then, Marx's theory cannot be modified by the arbitrary stipulations he introduces. The entire thrust of Marx's text is to portray the average, which is a conceptual entity, as a concrete phenomenon found in the objective nature of the entities under discussion – as something observable in nature, rather than as an arbitrarily-chosen point on a continuum of equally valid quantities. The word "homogeneous," used in this manner, allows Marx to avoid use of the plainly conceptual term, "average." Marx implies that labor *actually* is homogeneous, not that he himself arbitrarily adds all labor together in a homogeneous mass; he writes as if describing spontaneouslyoccurring phenomena, rather than as if calculating a purely statistical quantity. He uses the deceptive term "uniform labor-power," falsely implying the existence of actual uniformity rather than the process of calculating average productivity.

Marx writes of homogeneous labor as "the labor" that counts as value; this seems to imply a type of labor, with a difference in kind, a qualitative difference from other "labors." In other words, it is a type or kind of labor, not a mere quantitative difference in the amount of labor contained.

Similarly, Marx writes that each individual unit "is" the same as any other - i.e., spontaneously, actually the same. He doesn't state clearly that we divide and find the average, and thus we *make* each unit the same as any other.

He says the labor-power "*counts* as one homogeneous mass"; and this may be seen as a partial admission that the assertion is somewhat arbitrary. (He doesn't simply say it "is" a homogeneous mass, after all.) But he seems to imply there is some substantive reason why it counts as a homogeneous mass – not that he just chooses to count it so in order to derive the average.

Everything Marx says in converting the concept of "average" to "homogeneous" seems aimed at presenting the arbitrary use of a statistical entity as instead the description of a substantive phenomenon, something found in the objective nature of the things themselves. This face which he puts on the "homogeneous" labor thus makes his qualification seem to be in accord with the objective, scientific nature of his labor theory itself.

The difference between value as "the amount of average (or homogeneous) labor," and value as "the average amount of labor" is this: in the former guise the average is dressed up as a substantive, objective phenomenon, whereas the latter formulation clearly speaks of a statistical entity. Marx implies a qualitative distinction which makes only "homogeneous" labor fit or capable of becoming value (for some unnamed reason). Thus in this scheme there is an objective justification for discounting the labor performed in an "idle and unskillful" manner, and accepting only a certain percentage of it, according to how well it measures up to "homogeneous" labor. Without such a justification, the whole amount of unskillful labor would have to "count" (we infer from Marx's theory) as value; and that would be contrary to the evidence of our own senses, or that is, our experience of economic realities. The fallacy of Marx's "homogeneous labor" is that in actuality there is a mere quantitative difference between average labor and labor at any other rate of productivity. Thus the use of homogeneous labor is a matter of mere arbitrary decree on Marx's part.

The difference in meaning implied by the two phrases can be illustrated in terms of a common usage in everyday speech. We often hear statements like, "The average person drinks six cups of coffee a week," or "The average family has 2 ¼ children." Such expressions don't actually posit the existence of such things as an "average person" or an "average family." They are just shortened forms of expression, elliptical references. "The average person drinks six cups of

coffee" is understood to mean, "The average amount of coffee drunk per week, per person, is six cups."

In other words, in using such expressions nobody conceives of the average as being calculated by identifying some quintessentially average person or average family, and then simply counting the cups of coffee or number of children for that person or family. If someone says, "The average big-league baseball player earns over \$500,000 a year," it doesn't mean he has looked in the reference books and found a player, all of whose statistics are average, to use in determining the "average player's" salary. You don't identify one given player who you decide is average, then find out what that player's salary is. That's not what is really meant by an average.

No one who uses such expressions envisions the existence of such a normsetting "average person" or "average player." The average in all such cases is found in the usual way, by adding up all the coffee (or children) and dividing by the number of people (or families); no one is so stupid as to suppose otherwise.

This common form of elliptical speech, however, has its analogy in Marx's concept of "homogeneous" labor. Value for him is not the average amount of labor (conceiving of averages in the normal way), but the amount of a particular kind of labor, a quintessentially typical labor, "homogeneous labor." Marx actually conceives of "homogeneous" labor as a real, substantive thing, different in kind from other "labors." His labor theory now says, "Value is the amount of average labor"; but unlike the normal person who speaks of the amount of coffee consumed by "the average person," Marx really believes there is such a thing as "average labor." He believes he can determine value by measuring the amount of a particular, standard, "homogeneous" kind of labor contained by the commodity. He conceives of the measuring of value as a process of finding this quintessentially typical or "uniform" labor and then determining what proportion of it is contained in the ordinary, actual labor embodied in the commodity. Marx at this point demonstrates gross scientific illiteracy.

The difference between value as the amount of average labor and value as the average amount of labor, is the difference between a supposed actual or concrete phenomenon called "homogeneous labor," and a conceptual, statistical entity called an average. Marx does literally mean to invoke "homogeneous" labor as an objective phenomenon. He invokes "homogeneous" labor as a concrete entity, and means literally that value is "the amount of average labor." "Homogeneous" labor is for him labor of a particular kind; there is a qualitative difference, not just a quantitative one. Labor is composed of units which must "have the character of" average labor. It is a matter of what kind of labor "counts," for some substantive reason in the nature of the different kinds of labor. It is not just a matter of stipulating an average or of making quantitative adjustments in what is defined as value; or at least it presents that appearance. Thus Marx's qualification, stating that only homogeneous labor constitutes value, has more scientific and objective-sounding overtones than the prosaic command, "For value, take the average."

Marx's qualification, then, is made to appear a part of the nature of things, imposed by the properties of the phenomena themselves, rather than a mere arbitrary stipulation or re-definition needed by Marx to protect his theory from the real world.

Labor Theory as Science

The reason Marx's qualification is presented in quasi-naturalistic guise is that only in such a form can it possibly merge with the basic core of Marx's labor theory in order to form a coherent whole. Marx has initially presented value itself as a physical property of commodities, and has presented his value theory as a naturalistic analysis, the discovery of an objective relationship between physical or naturalistic entities: as, actually, scientific law. This objective law cannot be "qualified" by the addition of arbitrary stipulations such as "Value is the average amount of labor." Arbitrary, statistical concepts cannot be parts of any scientific law purporting to describe objective reality. The respective natures of the two are inconsistent; they proceed from entirely different assumptions about the nature of the phenomena under consideration; they will not merge. Thus Marx had to present his qualification as objective fact, just like the initial theory.

In order to make this disparity plain, the supposed scientific nature of Marx's labor theory can be further elaborated on.

Value as a natural property

The first point to be made is that value, as Marx presents it, comes quite close to meeting the requirements for being a physical property of the commodity. Physical properties, or natural properties, like weight (or mass^{*}), volume, specific gravity and so on, are the subjects of concern in the natural sciences. Such properties have as their distinguishing characteristic the fact that they are precisely definable, objectively discernible, measurable properties of an

Mass is an actual physical property of the object itself; weight depends on the pull of gravity at a particular place, and thus might be considered a property of the object and its environment. It is determined by the mass of the object and other factors like the mass of the attracting body (the earth). An object weighs less on a high mountain, or on the moon, for example.

object in and of itself. Only properties which meet these requirements are subject to treatment by the natural sciences.

Natural properties are *precisely definable*; that is, one can tell exactly what does and does not fit into the category of a particular property. For example, color is a property of objects, but it is perhaps not definable precisely enough to be treatment by sciences; there are many shades of red, and it is hard to say at times whether a color is green, or blue, or blue-green, or what have you. On the other hand, frequency, meaning the frequency of the light reflected from the object (which is perceived as color), is a more scientifically-rigorous property than color, and it is treated by science as being closely related to color but more precise.

Physical properties must be *objective*, not subjective or perceptual. Again, color is somewhat in this category: an object reflects light of certain wavelengths, true; but color itself is a matter of perception. The subjective image or perception a person experiences from a particular wavelength is not open to investigation.

Another example is beauty: the shape or form or appearance of an object such as a painting is perhaps objective and describable, but the *beauty* of the object is more a matter of subjective opinion. The beauty may plausibly be said to be not a property of the object itself, but a function of people's perception of it. That is, the property "beauty," unlike the objective physical arrangement of the object, is not a part of the object, but is in the beholder's perception of it as aesthetically pleasing.

Physical properties are, above all, *quantifiable*, at least, in principle. The properties in which science is interested, and which it is equipped to deal with, are quantities of objective magnitude. Other characteristics may be as real and as important, but science is unable to discuss them – they do not adapt themselves to treatment by the scientific method. Thus properties like mass, volume, density, and so on can be discussed quantitatively. The taste of an apple, or the niceness of a person, or the moral worth of a society, cannot be quantified. They must be discussed and debated by other methods, using standards more humanistic than scientific.

(Actually, not every physical property is measurable at all times. Sub-atomic particles may be said to be something of a special case, but still the fact remains that, according to the Heisenberg "uncertainty principle," it is impossible to determine both the position and the velocity of a particle at the same time. One or the other can be determined, but the act of determining one disturbs the other, so only one at a time can be measured.)

By the terms of almost all of these criteria, value as described in Marx's labor theory is a physical property of goods. Value is represented as a common *substance*, found "in" all commodities – this indicating that Marx considers it a

property *of* the commodity, something found in the commodity, and not a matter of externalities like how the market treats the commodity.

Value consists in the fact that in commodities "there exists in equal quantities something common" to all commodities. That is, it is quantifiable; it exists in certain fixed amounts (determined directly by the amount of labor invested in the commodity).

He says that "the magnitude of the value of a commodity represents only the quantity of labor embodied in it," or "congealed" or "crystallised" in it – a sure indication he is referring to an internally-contained property. Moreover, he says "the bodies of commodities are combinations of two elements – matter and labor." That is clear indication that he means congealed labor is physically contained in the commodity.

In every way Marx portrays value as a physical property: it is a characteristic of the commodity in and of itself, a part of its physical makeup; it is definable and objectively quantifiable.

(It should be emphasized that Marx's view of value is diametrically opposed to the classical view in this respect, since he regards value as a physical property possessed by the commodity itself in a fixed amount, and not a matter of human market interactions with respect to the commodity.)

If there is one respect in which Marx's portrayal of value is not a picture of a physical property, it is this alone: value is not *directly* discernible in the commodity. That is, it can't be directly observed or measured within the object, as physical properties like mass, volume, and so on can. Value can only be measured beforehand, that is, while it is being embodied in the commodity. The labor exerted to produce the commodity is measured, i.e. timed, to determine the resulting value of the commodity.

That is, value is congealed labor, but it can't be perceived or measured in the commodity itself; the labor itself must be measured before it "congeals," i.e. while it is being performed. Only thus can one know how much value the object contains.

In all other respects value has exactly the nature of a physical property. (Thus Marx, for whom the great buzzword and all-encompassing principle was things "social," went in exactly the opposite direction here: value is not a social or market result, but rather a physical property.)

Marx's portrayal of value, in its essentials, is that of a physical property. This is true despite the fact that he explicitly rejects the possibility that value is a physical property. He says, "This common 'something' cannot be...any natural property of commodities." However, this would not be the only place where Marx said one thing explicitly, in so many words, and then said the direct opposite implicitly, in the gist and entire substance of everything else in his text.

Marx denies that value is a physical property, but he goes on to explain that it has all the *characteristics* of a physical property.

It is as if an one should say, "I see a bird, which is not a duck. It is a largebodied waterfowl with a bill and webbed feet; it is migratory, bottom-feeding, and it quacks, but it's not a duck." The explicit statement in the above is that the animal is not a duck. But the cumulative import of everything else the statement says is at odds with that; and one assertion or the other must be rejected.

This type of self-contradictory rhetoric may be illustrated by a recent newspaper article. Reporting on a statement made during a recent election campaign, the news story says,

Gov. Buddy Roemer said Thursday... that he cannot endorse longtime political foe Edwin Edwards.

But in an emotional speech, Roemer said he'll vote for Edwards in the Nov. 16 runoff – and urged his supporters to do the same.¹

The joke is this: the politician quoted said expressly that he couldn't endorse a certain candidate; but he seems to have done, implicitly, everything required by the definition of "endorse." Thus in very real fact, under the terms of the definition of the word, he did endorse the candidate. He only *professed* not to endorse the candidate; he succeeded only in rejecting the word "endorse."

Similarly, in Marx's exposition of his theory, he says value is not a physical property; yet he attributes to it all the characteristics of a physical property.

Certain possible explanations for this contradiction present themselves. Marx may have just wanted to inform his readers that value is not one of the *traditionally-recognized* properties of objects, which he adverts to as the "geometrical" and so on. That is, it is not one of those old, already-identified properties, but a new one he has just invented.

Or it may have been simply a matter of ignorance – he may actually not have understood what constitutes a physical property, and may not have recognized that he was describing value as one.

And of course there is the possibility that Marx never even meant to seriously consider whether value was a physical property or not; that he just wanted a quick pawn or straw man to set up and then knock over, as part of his "dialectical" path for showing value is really labor; and that he considered "physical property" to be a good choice for the role of straw man.

Most likely, though, Marx considered value to be a sort of halfway physical property. He may have considered it to be enough of a physical property to have all the right characteristics, from Marx's point of view – to be a mechanistic "substance" divorced form the marketplace and contained by the commodity

itself; but to be enough *not* a physical property that no one could expect Marx to tell how to measure it, and that no one would expect to discern it, objectively, in the commodity. Value is neither fish nor fowl, neither a physical property nor *not* a physical property, and as such it is perfectly adaptable to Marx's purposes. That's dialectics.

Labor theory as natural law

If value is a physical property, Marx's law of the determination of value is likewise an account of an objectively-existing quantitative relationship between value and other physical entities. In essence, his law is, "Exchange value is directly proportional to the amount of invested labor." (Actually, his law is that value is equal to the labor, but presumably labor and exchange value would be measured in different units; thus "is proportional to" may be a fairer statement.)

In fact, to go even further, his law is that value and the embodied labor are identical. That is, they are not only quantitatively equal; the value *is* the labor. Marx describes the physical process by which this occurs: labor "congeals" into value (much as steam condenses into water). Value is labor in a congealed or solidified or embodied state, so value must necessarily equal the labor: the two are identical.

This statement of identity, with the description of the physical "condensation" process, is a statement of an objective nature (whether true or false is another matter). It has the character of stating a uniform regularity, a relationship between physical phenomena which always holds true. It asserts an unfailing generalization about physical entities. In sum, it purports to be natural law.

We might also look at Marx's proof that value is labor – his argument, by process of elimination, showing labor to be the only possible candidate for the role of "common substance." Presumably, a logical proof, if valid, is conclusive. Marx's proof shows a relationship between naturalistic entities, and since the proof is (let us suppose) valid, the relationship is thereby established beyond question. Here again we see the eliciting of a scientific law – in this case a logically proven relationship between natural phenomena.

Marx's labor theory then – "Value equals labor" – is scientific law, as Marx portrays it. The process of creation of value, by the condensation or congelation of labor, has the same nature as other physical processes, for example literal condensation. To elaborate:

Labor becomes value *automatically*. It requires no choice or decision by human agents. Nor is it a mere matter of definition, of saying "Let us consider value to be equal to labor." Value and labor are physical, or at least objective,

quantities. Labor transmutes into value as part of the natural order of things, simply because labor congeals into value, and not by any human or social decision or intervention. Thus it is like condensation of steam into water – it occurs by itself and requires no human input or intervention to occur. (The creation of value does of course require human labor. But the *decision*, as it were, of whether this labor will constitute value, is out of human hands.)

The process also occurs *invariably*, in all cases. Like all natural processes, there is a natural regularity in it. Whenever the appropriate starting conditions are met, the process occurs. Scientific law is an expression of the regularity of the physical universe, a statement that an event, under the same conditions, occurs the same way each time. When the temperature of steam drops below a certain point, it condenses, without fail. When labor is performed, it embeds or embodies itself as value, presumably also without fail. Such is the nature of physical processes.

Moreover, this process occurs in a predictable and predetermined manner. Just as the amount of water you get when steam condenses depends on the starting amount (i.e., mass) of steam, so the amount of value embodied in a commodity depends on the amount of labor exerted in producing it. The result depends on objective, mechanistic and knowable factors, and is not human-defined or human-controlled: a certain amount of water comes from a given amount of steam, and a certain amount of value congeals from a given amount of labor.

(A side effect of this, mentioned before, is that value is for Marx something of an *a priori* category – when goods go to market, they have a certain fixed, preordained value already contained within them. Value is not a dynamic entity; it is not the result of bargaining in the marketplace, the clash of opposing interests in the bargaining process. Value is an *a priori* property, a substance contained by the commodity itself in a fixed magnitude. That is, once the production process is finished, the magnitude is fixed. Human factors do determine the amount of labor required to produce a commodity.)

Homogeneous, not average

Given this naturalistic foundation behind Marx's labor theory, and given its supposed status as science, value as "average" labor could never have fit in as a consistent part of the theory. Averages are human-derived, not natural. They are arbitrary choices, i.e., statistical descriptions of the natural events themselves; they could never serve as natural factors determining those events. Thus, the average appears in Marx's text in a sublimated or disguised form, as "homogeneous" labor. Homogeneous labor is presented as somehow objective, found in nature, as a category brought into being by the substantive nature of the phenomena themselves. He does not show it to be, like an average, arbitrary, human-defined and a matter of human decision or choice.

We will, however, consider "homogeneous" labor not for what Marx claims it to be, but for its actual nature as revealed by his text as a whole: as an average. The problem for Marx is that a quantity cannot simultaneously be an average and at the same time have the character of an objective physical principle – it cannot have the dual nature Marx seeks to impute to his homogeneous labor. Labor embodies itself in goods in a physical process of congelation or condensation; well and good. But how then can the resulting value be not the labor actually invested in that particular object, but some social average? How can a physical process at the same time be an arbitrarily-defined category?

Physical processes work on the physical objects actually present. If steam condenses into water, it is the steam *actually present* which condenses; and the amount of water which results is entirely determined by the starting amount of the actual steam. The steam doesn't condense into a "socially average" amount of water.

Or to put it another way, if a dog buries a bone in a hole, then digs it back up, the bone he retrieves is the same one he buried, not some "socially average" bone. (In this respect, dogs could be said to have a better instinctive grasp of physics than Marx did.) When you churn cream, the amount of butter you get depends on the amount of cream and its particular composition; it would be senseless to expect that the amount of butter yielded be determined by a "social average" of the amount of butter yielded using the best kinds, the most state-ofthe-art kinds, of cream generally available. You can't say, "The average household uses only a half-pound of butter per week, therefore it is 'socially necessary' to produce only that amount, therefore the yield from what you just churned equals half a pound of butter." Physical processes of this sort simply obey certain commonsense rules (so elementary that they don't often need to be stated), such as that a thing is itself and not something else.

Marx's idea that labor embodies itself as value, but as a "social average" of the amount of labor, is scientifically incoherent; it envisions an Alice-in-Wonderland world, chaotic and lacking in a basic natural order.

To repeat: if labor embodies itself in commodities, then what is embodied must be the actual labor exerted, and not some other arbitrarily-chosen amount of labor. There is no rational basis for supposing that the average amount of labor invested in a commodity could play a part in Marx's quasi-physical system. There is no objective, real-world means by which an average could embody itself as value.

This is not because averages are intrinsically an illegitimate concept in natural sciences. For example, if we had some sort of law saying, "The amount

of growth a plant undergoes depends on the amount of rainfall it gets," we might be justified in saying that by amount, we mean the *average* rainfall received over a period of time – that that is what matters. However, this example is different from what Marx is doing. What really makes Marx's "social average" an invalid category is that it is an average of quantities entirely unconnected to the entity under consideration.

That is, in the case of plant growth, the "average rainfall" means the average falling on the plant we're concerned with; the average amount of rain falling on *this* plant determines *this* plant's growth.

By contrast, a social average of labor is, as Marx describes it, an average of all the labor done on items similar to the one under consideration, even though they may be physically removed from it in every way. In Marx's theory, the labor required to produce the commodity, both at this particular factory and at all others, is averaged to determine the value of the output of *this* factory (and all others). But this kind of social averaging cannot apply to a process like "condensation." Marx is positing a physical process whose outcome is affected by events and objects totally unconnected to it and never directly impinging on it in a physical manner. There is no naturalistic or scientific relationship which functions like that; there is no way a "social average" of some property could embody itself physically within a commodity.

An average, then, insofar as it is an average figured over an entire set of unconnected individuals, cannot govern or determine physical processes and physical properties pertaining to each of the particular individuals.

To expand the previous example, we might say that the height a tree (of a particular species) reaches, over a given number of years, depends on the aggregate of such conditions as soil nutrients, rainfall, temperature, sunlight, and so on; this might be posed so as to give a roughly valid scientific law. Just as Marx says the amount of labor determines value, we could say these enumerated conditions determine the height of a tree.

But it would be arrant nonsense to say that the height of a particular tree is determined by the "social average" of these conditions, figured on a social or nationwide basis. The height of a particular tree is determined by the physical conditions that impinge on it, and those conditions alone. An average of such conditions, including in the average regions far removed from the particular tree in question, cannot affect this tree's growth. Such arbitrary stipulations cannot truly represent the behavior of genuine natural phenomena.

It's like saying, "E=mc², except on Thursdays." "Thursday" is a man-made, human-defined concept; Thursdays don't exist in nature. The day of the week could never actually serve a function in any genuine law of physics; it is too arbitrary, too much a matter of definition, too non-naturalistic. And Marx's qualification contains the same kind of self-contradiction. It attempts to interrelate two principles which inhabit different realms, which are on different levels of existence, and which have no way of impinging on or affecting each other. The two can never combine to make a coherent whole.

What this means is that there is no way a "social average" of the amount of labor can embody itself in a particular commodity. If the creation of value is, as Marx portrays it, a naturalistic, mechanistic, self-governing process like other purely physical processes, then it is incoherent to suggest that a "social average" is the determining quantity. The average is a figure not present, not known, not a factor accessible to the labor and the commodity in a particular workplace. If the process is of a mechanistic nature, as Marx describes it, then what embodies itself in the commodity must be the labor which is actually "there" to be embodied, namely the labor actually performed on the commodity. The rule must be, "From the laborer's hand, to the commodity – and that is value." Measure the amount of labor actually performed, with no intermediary and no conversion factor between the worker and the commodity, and you will know how much labor has "congealed."

Marx's profound illiteracy in the realm of science is hard to reconcile with his claim to have put socialism on a scientific basis; but we can partially understand how he could make the claim by looking again at his notions of the basic content of science. For him, science meant not the modern scientific method, an established discipline with proven methods and results, but rather "dialectics and the laws of logic" – that is, Marxist theory. Briefly put, science for Marx meant, "whatever I put down on the page." Surely no one today could accept that definition; to do so would be simply to abandon oneself to Marx's authoritative decrees. Followers of mass movements and acolytes of political ideologues may do that, but not scientists.

While Marx portrays his qualification as required by something substantive in the phenomena themselves, i.e., as a statement of objective reality, it actually comes as a mere pronouncement or decree. Marx simply declares, "The labor...that forms the substance of value is homogeneous human labor," without actual evidence or justification of any kind. It is a decree *ex cathedra*, and as such perhaps carries credence for those who are unable to distinguish between asserting a thesis and proving it, that is, only for the gullible and scientifically naive.

True, after his initial pronouncement Marx goes on to add supporting details; but these details only show that an average can be calculated, and that Marx can describe the process of calculation in cryptic or Aesopean^{*} language. It does not

^{* &}quot;Aesopean" is a term used by Lenin and others, referring to code-terminology: as in a fable, a thing is simply given another name. Another term for this is "Orwellian" language.

alter the fact that the "social average" cannot with logical consistency be grafted onto Marx's quasi-physical process, in the conversion of labor into materialized value. The qualification is something he tacks on simply because he wants it and needs it, something he imposes on the theory by authoritative decree, without logical consistency and without justification from the real world.

As for the concept of the labor socially "necessary," this too is an Aesopean term, merely restating the qualification as Marx has already outlined it – value is a "social average," and whatever that average is, is the "necessary" amount. It is tautological or vacant term, not a basis for the qualification it renames.

The real basis and justification for Marx's qualification, then, is this: Marx needs it to save his theory from blatant refutation by market events. His theory in its original form would attribute a higher value, a higher congealed labor, to goods produced by "idle and unskillful" (that is, slow) labor, than to goods produced in a smaller amount of labor-time. But the market obviously does not validate this conclusion, and thus, Marx's hypothesis is disprove by direct observation of the behavior of phenomena under discussion.

To forestall this refutation of his theory Marx had to resort to an added "fudge factor"^{*} to save his theory, namely the qualification under consideration. He needed the qualification in order to make his theory work – that is its only justification.

A Word on Methodology

It should be obvious that, except at widely scattered points included for the sake of appearances, Marx's text is not a description of the actual workings of economic matters, or an analysis based on direct observations of an economy's actual behavior. His "scientific" method is something else entirely. He writes as one who is constructing a self-contained logical system, in which he is free to define the rules himself. His system is not a description of the workings of the real world, but a hypothetical, speculative exercise, the creation of a logically self-consistent schema.

Marx begins with certain axioms or assumptions, such as the "pre-Aristotelian" notion of exchange value, which views it as a manifestation of a universal, inner "substance" in goods. He adds definitions and theorems to this axiom, and he elaborates by extensions of logic and by adopting ever more arbitrary assumptions. As the system progresses, each later point is proven by

^{*} A "fudge factor," sometimes also called the "finagling factor," is a facetious entity present in laboratory sciences; it is defined as "that quantity which must be added to, subtracted from, multiplied by, or divided into the result you actually got, in order to yield the result you should have gotten."

reference to previous "theorems," or by inventing new axioms as needed. Thus a network of axioms, definitions, theorems, and derived rules (such as the law for determining value) is built up. Marx's method is thus not empirical or descriptive, not based on discovering how the world actually works. It is hypothetical and purely theoretical, logical* rather than empirical, and prescriptive rather than descriptive. He invents a logical schema and by brute force, as it were, decrees that it is valid and that it describes the real world. Thus he issues such dogmatic pronouncements as, "The labor that forms the substance of value, however, is...," etc.

Marx is actually constructing a formal system ("formal" as opposed to "actual"; it is based on rules only, and devoid of any factual content). The process is much like inventing a branch of mathematics: he adopts certain axioms and definitions as a departure point; then he applies deductive logic to these beginning elements to derive conclusions, or theorems, from them. Each theorem is proved by applying mathematical rules and logic to what has gone before. Marx's theory, like a branch of mathematics, is self-referring; it is a closed logical system, having reference only to itself. It is in no sense a description of how the real world works; only the terms used are like real-world economic terms, to deceive the unwary.

It might be thought that if Marx's theory is like mathematics, it should be all the more reliable; but there is a problem with writing a social theory which purports to be as accurate as mathematics. It is evident that mathematics, though based on formal systems, does of course has a bearing on the real world. This is because the axioms and basic definitions of mathematics are chosen so as to parallel situations in the real world. This being so, the results produced by the system, for example solutions to problems in algebra or geometry, can be assumed to have a corresponding validity in real-world circumstances. But in and of themselves, the axioms, theorems and other elements of a branch of mathematics refer only to themselves; they have validity first as a closed, purely theoretical or formal system, and then by analogy to the real world. Standing alone, they need no verification from the outside world, nor lend any to it.

Thus we can apply what we know about trigonometry, such as laws of similar triangles, to surveying, and to calculating lengths and distances in other situations. But what the mathematical laws apply to is pure numbers, not feet or acres. We can use the mathematics by analogy, and because the foundation axioms and definitions of the mathematical field were previously chosen in such a way as to correspond to a physical reality.

[&]quot;Logical" here meaning based on argumentation or syllogistic reasoning – perhaps "dialectical" would be a better term. The word is not used to imply "sensible" or "reasonable."

That is, if mathematics says a straight line is the shortest distance between two points (an axiom) and that a + b = b + a, these mathematical axioms were chosen so because we want to reflect certain real-world circumstances. From this arises the applicability of mathematics.

(Some branches of mathematics were invented as "pure math," without any real-world parallels in mind. For instance, Boolean algebra, the field dealing only with the elements 1 and 0 and with logical operations on them, was invented before the invention of computers gave the field its special relevance of today. The "inventor," George Boole, in fact remarked that he was proud to have devised a completely useless branch of mathematics! Boolean algebra when invented could be performed as an exercise in formal logic or in the rules selfreferring mathematical system. Only later on did it become apparent that Boolean algebra did in fact have great relevance for a certain class of real-world situations.)

Marx's theory too is a self-referring system, but his is not designed to correspond to any real-world situation. His is designed to prove certain preconceived points of his own, and to hang together coherently enough to be convincing and to serve as a substitute for a description of how the world really works in the realm under consideration. That realm or subject, the economic realm, is not however an appropriate ground for the invention of a logical schema. What we are looking for is not an analytical, abstract approach, but factbased answers about the behavior of the phenomena involved. We might say economics is more like physics than like mathematics; it concerns real-world phenomena and is a field where the primary task is the discovery of the facts.

Marx should have given us the facts, proceeding from thorough observation, with added analytical insight into what is observed. Instead, he creates a world from scratch, and tries to foist off this arbitrarily-invented system on us as the real world. He gives us a sort of "calculus of economics," a system of axioms, definitions and theorems, with further pronouncements and tendentious logic added as he proceeds. His calculus takes absolutely no account of how real-world economics works, but is an arbitrarily-contrived product of his own imagination, designed to authenticate his own biases. His qualification, "For value, take the average," is just one arbitrary decree among many he emits as he proceeds, inventing a world to his own specifications.

Two Alternatives

The net result is that Marx's theory in its original form cannot be merged coherently with the qualification proposed for it. The two are mutually inconsistent in their assumptions about the nature of value. A law or hypothesis
about the workings of the natural universe cannot be arbitrarily adjusted with artificial, man-made stipulations. There are no such laws as " $E = mc^2$, except on Thursdays." To quote Marx, "Such a self-destructive contradiction cannot be in any way even enunciated or formulated as a law."

The basic law and the qualification are mutually inconsistent, and one or the other must be discarded. If the theory is to be considered what Marx says it is, a scientific statement about the objective nature of things, then the qualification, an arbitrary stipulation, must be dropped. The theory must remain alone in its original form; labor must constitute value by a direct and immediate physical process, with no modification of it on the basis of distant events, as the qualification envisions. The value must be the labor actually performed on the commodity, as indeed Marx has already "proved" it to be in his entire dissertation about the "common something."

If on the other hand Marx wants to retain his qualification along with his theory, he can do it. However, there must be a revision in our view of the basis and fundamental nature of the theory. That is, the theory can be adapted and qualified, but in that case we must cease to consider it a statement of natural law. It cannot be a scientific description of objective fact, an impersonal rendering of the way physical nature works in and of itself. If the theory can be modified by arbitrary stipulation, then the theory must have been arbitrary to begin with, and not a representation of physical reality. The supposed basis and justification on which Marx advances the theory must be discarded, including his proof and his description of value-creation as a physical process of "congelation." Marx's results can be adopted whole, but as an arbitrary definition, or as a tentative hypothesis (or guess), or perhaps as a dogmatic decree *ex cathedra*. But if Marx's theory is the kind of thing subject to arbitrary modification, the justification originally presented, one of scientific basis in objective fact, must be dismissed as groundless.

First Alternative

The problem with the first of the above-named options, the purely physical view, is just the sort of example Marx himself advances. If labor directly constitutes value by means of an automatic, impersonal process, then certain results are implied. The more labor is invested, the more labor congeals, and thus the more is the product's value. The longer it takes workers to produce the product, for whatever reason, the more valuable it is. There can be no question of averaging the labor – what goes into the commodity is the labor actually done on it.

This result, a prediction implied by Marx's theory, is refuted by the real world. The mere fact that workers take a long time to produce a particular commodity, whether because they are poorly trained, less dexterous, or "idle and unskillful," does not guarantee a higher market value for it, i.e., a higher price. People do not pay more just for the pleasure of owning more congealed labor, or as a reward for the virtue of the laborer's efforts. In the real economic world, the dynamics and the motivations involved are different. (But Marx is not discussing motivations or an economics of people; he is constructing an automatistic system of quasi-physical entities, without the need for human intermediaries.)

Besides the issue of "idle and unskillful" labor, or of differences in speed among laborers, there is another situation which might be pertinent to this qualification. That is the existence of minor fluctuations in the amount of labor embodied in goods by the same laborers from one moment to the next. Take the case of a factory worker performing a particular task on each of a series of items coming down an assembly line: each of the items will take a slightly different amount of time to complete. One item may be positioned improperly on the line, or the worker's attention may stray for a moment, or there may be simply the human variations in how efficiently and dexterously the worker handles successive items. For a multitude of reasons the items may represent or "embody" varying amount of labor. In most cases the difference will be minor, but once in a while it will be significant. This is a natural and inevitable reality concerning anything produced by humans.

According to Marx's basic theory, all these slight fluctuations should also show up in variations in the value of the goods. (Marx himself does not raise this issue, but it is implied by his theory.) There should be a few cents' difference in the price of each of the items produced by that worker and sent to market, i.e., a difference in the "phenomenal form" of value, corresponding to a difference in the inner, transcendent "Value."

Of course this expected result of Marx's theory fails to be borne out by the market. All of the essentially identical items produced are priced the same. And it is not because value is average or "homogeneous" labor; it is because of more down-to-earth considerations, namely, that there is no rational reason why the seller should try to make a distinction in the price of identical articles, and there is no reason why buyers would go along with such a practice.

Actually, the problems introduced by Marx's theory never arise in the world of real-life markets, and hence pose no problem to it. Merchants price a group of essentially identical items alike because it makes more sense that way; there is no basis for making a distinction in price. Pricing is (to an extent) at their discretion. They are not bound by some formulaic system which automatically, by the workings of abstract logic, compels the value of a product to be some predetermined amount. There are no such automatistic laws in reality, and thus the capitalist need take no pains to evade them. He knows his costs, he adds a desired profit, and he offers the goods for sale. Rather than his price being coerced by a preordained formula, it is understandable only in terms of the dynamic interplay of his actions and the responding actions of buyers in the market place.

It is Marx's attempt to produce a scientized economics, to exaggerate the degree of rigor, precision and infallibility attainable in his theory by portraying it as a natural science, primarily by removing the human element wherever possible, that introduces absurd results and drives Marx to such expediencies as the present one. In an attempt to be more exact and certain than the facts or the nature of the subject justify, Marx removes the capricious and unpredictable human element. The resulting economics is a pseudo-physics, a realm of iron laws subject to Marx's invention.

Thus it is the (literally) mindless, automatistic, scientistic, or formulaic approach of Marx's that must be dismissed, more than any of his particular laws or deductions. It is his whole approach that is at fault, the whole set of terms and questions by which he approaches the subject, not so much the answer he produces to any one question. His very methodology, his entire approach to science is illiterate; his understanding of the nature of the subject of economics itself is fundamentally distorted. Any results derived from such half-baked methods are bound to be the "poisoned fruit" of an unwholesome tree.

Classical Explanation

We have looked at Marx's qualification explaining why the value of goods is not a straightforward function of actual labor-time. We may now look at the classical view and what it says about things like the exchange value of goods produced by excessive amounts of labor, i.e. by "idle and unskillful" workers.

In the first place, in classical theory there is no naturalistic law of value, and exchange value and labor are not conceived of as physical quantities related by an impersonal mechanism. Economics is not reduced to pseudo-physics, in other words. Thus classical theory is not in the position of having to explain the shortcomings of an iron "law of determination of value."

Having said that, we can consider what classical theory does say. It agrees with Marx's labor theory this far: the amount of labor invested in the production of an item does affect labor costs. Workers are usually paid by the hour, and thus the higher the total hours of labor exerted, the higher the total labor costs. If the rate of productivity is low, the labor costs per unit will be correspondingly higher, in which case the price must also be higher. At this point however classical theory diverges from Marx's labor theory. Labor does not

automatistically and by a physical process of condensation transform itself directly into the commodity's quantum of value, with no required further input or intermediation by people, i.e. by market forces. It is not a physical transformation that determines the amount of value; it is the whole complex of economic considerations and human decisions.

For the capitalist the key constraint is labor *costs*. He must recover his production expenses in the sale of the finished product, and for that reason labor is one factor determining value. It will be seen that there is a rational and coherent line of cause and effect in this explanation. The line of cause and effect connecting labor to value proceeds via the mechanism of labor *costs* (rather than, as in Marx, labor's spontaneously constituting value in its own right). It is the economic constraints on the entrepreneur, rather than a spontaneous process of transmutation, which explains why labor affects exchange value. The capitalist's concern (again, understandable to anyone who has ever dealt in the economic realm) is to make income exceed outgo. The amount of labor-time per unit is significant, but it is so because each unit of time is paid for at a certain price, adding up to certain labor *costs*. That makes the labor time (partly) determine value, or at least the price asked.

This rational line of cause and effect is in marked contrast to Marx's convoluted labor theory, which offers only a proof and never an explanation in real-world terms. He never shows why his labor theory is what is at work in the real world, and how labor itself, as a concretized or reified entity, can exert direct control over market value. He doesn't supply any explanation leading to an intuitive understanding of the real world or a description which we can conceive of as plausibly occurring in reality. He offers a proof, to compel us to believe his theory, not an explanation to enable us to understand it. The picture he does supply, his elaborate line of hocus-pocus about "congelation" and so forth, acts in quite the contrary manner to giving an understanding – it is nothing that could actually occur in the real world, and it thus tends to discredit his theory, rather than to illustrate it.

In short, Marx's labor theory lacks any coherent line of cause and effect and is a work of sophistry. Thus for a rational explanation we turn to classical theory, with a cause-and-effect explanation couched in terms of human economic behavior; because after all it is people who are the source of economic actions – "Economics is something people do."

In this context, let us consider the capitalist who has an aging facility or a work force "idle and unskillful" for some other reason. The capitalist is trying to recoup his labor costs in the sale price of the product. But while the labor costs help determine what he must ask for the product, they don't automatically guarantee that he'll get it. (Unlike in Marx's theory, labor doesn't simply determine "value," automatically and deterministically, all by itself.) For one thing, besides himself there are likely to be other producers of the same product. If these producers' workforces are not "idle and unskillful," they are likely to be offering the product at lower prices than his. Thus there are numerous varied factors impinging on him (and not just one factor, as in the reductionist situation Marx envisions, where labor alone "condenses" into value). It is not always possible to sell a product at a higher price just because the workforce is "idle and unskillful" and the amount of time embodied in producing the commodity is high. In such a situation the capitalist may resort to expedients to cut costs; he may resign himself to a much smaller profit, if he can make any at all; he may try to replace his workforce; or he may be driven out of business. But there is not the fatalistic assumption which is implicit in Marx, that value as pre-determined by some mechanistic law or formula can automatically, by presumption, be received for the commodity as its price or exchange value. There is not the assumption that the buyer is forced by fate of by force or logic to pay the amount determined by an *a priori* formula.

The real reason excessive amounts of labor do not show up in correspondingly high selling prices, then, is that economic exigencies are at work, rather than the automatistic theory Marx envisions. Market forces, or human economic behavior, have a say; and these forces work to prohibit inordinately high prices. Competition usually makes it impossible to sell goods at a higher price when essentially identical goods are available at a lower price. That is the human-oriented or real-world answer to the problem (if any) posed by Marx in discussing this qualification.

The question of small variations in value due to small, moment-to-moment fluctuations in the time spent on each item by the worker, does not even arise in classical economics, that is to say, in the real world. *Of course* the capitalist prices all the units alike. He has no basis or motivation for pricing them differently, and since they are all essentially identical, the buyers would resist paying different prices. It is only Marx's mechanistic theory of labor and its metamorphosis into value that would suggest otherwise. Classical theory has no resemblance to his theory, and hence no need to explain away his theory's more peculiar logical implications. Common sense and a down-to-earth understanding of how the economic marketplace behaves are much more applicable, and are sufficient to dismiss such situations as the one referred to above.

Second Alternative

Marx's theory in its original form, then, is inadequate. The second alternative, to accept his theory and the qualification but without the mechanistic picture underlying it, is no more successful.

To recapitulate: if we accept both the base theory and the qualification, we must give up the underlying picture of value as a quasi-physical property, a "common something" found in all commodities. We must give up the picture of the metamorphosis or "congelation" of labor directly into value. For if that picture were correct, what is "in" the commodity would have to be exactly and only the labor physically performed on it; there could be no question of a "social average."

We consider then the theory with its qualification, but without the underlying elucidating picture or rationale. That means we discard Marx's proof, picture, or definition which compelled us to believe his theory in the first place. We disregard his identification of the search for an explanation of value with a search for a "common something." We discard the process of elimination which he reasons becomes irrelevant, and we are no longer compelled by sheer force of logic to accept his labor theory as valid.

Having discarded Marx's picture of the creation of value, along with the proof which forced us to accept his theory, we are then left with just the bald assertion, "Value is always proportional to the average amount of labor exerted in producing a commodity." This may be looked upon as a hypothesis, or a revelation, or a bold guess. It can now be evaluated in the light of observations of real-world markets; it can be held up against reality to see if the two coincide. We are not forced to a predetermined assent by sheer force of logic.

When we compare Marx's proposed law, "Value is in direct proportion to the nation-wide (or *social*) average amount of labor invested," to real market phenomena, we see that his law fails. His hypothesis is not borne out by reality; it is in fact refuted by reality: market prices show that labor alone doesn't determine value. (Marx, however, devotes a great amount of effort to inventing sophistries and intricate rationalizations for removing real-world obstacles to his theory, more or less on the principle that "My theory is correct; it is the facts that are mistaken." A great deal of the remainder of his text will be taken up with such.)

It is not true that the exchange value of a commodity is always directly proportional to the average amount of labor expended in producing it. (Exchange value, not Marx's transcendent or internal "Value" will be considered here, because that is the real-world meaning of the term. Exchange value, or price, is what we must look at; Marx's hidden, private entity, "Value," does not actually exist.) That's *close*, of course: labor costs are a major factor in determining what price must be asked for a commodity; they make up a large component of production costs. Another component of production costs would be rents, that is, the cost of renting or leasing or otherwise acquiring the land for the productive facility. These two, along with a desired amount of profit, are the component

elements of price. The price received goes to recompense all three of these factors; it goes to pay off all three contributors to the production process, not just one. Labor is not the only factor in the production process, and labor costs alone do not determine the asking price. (Note: the supply-and-demand view is now out of date; using modern analysis, the "marginal utility" of an item is considered a more fundamental determiner of price, or of what a buyer will pay for an item.)

The market refutes Marx's theory, in that for one thing, some products fail. That is, the three factors, labor plus rents plus a desired profit, may be added together by the capitalist to arrive at an asking price; but that is no guarantee the price will be met. The mere existence of a formula or deduced law does not (as Marx assumes) fatalistically guarantee that the market price will meet that formula. Potential customers too have a say in the entire process. Marx assumes that "Logic can compel the facts," that his deductive arguments and derived laws are conclusive: they say what value must be, and the real world – meaning market prices – necessarily fall in line. That is superstition, and market results aren't in keeping with it.

To return to the classical view, labor, rents and profits are the three factors covered by price – that is, covered assuming a successful product. But the formula itself is not to be conceived of as somehow compelling the market. "Consumer resistance" to the product may prevent the capitalist from receiving his desired price. What really controls prices is not some formula or even the conceptual division of price into its component factors. What really controls it is the customers' acquiescence in paying a certain amount, together with the sellers' willingness and ability to produce the product (profitably) at that price. That means it is supply and demand, the intersection or "dialectical" interaction of the will of buyers and sellers, that establishes market price. Marx's proposed law of value, in any form, is wrong in its entire conception and set of assumptions; it is a gross misappreciation of the workings of economics at their most basic level; and quantitatively it is inaccurate. His law is wrong, as the real world shows; and only mysticism, wishful thinking, obstinacy and extreme scientific ignorance enabled him so self-confidently to maintain his assertions. In this he fit in with the facetious maxim, "If you can keep your head while all around you others are losing theirs, you probably just don't understand the seriousness of the situation."

The determination of value is never over until the public – the entire population of potential buyers – has had its say. That is how economics works in the real world, as opposed to Marx's closed system of metaphysics.

It might be worthwhile to refer again to the previously-cited example of the production of the 1903 Model A Ford:

James Couzens had worked out the sums precisely. The basic machinery from the Dodge brothers would cost \$250.

Body, wheels, and other parts came to an additional \$134. Labor costs totaled \$20, and he set aside \$150 for selling costs, to include advertising, salaries, and commissions. This added up to a total expenditure of \$554, and the car would be offered for sale at \$750, leaving a margin of \$196 per unit. Deduct \$46 for contingencies, and that left a clear profit of \$150 per car.²

The author also records the result: "By the end of March 1904, the Ford Motor Company had sold 658 automobiles with a margin over expenses of 98,851 - a profit per car of 150, as James Couzens had calculated."

The point of the above, for our purposes, is that it shows how the final selling price goes to recompense the costs of production, including profit. But market value is not set in a deterministic manner; it depends ultimately on being able to sell the product at the required, profitable price.

The example, again, shows how economics really works. There is no direct transmutation of labor into a mechanically-set value, tying the producers' and the buyers' hands and inexorably fixing value by an impersonal, immutable process. Human and economic factors determine value.

Of course, it should be added, for Marx there was not 98,851 of "profit" in the Ford automobile. Rather, that amount of "surplus value" was squeezed out of the laborers who produced the cars. Profit, as an excess of selling price over the sum of production costs, is impossible – that is the import of his Yahoo economics. Let us address that supposition here, preliminarily, by saying that it was not from the non-existent wealth of its laborers that the Ford company squeezed 98,851, but rather from the purchasers of the cars.

Labor theory as a definition

So far we have examined Marx's labor theory and qualification in light of the physical process he envisions, that is, the process of labor congealing into value. This is one viewpoint of his theory, or one authority on which his theory rests; but there are others. He presents his theory in terms of a proof, a physical picture or paradigm, and an act of definition. It can be seen as any of these, and Marx uses each in turn to justify and authenticate his theory.

By way of review: his proof begins with the "pre-Aristotelian" assumption that there is a single common property in all commodities, a "common something" that determines the amount of their respective exchange values. From this reification of exchange value Marx proceeds to the search for the identity of the "common something" which, by a somewhat glib process of elimination, he determines can only be labor. His physical picture is an adjunct of the proof; it conceives of labor as congealing, condensing, or otherwise transmuting itself into a physical property of the commodity. A finished product thus contains a certain fixed value in and of itself – markets and human choices cannot affect or determine the amount of this interior, transcendent "Value." From within the commodity, this transcendent Value exerts its influence on its "phenomenal form," or real-world observable form, exchange value.

Alternatively, in contrast to his advancing of a proof and a picture, Marx presents his labor theory simply as a definition. Value is defined as the amount of congealed labor, a definition which yields the same result as that derived from the proof, but this time by a sheer act of will. Marx's theory is thus a mish-mash of justifications and authorities; if the reader doesn't like one he may choose another. At any rate, "Value as defined above," for him, is the internally-contained, congealed labor.

If we look at his theory strictly as a definition, then, he may be justified in adding the qualification to it: presumably, if he can choose to define value one way, he can just as easily choose to modify the definition.

What can we say then about Marx's labor theory and qualification, when viewed strictly as a definition of value? First of all, as stated before, the word "value" already has a meaning and is not subject to redefinition. If we wish to maintain a coherent economic discussion the word "value" cannot be redefined. Value, in its economic sense, is exchange value – it is nearly synonymous with price. We want to know why things cost what they do on the open market; why a bushel of wheat is worth two bushels of barley, and so on. The subject of how the "value" of commodities is determined is the subject of why the commodities sell for the prices they do on the open market.

The question then is whether by brute force, or bullying rhetoric, or sophistical logic, that question can be reduced to the question of how much "social, homogeneous" labor is embodied in each commodity.

Merely to redefine the word "value" does not answer the relevant questions; it only changes the subject. The question of what determines the magnitude of Marx's pet concept, value as congealed labor, does not interest us. No one is interested in *that* "value." As the lawyers say, that answer is unresponsive to the question. And his redefinition introduces a semantic confusion – he can proceed to expound on that "value" at length, and the unwary reader will forget or fail to notice that his "value" has absolutely nothing to do with the real, market value that interests us. His text becomes a phantom discussion of a non-existent entity.

By using the word "value" to refer to his own invented concept, i.e. by defining by brute strength value to mean what he wants it to mean, Marx gets the best of both worlds. He is able to carry along the connotations of the genuine

word "value" that give it real-world economic significance, while analyzing "value" only under the terms of his own contrived definition.

In cases like this, as Alice said, the question is whether you can make a word mean whatever you want it to. And in the spirit of Humpty Dumpty, Marx considers that the real question is only, Who shall be master. This method resolves nothing, and only introduces confusion into the discussion.

Another aspect of Marx's redefinition of the word "value" might be called the quantitative one. There is not only a word's meaning involved here; there is also a magnitude. Marx's inner, ethereal "Value" has an outward "phenomenal" correlate, exchange value. Exchange value has an objective magnitude; so how can Marx, by an act of definition, compel this observable magnitude to equal the embodied labor? Or on the other hand how can he assume that exchange value will adjust itself automatically to equal his defined inner value?

This is not only a defining of words by brute strength, it is a defining of objective magnitudes; it is as if one should decide to "define" the distance from the earth to the sun as 50,000 miles. Such quantities are already determined; they are not subject to definition. Market price is determined by objective factors; it would be as sensible to "define" the outcome of next Thursday's baseball game as to define market prices. To repeat: such things are not subject to definition.

There is something superstitious, something of the witch doctor in this. Marx defines value arbitrarily, and yet he assumes that somehow this arbitrary concept or definition always equals an objectively-determined quantity, exchange value. How is that possible?

Perhaps Marx thought his definition to be the controlling factor, that market prices conformed themselves to his definition. What then governed prices before he wrote his definition? And anyway, it is foolish to think buyers and sellers pay any attention to his theories. No mechanism can be posited by which price could conform to his definition.

Or perhaps Marx observed that prices always seemed to conform themselves to the amount of labor invested in producing the product, and for that very reason he defined value as he did. In that case it is not really a definition, it is a hypothesis as to the objective factors that determine exchange value. (In any event, we know that exchange value is not determined solely by labor costs.)

Or perhaps Marx defined value expecting that purely by coincidence exchange value would always agree with his definition; or that it would do so for some unknown reason which he was unable to devine. But this too is just superstition. Exchange value is governed by more or less objective, real factors and considerations. It can't be expected always to coincidentally equal an arbitrarily-defined quantity. Even if exchange value were random and capricious, not governed by any objective factors at all, it would be too much to expect that this random entity would always equal some other defined magnitude sheerly by coincidence. And if there is some objective correlating factor, Marx should state it and advance the objective law governing value, not resort to definitions imposed by brute strength.

When Marx says, then, "Therefore, the common substance that manifests itself in the exchange value of commodities... is their value," he is introducing an impostor. "Value," in normal speech, means exchange value. His redefinition of the concept and envisioning of some abstruse pre-determining process is simply hallucination.

As stated above, an objective quantity cannot be arbitrarily *defined* equal to a certain magnitude; it is not subject to the will of some writer putting words on a page. Marx's adoption of such practices might be considered a superstitious or mystical approach to science: the objective world is seen magically subject to the incantations of the author. Or it might be considered a throwback to the methods of the medieval Scholastics, with logical deductions and various argumentations accepted as conclusive. Either way, Marx's "definition" of value, requiring it to attain a certain magnitude, is scientifically illiterate.

The "Dialectical" Conception of Value

Besides considering Marx's theory about the determining of the magnitude of value, we should also examine his concept of the essential nature of value itself as a category or entity. His view of it is fundamentally, metaphysically different from the normal or classical view.

Marx's theory treats value as a fatalistic or pre-determined quantity, a deterministic property of the commodity. The commodity possesses a certain fixed amount of value (congealed labor) as a part of its physical makeup. It goes to market with its value already contained in it and thus pre-determined, with no need for any "input" from market factors. Value is fully determined in the production process, not by the bargains struck between buyers and sellers.

By contrast, in the classical view value is more of an event or process; exchange value is actually *valuing*, a process involving the will of the buyers as it conflicts with that of the sellers, the two intersecting at some point of agreement. Value is thus intangible and transient; it is not a physical property, but an expression of the end result of a process, as: "Corn was selling at \$3.15 yesterday."

Exchange value as a quantity could be compared to the gas mileage someone averaged on a certain trip. The gas mileage is concrete in the sense that it is a ratio of two "things," more or less - a certain quantity of gas and a certain distance traveled. But these two magnitudes were determined by an event or process; the fact that someone averaged 18.5 miles to the gallon on a certain trip

is a report on a ratio determined dynamically, not statically and *a priori*. Similarly, exchange value as a ratio of goods exchanged is a "post-mortem" report; it is a report on the exchange of two physical things, true, but the entity "exchange value" itself is not physical; it is a mathematical expression or measurement of the event that transpired.

Marx's version concretizes or reifies value, traps it in physical incarnation and portrays it as a physical property. Value is still determined by an event, and by the actions of people, but the event is only the labor performed in producing the commodity. Once the commodity is a finished product, its value is contained in it in a definite amount, as a fixed, static property. The commodity goes to market with an invisible price sticker already on it, as it were; and magically, somehow, actual market prices conform themselves to this invisible pre-ordained price.

Marx's "value" is thus concretized, or physicalized; it is an *a priori* quantity, pre-determined, rather than an *a posteriori* one, determined by events in the marketplace. It is literally a thing, not an expression or measurement of an event. As Marx puts it, "The price then, is merely the money-name of the quantity of social labor realised in the commodity" (*Das Kapital*, p. 120).

Value is a part of the commodity: "Could commodities themselves speak, they would say: Our use-value... is no part of us as objects. What, however, does belong to us as objects, is our value" (p. 95).

Value is a pre-determined entity: "Its value, like that of every other commodity, is already fixed before it goes into circulation, since a definite quantity of social labor has been spent upon it..." (p. 193). Thus, "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" (*Das Kapital*, p. 73).

That statement is just the reverse of the classical view. And it is a clear statement of Marx's "predestination" view of value. That is, market processes do not determine exchange value; value is pre-determined, an *a priori* or mystical entity which itself determines market price. (The dichotomy between exchange value and some other, supposedly more authentic, "value" is especially critical to Marx's thesis here.)

What is ironic about Marx's revision of the meaning of value is that in this instance he opts for a static, dead, or in his terminology "metaphysical" concept rather than a dynamic, living, "dialectical" one. Here he prefers to treat value as a thing (or as a property of a thing), rather than a process. His value is cut-and-dried, "ready-made," concretized, just like the notions of "metaphysical" science he criticized so severely.

We may recall some of the criticisms Marx aimed at "metaphysical" science, that is, at normal science. Science, or Western thought in general, had "left us as a legacy the habit of observing objects and processes in isolation... in repose, not in motion... as constants, not as essentially variables; in their death, not in their life." By contrast, dialectics, the view of "the universe as a process," held that "the world is not to be comprehended as a complex of ready-made *things*, but as a complex of *processes*...."

The point here is not whether these rhetorical attacks are valid, or even whether they have any genuine meaning; it is not whether modern science really takes such a blind viewpoint of the world as a set of static things as Marx represents is as taking. Nor is the issue whether it is really possible, as Marx proposes, to view the universe as pure *process*. The point is that in his theory of exchange value Marx takes a course exactly the reverse of what he professes to esteem.

While Marx purports to re-examine entities which have been unfairly treated, by "metaphysical" science, as things, and treat them as processes, what he does in the present instance is to take a phenomenon already well known to be determined by a process and treat it as a thing. He concretizes or "metaphysicizes" the phenomenon of exchange value. He goes exactly contrary to his own professed credo, and this in a case where all evidence and common sense and rationality would support the "dialectical" viewpoint, and would consider the entity under consideration to be primarily a matter of process.

The classical view, the common-sense view, is that exchange value is not so much a ready-made thing as a report or snapshot of an event: "Corn was selling yesterday at \$3.65 a bushel." That is, inasmuch as exchange value is "a quantitative relation," the proportion in which goods of one sort are exchanged for those of another, this proportion or this quantity is dynamic. It is established not by any *a priori* criteria but only by the interplay of the market: by the exchanges themselves. Value is not a "ready-made thing" in this view, unlike in Marx's theory which has it as a "common something" "contained in" all commodities. Value is not deterministic, fixed by some organic characteristic of the commodity; it is established only in the act of exchange, in the striking of bargains, and is influenced by a whole shifting complex of factors in the economy. The complexities determining how much money people have and are willing to spend, and how much production is occurring at what prices, and how much producers can afford to sell at, are immense. One would have thought they would be "dialectical" enough for even Marx. When Marx says, then, "it is not the exchange of commodities which regulates the magnitude of their value; but, on the contrary... it is the magnitude of their value which controls their exchange proportions," he is reverting to mysticism. He asserts that this hidden, unknown inner quantity, which no one has actually seen or measured and which no one takes any conscious account of, in some unexplained way always determines the end result of the conscious bargaining which establishes market price. He is

positing some fixed, "ready-made," *a priori* category which pre-determines the exchange value of goods. This is a fundamental misperception of reality, a superstitious or fatalistic notion; and in addition, it is contrary to one of Marx's professed basic principles.

In reality, exchange value doesn't exist beforehand, *a priori*; it is not a "substance" or a property lying hidden in the commodity. Value is determined in the event, or if you will, "dialectically." If Marx had not needed his concretized view of the phenomenon, he surely would never have stooped to such a "metaphysical" viewpoint. But it is only by reducing value to a static thing, and reducing the determination of value to a mechanistic, deterministic formula, that he can eliminate all the human complexity of economics and at the same time establish one necessary point: that labor alone constitutes value, or "congeals" into value. He needs this point in order to prove from the outset that the capitalist is a parasite. And if he has to violate one of his supposed basic tenets to produce the point, then "necessity" must rule – that's dialectics.

Marx's dialectics is a theory of processes actuated by "internal contradictions," the struggles of opposite tendencies. But he rejects the theory of price's being established by the conflicting desires of buyer and seller, the price being the resultant of the opposed forces of supply and demand. Instead, he chooses to view value as a deposited lump, the residue it's true of the production process, but for all that a ready-made thing, a static, pre-determined object seen in repose, in isolation, not in interaction with any influence on the marketplace. Marx's writings bring to mind the story of a man who was questioned closely by a stranger about the value of his horse. He praised his horse extravagantly, saying it was worth \$200. "As much as that?" the stranger asked. "Every bit of it. But why are you so interested?" The stranger responded, "I'm the tax assessor." "Oh," the owner replied, "I see what you mean now. Well, for tax purposes, the horse is only worth \$25." That is the same way it is with Marx's theories and principles – whatever advances his argument at the moment, he uses. The truth depends on what fits his purposes at the moment, meaning what will advance his "case against capital" or vendetta against capitalism. There is no more reasoning or explanation to it than that.

Second Qualification

Marx introduces a second qualification to his labor theory, as follows:

The labor-time socially necessary is that required to produce an article under the normal conditions of production, and with the average degree of skill and intensity prevalent at the time. The introduction of power looms into England probably reduced by one half the labor required to weave a given quantity of yarn into cloth. The hand-loom weavers, as a matter of fact continued to require the same time as before; but for all that, the product of one hour of their labor represented after the change only half an hour's social labor, and consequently fell to one-half its former value.

To paraphrase: what Marx is now saying is that the value of commodities is "the labor-time socially necessary" for their production. And the labor-time socially necessary is the "normal" time, that is, the time necessary under normal conditions of production, meaning the normal or average conditions of "skill and intensity" prevalent at the time. We might say value is the labor necessary using "state-of-the art" technology and methods, understanding that by "state-of-theart" we mean the state of the art prevalent or generally available at the time (not necessarily the most advanced equipment in existence). Thus Marx stipulates that value is equal to the labor-time "socially" necessary using up-to-date, rather than obsolescent, equipment. How this is different from Marx's previous formula for value, and why the qualification was necessary, will be discussed in due time.

Preliminary Examination

The first question raised by this is, What objective justification does Marx have for making this qualification? Is it based on facts or arbitrary decree? On a fundamental level, we need to ask, What kind of statement is it? Is it a report of an observed pattern of cause and effect concerning objectively-identifiable phenomena, or is it an arbitrary stipulation or decree, based on nothing but the need to preserve Marx's theory against the destructive effects of reality?

Another question we will have to consider is whether this latest version of value is even possible; whether, by its very nature, it is such that the facts of objective reality can ever conform themselves to it, or whether on the contrary it is inherently impossible. We may also ask ourselves once again how the criterion for establishing value became, not the labor directly embodied in the commodity and "congealed" or "crystallised" into value, but rather "the labor-time socially necessary." (How, that is, did the model change from a quasi-physical or quasi-"physics" model to a quasi-sociological model?) All these questions will have to be addressed in discussing this qualification.

Fundamental Self-Contradictoriness

First, looking just at the results of this qualification and not its basis, we can say about this qualification, as with the first: if value is said to be identical with the "embodied" labor contained by a commodity, then what is contained must be the labor actually, physically performed on the commodity itself. This is the only labor the commodity "has access to," the only labor that touches it and can be incorporated within it as value. If Marx's physical model, along with his physically-predicated proof, is accepted, then there is no basis for social, or sociological, qualifications like the present one. The physics of material objects is not subject to such qualifications.

So if the view of value posited by Marx's labor theory in its basic form is accepted, any question of how much labor is "socially necessary" is irrelevant. On the other hand, if we reject that original basis and picture of Marx's labor theory in order to admit considerations of what is "socially necessary," then the original proof and support for Marx's labor theory must likewise be abandoned; we might as well throw out the whole theory. Thus, even prior to the issue of whether we can find any factual support for this qualification, the attempt to make such a hybrid theory – part physically based and governed by the laws of physics and part sociologically-determined – is incoherent. There is no basis for such hybrid constructs in any even minimally literate scientific method.

Basis For The Qualification

As concerns any evidence supporting the qualification, here again we see that Marx is imposing an interpretation on events with no justification but his own decree. He is fitting the world to his theory, and not vice versa.

To support the qualification, which is essentially a redefinition of value, Marx offers, apart from mere assertion, the illustrative example quoted above. (As the saying goes, however, An analogy is no proof.)

The example itself is accurate enough – when machine-woven cloth came onto the market, hand-woven cloth could no longer be sold at its higher price. The question, however, is whether Marx's theory gives the reason for the phenomenon, or whether the mechanism at work was actually something quite different. As was done with the previous qualification, Marx appends this qualification to his theory to make its predicted outcome or end result align with actual results; but that does not necessarily mean his theory is the real *explanation* for those results. it has been said that for every event there is someone who thinks it happened in accordance with his own pet theory; the task is to find the actual line of causation somewhere in the mass of contending theoretical explanations.

We may anticipate somewhat and say, classical theory gives the obviously valid explanation for the events Marx describes. The reason the value of the hand-woven cloth falls to the price of the machine-woven cloth is this: people will not pay more for an essentially identical product, when they can get the same thing for less. The classical explanation for the situation described in Marx's example is that when a product from one source comes onto the market in sufficient supply at a cheaper price, demand for the same product at the original, higher price drops to zero. If all consumers can find all of the product they want at a cheaper price, no one will buy at the higher price.

This explanation illustrates again that classical theory, or genuine economics, deals in terms of human behavior, conceiving of economics as predicated on the basic elements of universal human economic behavior. Value is not an abstract, philosophical category, nor is it a physical automaton. A fall in a product's value is not explained by *ad hoc* modifications of Marx's definition of an abstract category, that is by a redefinition of the category as "the labor-time socially necessary," that entity having already redefined in terms of "normal conditions" or the "average degree of skill and intensity." To deal in such speculative abstractions is simply to conjure up an imaginary world, a conceptual world made of invented categories, abstractions and relationships, with, to be sure, rules and "theorems" of its own, but with no relation to reality.

Marx is thus writing not scientifically, as one who must construct a theory in accord with all the facts, thoroughly investigated, but as one conveying revealed truth, or as one possessing an *ex cathedra* authority to say what the truth is. (Nevertheless, if there by chance should be any objective support for the qualification, we must find out what it is or what evidence Marx offers.)

The Need For The Qualification

Let us examine the qualification in its particulars. The situation Marx describes in his example is one he must address, of course. One of the most striking characteristics of the Industrial Revolution, and a defining characteristic of technological progress in general, has been the continual lowering of the amount of labor required for producing a product. This lowering was generally accompanied by a lowering of the item's price. Goods became cheaper with the advent of each new piece of machinery, and the standard of living of the "common people" rose significantly, for the first time in centuries.

And of course if the price of goods made with the new machinery declined, the price of similar goods made in the old way, using the former production

methods, could not be maintained. The question is then, why does the price of *both* sets of goods – those made the old way and those made the new – fall to the level of the price of goods made with the new equipment? Which explanation is valid – Marx's or the classical one?

There is hardly a problem here at all for those who take the classical viewpoint. The working principle might be called supply and demand, or it might be placed more broadly under the category of the desire of the buyer to buy as cheaply as possible. (That is an even more elementary article of economic explanation than laws of supply and demand, and is in fact the basis for them.) However one terms it, the fact is that people will not pay more for goods, when they can get what are (for practical purposes) the same thing for less. If the supply of machine-woven cloth is adequate to meet demand, buyers will buy it rather than pay the price for hand-woven cloth. This means that the hand-woven cloth becomes "distressed merchandise," merchandise which can only be sold by cutting the price to make it competitive with machine-woven cloth.^{*} People – that is, human economic behavior in the aggregate – determine the price; the process is *economic* in nature. It is not determined by a set of abstract, philosophical definitions and categories. And it is not governed by the laws of a system of quasi-physics; it is not a physical property or an abstraction.

For Marx's theory, however, the situation is more problematical. His theory, in its original form, states that value is embodied labor. The more labor "congeals" in a commodity, the higher its value. Therefore the hand-woven cloth, with a high internal content of labor, should continue to have a high value, meaning that it should also have a high price; and machine-woven cloth should have its own appropriate, lower price. By the terms of his theory, there should then be a "two-tiered" pricing level.

This of course is not what happens in the real world, and Marx must explain why; he must show why a price dichotomy is not really called for or predicted by his theory. That is, he must adjust his theory so that it seems to fit the real-world situation and can be portrayed as the cause of it – so that, at this one tangential point where his theory impinges on the real world, the results as predicted by it are made to appear like those which do obtain in the real world. To this end, he must modify his theory in order to salvage it.

He accomplishes this mainly by leaning more heavily on the definition of value as "the labor-time socially necessary." Note that this all-purpose phrase, this formula for determining of defining value, has been insinuated into Marx's text without any direct argument in support of its use. It simply makes its

It may not be necessary to lower the cost all the way to that of machine-woven cloth, however. Presumably the quality of hand-woven cloth is better and, even though not sufficient to induce people to pay the full price for it, this fact would support a slight price differential or premium above that of everyday goods.

appearances and is assigned its role as the proper interpretation of the meaning of the labor which is value.

Value up to this point was the amount of "homogeneous" labor contained by a commodity. Now Marx tells us that the "labor-time socially necessary" is such and such, by which we are to understand that "value" is such and such. He doesn't telling us why, all of a sudden, "socially necessary" is the standard for determining the labor contained by the commodity. Marx inserts the phrase as if that had been the definition of value all along; and proceeding upon this definition, he explains that "the labor-time socially necessary" is the labor-time using the most efficient method of production generally available, etc.

The really important sleight-of-hand in this qualification is in making "labortime socially necessary" the accepted definition of value. Value was supposed to be the labor embodied in a commodity, the amount actually performed on it. Now Marx has introduced social criteria and semi-articulated entities like "social necessity" into the picture. That was his real conjuring trick. Marx begins the present qualification by telling us what constitutes the "labor-time socially necessary"; he completely finesses the issue of how "labor-time socially necessary" became the standard for measuring or determining value.

This exposition of what is contained in the "labor-time socially necessary" is in turn unsupported by any empirical explanation or theoretical justification. Marx simply chooses to define "labor-time socially necessary" the way he does, because he needs it to mean that; that is, he makes it serve his own purposes. It is a definition "pulled out of his hat," assumed from nothing.

Actually, the term "labor-time socially necessary" is too amorphous to be given any certain specific meaning. It is an entity that exists only in Marx's head, a creation of his own imagination; thus he can endow it with any meaning he chooses, with little fear of contradiction.

That should be qualified in one respect. Taken simply at face value, there might be a certain amount of sense in Marx's statement that the "labor-time socially necessary," for producing a commodity, is the amount required using the most advanced equipment generally available. That amount is the minimum time needed using readily available means. Literally speaking, that is indeed the amount of labor *necessary*; we need not invest more labor in the commodity than that, because equipment is available that will enable us to produce it with just that given amount of labor. For instance, when power looms are available, no more labor is "socially necessary" than is expended in producing cloth with them; with power looms generally available within the society, it is not "socially" necessary to spend any more labor in producing cloth than is needed using them. So in this sense the labor "socially necessary" could perhaps be defined or viewed as meaning the minimum amount necessary given readily-available means within the country, or society.

Thus an argument could be made that this definition of "the labor-time socially necessary" makes a certain amount of sense, if not good syntax. What cannot be shown is that this category of "socially-necessary labor" has anything to do with the price, or value, of a commodity in the real world; nor that it has any valid or logical connection with Marx's theory of value as originally expounded. In other words, the connection cannot be made coherently between Marx's original theory and this qualifying redefinition; nor can any connection be made from his definitions of abstract categories to events in the real world such as the determination of prices. He needs to make some showing of a line of cause and effect, not simply to define a category and then assume that, through sheer force of rhetoric, his category is the defining one and his argumentation must be authoritative. If his "labor theory of value" is now to be seen as a "socially-necessary-labor theory of value," he must make the connection and justification for this change explicit, and not merely insinuate it into the discussion.

Again, we see with this qualification Marx completely changing the ground of the discussion, along with the imputed character of value. His labor-as-value starts out as a physical entity, its magnitude determined through an impersonal, physical process. However, this second qualification, like the first one, introduces social criteria and concepts like the amount of labor "socially necessary." The question again is how such social matters can affect an automatistic physical process, or to put it another way, how these two directly contradictory natures attributed to value can merge coherently in a unified theory. We will consider this in detail as we go along.

Detailed Analysis

Let us now examine the qualification in its particulars. Goods became cheaper with every new development in productive methods. And the situation at such times, of course, has always been that the price of the particular kind of goods has fallen to a single, more or less uniform, lower price; there wasn't such a thing as machine-made goods' becoming cheaper while hand-made goods retained their former high value (i.e., price). *All* goods of the same description have been governed by the lowest price such goods could be made and sold for, namely, the price of those made with the most advanced productive equipment. The overall price is determined by the cheapest one.

The above are the facts; the question is how Marx makes them appear to fit in with his theory and indeed to be caused by the mechanism it describes.

It should first be noted, there are actually two slightly different situations which could be envisioned as falling under this qualification. One is the case Marx discusses, where goods are produced, at the same time, by the two different methods, old and new. These two sets of goods, produced simultaneously, have different amounts of labor actually embodied in them, and the question is, How do their prices come out the same?

The other case is that of goods previously produced by the older method, i.e. already embodying a certain amount of labor, but as yet unsold when the new method of production comes in. The question is, What happens to the value of these goods?

Let us consider first what Marx's law of value, in its original, unembellished form, would say about these situations. We can extrapolate from his basic law, "Labor congeals into a corresponding amount of value."

It is entirely appropriate, then, to ask what Marx's law of value predicts for the particular situations given. And the answer is plain enough: labor congeals into value; that is, the labor invested in the production of an item congeals into its value; and the value of goods, including hand-made goods, is always the amount of labor invested in their production. Regardless of what someone else may be doing somewhere else. The labor actually performed on this particular commodity must congeal into its value – any other suggestion would be nonsensical and capricious.

Steam condenses into water; that is, the steam *right here* condenses into the water resulting from it – not some other amount of steam somewhere else, or a "social average" of steam. And since we are unaware of any process of deterioration of evaporation of value, labor must work the same way. Barring some unknown process of radioactive decay of value, the amount of labor initially embodied in a product remains its value "for life," regardless of what may occur later or what other methods of production may later come into use.

Thus in both situations – in that of already-produced, pre-existing goods, and in that of goods which continue to be made by the older method even while other goods are made by the new method – in both cases the value of hand-made goods remains at its full, "statutory" level as specified by Marx's formula.

If labor congeals into value, if it is an impersonal, quasi-physical process, and if the entire basis of value is as Marx describes it in order to prove his labor theory in the first instance, the above conclusion is the only one possible. A particular commodity's value is, identically and by definition, the self-same labor actually performed on it in the course of its production. If that is not the commodity's value, and if a set of social criteria and arbitrary stipulations is to be added, then we have been misled in believing Marx's labor theory; the whole basis for its authentication is thereby destroyed. The situation must be one way or the other.

The result then, as predicted by Marx's core theory, should be this: machinemade cloth comes on the market and sells for, let us say, half the price of hand-

made cloth. At the same time, hand-made cloth continues to be made and sells for its old, higher price. Each has its own appropriate value, and there is no interconnection between them.

(The above is, most probably, what Marx's theory predicts. It might be said however that hand-made cloth continues to have the same value as before but that it just can't be *sold* at that value. That is, it accumulates on the shelves of warehouses, but its value continues to be the same. Since in Marx's schema the word "value" has no connotation of "what a thing can be sold for," this contention could be made.

But while Marx claims to mean by value *only* "the contained labor," in practice he is forced to consider value as normal people do, that is, as market price. That is why he even discusses the given examples in the first place. In practice it makes no sense to speak of a commodity as having a certain value when it cannot be sold for that amount - as if value were an abstract entity existing apart from market considerations. Whether he wants to or not, Marx from time to time is forced to speak of value as normal humans do, as an aspect of market economic conditions and not as an abstract philosophical entity.

Thus we can safely discard the above possible interpretation of his theory and its predicted results as, at the least, irrelevant to real-world economics. Besides, it sounds too much like supply and demand to be what Marx meant.)

The facts as they obtain in the real world, then, are at variance with Marx's theory, at least in its initial form. Thus a qualification or further stipulation had to be added, to bring the results as predicted by his theory more or less into line with actuality. In the present instance, as with his first qualification, Marx shifts his ground by saying, in effect, that the labor which constitutes value is not the actual labor performed on the particular commodity, but theoretical labor, labor as a theoretical category defined in a manner stipulated by him. It is not actual labor, but "homogeneous" and, now, "socially necessary" (or just "social") labor. That is, it is the amount of labor embodied in the commodity using "normal" or "average" or "prevalent" productive methods. We would say, the value is the smallest amount of labor needed using the best equipment generally available – "state-of-the-art" equipment, if you will.

This socially- or arbitrarily-defined quantity is now given by Marx as the new definition of the value of a commodity. But again, in arbitrarily redefining value, Marx loses all the explanatory power presumably provided for his labor theory by his picture of labor's being a physical entity which congeals into value. He also loses the partly logical, partly "quasi-physics" proof he provided for the theory. We are left with a theory backed only by arbitrary decrees and pronouncements, by Marx speaking *ex cathedra*; and his decree does not carry that much authority.

At any rate, value is now to be considered, not the actual labor, but the amount of labor "socially necessary." And the socially-necessary labor is the smallest amount of labor, or the lowest price, for which goods can be produced using "state-of-the-art" equipment; that is, using the best equipment generally available or "prevalent."

One question of interest which now arises is whether this redefinition of labor produces the desired solution, i.e., whether it makes "value-as-labor" correspond to market prices and real-world events. It appears that Marx has brought his theory quite well into line with actuality. When a new, more efficient, method of production cuts the "average" or "normal" amount of labor "prevalent" in producing goods, the value of all goods falls. Both the hand-made and the machine-made goods get cheaper: they both sell for the same lower price. Thus Marx's theory has evaded a possible contradiction from the real world. Of course we aren't given a quantitative example showing that the price corresponds to the labor increment only; but we are shown that the price of hand-woven cloth must fall to the level of machine-woven cloth – for his purposes that's evidence enough.

The next subject of concern is the validity of Marx's redefinition. Do the real-world events described occur for the reason Marx's theory advances? Is this theory, and its accompanying qualifications, the *explanation* of events, or is it simply an *ad hoc* rationalization or sophistry added after the fact in order to bring his theory into a semblance of conformity with the real world? He seems to have dodged the bullet here again in his second qualification, but has he really?

The question is no sooner asked than answered. The real reason the price of all goods, both hand-made and machine-made, falls to the same low price, is that people will not pay more for goods when essentially the same items are available for less. The demand for goods at twice the price, when the same, or for all practical purposes the same, goods are available at half the price, is nil.

That is, the real reason is a matter of economics, and this comes down to a matter of human economic behavior. The reader may ask himself what he would do if faced with the situation described, of similar goods at two different prices. The response is universal – everybody prefers to "buy low."

The real explanation is an economic one, a matter of real-world exigencies and behaviors; it is not a matter of philosophical abstractions or arbitrarilydefined theoretical entities. The value of the goods doesn't fall to a uniform lower price because Marx has defined a theoretical entity called "Value" in a certain way. Logic does not compel the facts.

In essence, Marx's "explanation" of events is not an explanation at all. It is an arbitrary stipulation or decree, which *seems* to bring his theory into accord with the facts as they occur. But it is a rationalization, not the real reason for events.

Marx's qualification can gain credence only if his theory is treated as a "black box." (The black box is a technological concept referring to situations where we consider only the input and output, disregarding what actually goes on inside the "box." That is, we describe the pre-existing conditions, or "input," and tell what results or "output" are expected or desired. We abandon consideration of the actual workings of the box as irrelevant for the moment.)

Marx apparently considers his theory a black box - if he can make the results, as predicted by his theory, seem more or less in accordance with actual, real-world results, then that is all the justification he thinks necessary. He thinks that such a process proves his theory in and of itself, regardless of how nonsensical the actual mechanism of the box, as Marx describes it, may be.

Actual science is not satisfied with such methods. A set of arbitrary pronouncements and decrees cannot be accepted as a valid description of reality just because at one or two observable points the results predicted by the theory fall in line with reality. The explanation itself must make sense, and must *be* an explanation – it must derive its authority from events and observed regularities of the real world, and not from an assumed power to speak authoritatively about such things.

The examples or situations Marx describes in his qualification are a few touchpoints where his theory impinges on observable reality. He may bring the results predicted by his "black box" into line with events at these few points, but his theory still must be examined for credibility on a more fundamental level.

Theoretical Justification

We need to examine the theoretical justification of Marx's redefinition of value: is his "qualified" theory of value logically consistent with the original form of that theory, and are the arguments advanced for its introduction sufficient and valid?

What the qualification says, to repeat, is that value cannot be determined by simply measuring the amount of labor directly embodied in the commodity. What counts is value as defined by a new social criterion, as the "socially necessary" labor-time, meaning the amount of labor embodied when using the best, most efficient, equipment. The labor required "under the normal conditions of production, and with the average degree of skill and intensity prevalent at the time" is what counts as labor. And "normal conditions" of production are those using the best means of production "prevalent," or generally available.

The justification for adducing this qualification may be summed up in the phrase, "labor-time socially necessary"; Marx's qualification is devoted to describing what labor that is, and he advances more-or-less plausible reasons for

his decisions as to what is and is not "socially necessary." As to how the criterion of value came to be this redefined social category, rather than ordinary labor, or the labor actually, physically performed on the commodity – on that Marx is silent. He assumes it as self-evident that the labor which is value is "socially necessary" labor.

(Perhaps the mystical authority of those two words or concepts, the "social" and the "necessary," was so great for Marx that no argument for using them was deemed necessary. Certainly throughout his body of work he treats them as shibboleths, not to be investigated or challenged.)

At any rate, we may challenge the theoretical justification for Marx's qualification on two bases: on the basis of the particulars of his definition of what is "socially necessary" labor, and on the basis of his adoption of that concept as a criterion of value in the first place.

On a superficial level, Marx's qualification seems to be a truism, a statement of self-evident fact – or at least an eminently reasonable definition of the phrase "socially necessary labor." When there are new, more modern methods of production available which require less labor, it seems reasonable to say that it is not "socially necessary" to expend any more labor than that. The labor "socially necessary," it seems obvious, is the minimum amount necessary to produce the goods, using whatever means are generally available in the society. No more than the minimum is "socially necessary."

What can easily be overlooked, however, is that this "socially necessary" labor is simply an abstract, theoretical category. It is manufactured from whole cloth by Marx and is essentially arbitrary; as his own creation, he can endow it with any meaning he wants. And that implies that it is not an economic category: it is not one of the concepts in terms of which real manufacturers and buyers, or let us say people involved in real-world economies, reason and deal.

The real-world analogue of "labor-time socially necessary" is the cost of production; this is the concept in terms of which participants in the real marketplace figure. It has a real, not abstract, method of calculation, and its effect on economic considerations is real, not theoretical. When Marx departs from the terms and quantities by which the active participants in actual economies gauge and consider their actions, he presumes to have all authority within himself for defining the entire field of economics or "political economy" from scratch. He invents economics from whole cloth, as if it were not an ongoing activity, proceeding by certain rules and on the foundation of the reasonings and motivations of the active participating agents. He ignores the people "doing" economics, and thus ignores real-world economies entirely. In fact he departs from a discussion of real-world economics into creation of a world of abstractions, an imaginary world.

In the present instance, "socially" seems to be the more misleading term in the phrase "socially necessary." The phrase does not imply a decision made socially, or by society as a whole. If X amount of labor is "socially necessary" for producing a commodity, it doesn't mean a social decision has been made to that effect. The phrase "socially necessary" does not mean that a consensus of society has ruled that X amount of labor may be invested in producing a commodity, but not Y. It just means that in the given society, or country, the most efficient or least "labor-intensive" method of production will produce the commodity in X amount of time. The labor "*socially*" necessary refers to the quickest means of production available in the society. But of course for Marx anything with the word "social" attached to it had enormous depths of significance and authority.

We may accept as plausible Marx's definition of the amount of labor "socially necessary," even though different people may have different ideas of what is necessary, and even though there is no objective way for society as a whole to decide what labor is necessary. But the question remains of whether the adoption of this criterion, however defined, was justified in the first place. How does the labor embodied in the production of a commodity become the amount of "socially necessary" labor needed to produce it?

It is abundantly evident that, while "proving" his labor theory in the first instance, Marx conceives of labor as the actual labor physically embodied in the commodity. It should not be necessary to re-state those evidences here. Suffice it to say that his proof, hinging on the assertion that commodities of equal value "contain" equal quantities of some "common something," which congealed or crystallized in them during their production, can only make sense if the actual labor performed on the commodity is what constitutes its value. The model or paradigm is physical, *of physics*: by natural law the quantity of substance X (value) contained by an object equals the quantity of substance Y (labor) which by a change of state congealed or condensed or "embodied itself" in it.

This physical paradigm, and the proof based on it, does not admit of the use of such social or theoretical, i.e. human-defined, categories as "socially necessary" labor. The two inhabit different realms; they are logically and practically incompatible. If we accept the naturalistic or physical model, the creation of value is an automatic, physical process beyond human choice or control: it is a by-product of production itself. Just as a certain amount of water (namely, the amount much we boil) produces a certain amount of steam and vice versa, just so does the exertion of a certain amount of labor (the amount we do) produce a certain amount of value. It is a matter subject to the laws of the physical universe, not to arbitrary human decision.

This must be the viewpoint we adopt if we accept Marx's proof of his labor theory in the first instance. And by this viewpoint it is not the amount of labor "necessary" by any philosophical criterion, but simply the actual amount of labor exerted, that constitutes, or reconstitutes, itself as value.

On the other hand if we accept Marx's social criterion, all justification for accepting his labor theory in the first instance vanishes. We are then simply accepting his fiat pronouncements, and allowing him to define reality on the authority of his own naked assertions.

In any case the two halves of Marx's theory will not hold together; they are logically inconsistent. And the method he uses in his qualifications, of proceeding by unsupported, bald assertion, is not science. Marx either insinuates the criterion of "socially necessary" labor into his text, writing as if its validity had already been demonstrated and hoping no one will notice any different; or else he asserts it on the authority of his own unsupported word. In either case the concept is not valid and not science.

The two will not merge: one view or the other must be accepted. We may accept that labor is physically deposited within the commodity as value, in which case the actual labor performed must be the actual value. In this view the creation of value is a self-determined, mechanical process, with no possibility of alteration or adjustment by specially-defined social categories like what is "socially necessary."

That view is capricious. What is "socially necessary" has no way of affecting a mechanistic process. Since Marx advances no mechanism by which value evaporates or undergoes radioactive decay as a response to the production of a less labor-intensive product, the conclusion must remain: under the terms of Marx's original theory, the value of hand-woven cloth is precisely the amount of labor actually embodied in it, regardless of what the makers of machine-woven cloth may be doing.

The problem with this version of course is that real-world events refute it. In one of the few places where his abstract, theoretical text can be checked against reality, it fails. Everyone knows that the price of a certain type of goods falls to the price of those produced the cheapest way, meaning usually the least "laborintensive" way. It was to make his theory accommodate such uncomfortable facts that Marx needed this qualification.

On the other hand, suppose we take the finished version of Marx's theory, but disregarding the theoretical underpinnings; suppose we examine it as a hypothesis or inspired guess, not caring how we arrived at it. His theory then may be expressed, "Value is the average amount of labor exerted to produce a commodity, using the most efficient means of production generally available." How does this stand up quantitatively?

It bears a certain resemblance to the truth - the value of a commodity (meaning here its price on the market) tends to run parallel to the amount of labor needed to produce it. If improved methods cut down the required amount

of labor, the price falls, and it doesn't matter whether a particular item was produced by the new version or the old – one price only tends to hold sway, that being the cheapest. The real law is, The cheapest price prevails, along with the production method making it possible.

The Real Reason

On this superficial, or results-only, level, Marx's theory seems to be in accord with reality. However, Marx's theory is a rationalization, and not the real explanation for the phenomenon. His theory is incorrect, one might say, because the real reason is the one given by classical theory. That may seem circular reasoning, but it can be supported.

That is, first: price is not composed of one element only, labor. Price is composed of, or "dissectable" into, three distinct economic factors which it recompenses: labor costs, rents for the physical plant, and profits. Thus value is not in direct proportion to labor alone, as Marx states. Labor is one factor of price, and when the labor component declines, price declines. Thus his theory, while superficially seeming to explain value, is only roughly correct numerically.

Lest this criticism of Marx's theory seem to be in its turn an appeal to naked authority – "Marx is incorrect because classical theory is correct" – that claim must be followed up by saying, it is easy to verify that classical theory gives quantitatively the correct answer. Every entrepreneur verifies it. Each one calculates his labor costs; other expenses (mortgage, payments on machinery, rents, etc. – using a less theoretical but more down-to-earth choice of categories); and adds on a desired percentage of profit to arrive at the asking price. Or he works in the other direction – he starts with the selling price, or his receipts, and figures out what percent of profit he's making.

The fact that these calculations may be done, that economics proceeds on their basis, and that labor, rents and profits actually are recompensed from the selling price, is strong evidence that value (as defined by normal people) is composed not of labor alone, but of labor costs, rents, and profits.

That is, even if we allow Marx to adjust his theory so that value is defined as the labor necessary using the most productive equipment, still the fact remains that value actually equals not labor only, but the sum of labor, rents and profits.

That is the case when we consider labor *costs* as one factor of exchange value, using classical theory; Marx's theory does not exactly do that. In his theory labor itself directly constitutes or congeals into his redefined value, which finds further expression in its phenomenal form, exchange value. To discern a dependency between labor, value, and exchange value, it would be necessary to find some way of directly comparing the commodity's labor-content to its price,

without using the presumably corrupted capitalist standard of wages, or labor costs. But we seldom know with any accuracy the grand total of labor embodied in a product, as distinct from the labor costs of producing it.

That is, it is not possible to verify or refute directly, in an empirical manner, Marx's assertion about value equaling internal labor. All the essential elements of Marx's theory are unobservable. His "Value," for one thing, doesn't correspond to price except secondarily; and thus being invisible it is malleable and adjustable, and subject to all the theoretical manipulations of Marx's text. As for labor itself, it can *in principle* be measured; but in practice that is almost impossible. The typical product has too many component parts and goes through too many diverse stages of production for anyone to know with any degree of certainty how much labor it contains. (For insight into this reality, see the short article, "I, Pencil" – a story which shows how many different materials and productive facilities are used even on such a simple thing as a pencil.)

Then too, we now see that Marx's theory as qualified completely specifies or stipulates the necessary labor content of goods by means of deductive reasoning within the framework of his theory, apart from any direct measurement or observation. As the net result of his qualifications, we have to measure the embodied labor, counting only labor of the most productive "degree of skill and intensity," and then find the average or "homogeneous" figure. This is probably impossible in practice – Marx himself didn't do it and probably reasoned backward from market prices in order to retro-fit embodied labor to observed value. In Marx there tends to be many a slip, many a theoretical fudge factor or modifying proviso, in such transitions. Value cannot really be measured.

Thus Marx's theory is shielded from quantitative verification or refutation. The quantities and entities he deals in are unseen, hypothetical, theoretical. They are unmeasureable because they are unobservable; we learn about their characteristics only in Marx's theory, not from real life; and we must accept his theory's assertions about their magnitude. If "Value" is "congealed labor" and the amount of this labor is determinable only by Marx's theoretical formulations, and if it has no direct relationship to market price, then Marx's theory is self-contained; it is entirely self-referring. It doesn't "touch ground" at any point where it is subject to observation and measurement. Ultimately, it pertains only to itself; that is, its subject is solely its own defined philosophical categories and it says nothing at all about the real world.

It is not economics. Its language and its terms of discussion only mimic genuine economic terminology; the actual entities being discussed are Marx's own creations. For example, classical theory does not speak of labor *per se* as a component of price – it speaks of labor costs, i.e. wages. These are a measurable entity and, besides, they are the entity in terms of which people actually make economic calculations and decisions. This is moreover the correct entity to

include as a component of price – it gives the right answer in a quantitative sense. Value does actually equal labor costs plus rents plus profits; it is not, as Marx says, proportional to labor per se measured in hours, as opposed to amounts of money.

This points up another problem with Marx's theory: its mechanistic assumptions. His elimination of human action, with his belief that labor itself can be a basis for determining value, without recourse to the intermediary of a money equivalent of that labor, is a large factor in the mystical, anti-rational character of his labor theory. Marx expresses his theory as a kind of quasi-physics. Physical quantities interrelate to yield determinate conclusions in a kind of mechanical automatism, independent of any human action.

In physics, for example, we see that when a rock falls off a cliff, its rate of descent depends on nothing but the laws of the physical universe. That is, it depends on the workings of the physical universe, given generalized expression – the laws of physics. In the same mold, Marx is creating a theoretical system in which one quantity (of labor) automatically, or automatistically, produces a determinate result – a definite quantity of value. This too is portrayed as part of the natural order of things and not a matter of any human-derived consideration such as market supply and demand, and so on.

This mechanistic assumption, applied to a realm self-evidently human, is nonsense. The world of markets, of production, sales, labor, supply and demand, and so on, is not on the same level with the world of inanimate objects, of falling rocks and orbiting planets. It is scientifically incoherent to suppose one can produce an automatistic system of economics, leaving out human inputs: to suppose that labor can directly, automatically, constitute value, as if labor and value were purely material phenomena like rocks, water, steam and so on. In sum, it is scientifically illiterate to write a "physics of economics."

Thus it is more rational and coherent to speak of value in terms of labor costs, rents, and profits, than to speak of a certain amount of labor (even a "socially necessary" amount of labor) constituting the value, or automatically equaling the value, by some metaphysical method, without any intermediary in human, economic terms.

One further unfortunate product of this mechanistic view is what might be called the fatalistic assumption. For Marx, the contained labor (once it has been properly defined and modified) constitutes the commodity's value: the commodity itself contains a certain value in and of itself. The forces of supply and demand, the vagaries of the marketplace as envisioned by classical theory, are irrelevant.

Presumably, since the embodied labor is the commodity's "value," the commodity can be sold for that; and people have no choice but to pay the value, i.e., buy the product for the full "statutory" price. That is, the question of

whether a commodity can find a *buyer* at Marx's theoretically-established value is waived. No matter how shoddy, tasteless, and undesirable a commodity may be, still it has a theoretically or categorically ordained value, and presumably, someone will pay it. (For Marx has not dropped the sense of "what a thing sells for" from his redefined concept of value.)

But suppose the consumers reject a product? Suppose a new soft drink has a vile taste. It still has calories, so it still has "use-value"; and it contains a certain magnitude of "average socially-necessary labor," that is, it has a fixed value. How can people be assumed, or made fatalistically, to pay this philosophically pre-ordained value? Do economic commodities have the power of mass hypnosis, to cause people to pay the contained values regardless of whether anyone can stand the product or not?

In classical theory, the price is ultimately said to be determined by supply and demand. This is just a mathematical generalization of behavior – if people do not like the product, the demand for it at a "normal" price is low; it cannot be sold. "Supply and demand" as abstractions don't set the price; supply and demand are (supposedly) mathematical representations of what people do at various magnitudes of price, supply, and purchases (depending on which ones are considered fixed and which variable).

The price of a successful product is sufficient to recompense the components of labor costs, rents, and profits. If a product is not accepted by the public – despite having certain "use-value" in an abstract sense – the full price cannot be received for the whole produced output. The price may be lowered to get rid of these "distressed goods"; but by this expedient the third factor of price, the profit, disappears.

Thus there is always the possibility, in classical theory and in the real world, that a product will fail. In this there is not the fatalistic assumption that a product, once manufactured, already contains a definite value and hence presumably can always be sold for it. This aspect of Marxist theory is a concomitant of the *a priori* nature of his view of value, which sees it as a precontained substance, a part of the commodity itself even before the commodity goes to market.

The mechanistic assumption, along with its corresponding fatalistic assumption, is at variance with the real world. Examples may be given. For example, one newspaper article described the situation in the U.S.S.R. as follows:

Russian retailers feature four product lines: plentiful and awful; awful and scarce; scarce and good; good and nonexistent.

People have to eat. If they can't eat good sausage, they'll eat awful sausage. Russians eat awful sausage by the ton. But they

have their limits. Anybody can buy a radio that gets only one station; hardly anybody does. A man with two atrocious suits doesn't buy a third. Truckloads of this unbought junk get carted to small towns, where wholesalers try to dump everything at a ruble apiece.

"They might just as well burn it," says Vasily Selyunin, an economist who picked up a coat that way. "The factory will go on making those coats for years – and thinking they're profitable."³

And under the heading "A Lesson In Capitalism," U.S.A. Today gives this example:

The Soviets have learned something about the laws of supply and demand – and pricing. At the international media center, commemorative summit T-shirts that sold for \$20 were marked down 10 percent as the 3,000 reporters prepared to leave Moscow.⁴

All those hours of congealed, "average socially necessary labor" – and 10 per cent of it suddenly evaporated? No, rather, Marx's entire view or paradigm of the nature of value and the manner of its determination is wrong. Value is established not by any internal, automatic mechanism, but by human actions and economic exigencies, the workings of "the marketplace," that is, of human economic behavior in the aggregate. Marx's entire method of attempting to turn the social science of economics into a kind of impersonal self-regulating quasiphysics, is a gross misrepresentation of the essential nature of economics itself. Any theory attempting to reduce economics to a system of purely physical laws, eliminating the human factor, is scientistic and specious on the face of it. Such a theory demonstrates complete ignorance not only of economics but of science itself as a realm of endeavor.

Overview

Let us now turn from the specifics of Marx's qualifications, and adopt an overview or perspective on his overall method and on what he accomplishes, or needs to accomplish, in making the qualifications.

First of all, what he accomplishes with his qualifications is to bring his theory into general accord with events in the real world – that is, he brings the results as predicted by his theory into line with the results actually obtaining

under the given circumstances. (That is, he accomplishes this, if we accept his qualifications as valid.)

Once value has been defined as, not the labor actually, physically invested in the commodity, but the amount of "homogeneous labor" "socially necessary," his results appear to fall roughly in line with the actual behavior of prices as observed in the marketplace. We may further translate Marx's final definition of value by saying, value is the average amount of labor, smoothing out any unavoidable variations in labor-time invested from one unit to the next; and it is calculated only on a basis of those workplaces using the most efficient (least "labor-intensive") means of production generally or "socially" available. Value is "socially necessary, homogeneous labor."

By these qualifications Marx thus escapes two great difficulties which were caused to his theory by value's being tied inexorably to the actual, physical production of a particular article. Value escapes the quasi-physical paradigm in terms of which he originally defined it, and acquires a "social" definition, that is, a definition based on more general and abstract social categories and less rigorously tied to concrete, physical fact. The more or less arbitrary choice of this "social definition," and the capricious, self-contradictory change in the fundamental character of Marx's "Value," at least meets the criterion of expediency; it makes his definition of value plausible in its results.

In its finished form, then, Marx's definition of value has eliminated a couple of the more glaring fallacies apparent in the basic or original definition. His theory no longer logically predicts continual minor fluctuations of value from item to item and workplace to workplace, corresponding to the minor fluctuations of labor embodied in the individual units of a commodity. And, value is no longer the amount of labor embodied in a commodity by whatever method of production is used, regardless of any more efficient means of production which may have come into existence.

These two obvious difficulties have been removed; and because there is a certain element of validity in Marx's labor theory, in that the price which will be asked for a product on the market does depend at least partially on the price paid for the labor embodied in its production, his theory ends up seeming roughly in accord with reality.

His theory says: Value is labor; but not just any old labor, or rather, not actual labor. Value is the average, "smoothed-out" labor, and only the minimum labor necessary, the amount using state-of-the-art methods. You can't expect to get the full, "statutory" price (statutory as defined by his original theory) for hand-woven cloth in an age of machine-woven cloth. And you can't expect to see minute variations in price from one piece of cloth to the next. And in general, anything that lowers (or raises) the amount of labor required to produce an item will lower (or raise) its price.

All these statements are true. If we thus view Marx's labor theory as a "black box," looking only at what goes into it and what comes out of it, and not concerning ourselves at all with the interior workings of the box, the theory appears valid. Results in the real world are more or less as predicted by the theory: when labor costs go down, prices go down, and the reverse when labor costs go up. And since Marx gives no quantitative examples with actual amounts of labor and actual prices (this would in any case be impossible in practice), a rough correlation is all we can have to judge by. His theory then would seem hard to deny.

The real issue at this point becomes whether his theory is the *explanation* for the events it describes – that is, whether it is the actual reason for the events, and whether his law or definition of value is what governs and determines value; or whether his law is an *a posteriori* rationalization, something added on after the fact, being actually irrelevant in the determination of any of the quantities it deals in.

Of course the latter is true. The two qualifications are mere "fudge factors," clumsily pasted onto his theory to redeem it from the shattering effects of reality, having no compatibility with the original view of value which they purport to modify. They amount to a new and entirely different theory of value, adopted out of "dialectical" necessity, or expediency. As scientific method they are atrocious, even illiterate.

Marx's qualifications are nothing but a pair of glorified fudge factors, added on with no warrant or justification except that they are needed to salvage his theory. For a dialectician, that is, sophist, they may have their justification in being "necessary"; but that is not a rational justification.

Marx's theory as modified is not the explanation for the phenomena it describes. The reason there are no minor variations in price from item to item is that capitalists use common sense – it would be senseless to charge different prices for identical articles, and besides, the capitalist doesn't calculate his required price on the basis Marx envisions.

The reason hand-made cloth can't sell at its full, original "value," is that people won't pay that price when essentially the same product is available cheaper. It is a question of supply and demand. There is a market explanation, not a quasi-physics explanation or indeed an arbitrary "social" explanation. Marx's proclamation that the "labor-time socially necessary" is such and such an amount, is no explanation at all.

By contrast, the reason Marx's theory runs more or less in parallel with actual results is that value does involve labor; the more labor, the higher the price – that much is true. But it is true for a different reason from the one Marx gives. It is true because the capitalist must recover labor *costs*; not because labor itself spontaneously transmutes into value, or because Marx by fiat defines value

as equal to a certain quantity of socially necessary, homogeneous labor. Value in the real world is quite able to disregard Marx's definitions, as indeed it did in all the centuries before he wrote them. Just as the planets were able to continue to orbit the sun in their own elliptical paths long after certain Scholastics had proved to their own satisfaction that their orbits must be circles, so too the realm of economics is able to function without being constrained or compelled by Marx's words on a page. Marx should have taken as his task the scientific one of describing how events actually occur in the real world – not the Medieval or Scholastic one of stipulating how they must logically occur.

(It should be added here that the lack of any quantitative documentation allows Marx's theory to seem more or less in line with the facts. If he had added any quantitative data, we might have been able to show whether value depends on labor alone, or whether it is composed of the three factors envisioned by classical theory, labor, rents, and profits. Of course anyone with the slightest familiarity with economics knows that the capitalist attempts to recover all his costs, plus a profit, in pricing his goods. But such is the degree to which Marx changes the whole ground of the discussion, that such obvious facts come to seem irrelevant. A quantitative example would have been useful for the reader; exceeding vagueness was more useful for Marx's purposes, however.)

In sum, Marx's theory-with-qualifications is not the reason prices (or "Value") are what they are; his theory is a rationalization added on after the fact, attempting to co-opt the facts and make them seem to be a result of the law or definition he provides. Marx tries to show how all events are governed by his theory; to show how phenomena in the real world fit into the schema provided by his theories, and how his theories are the ultimate explanation of the whole of reality. In the one realm where actual events are available for inspection to verify or refute his theory, his qualifications adjust his theory just enough to make those results appear to be the ones his theory would predict. But events are not actually governed by his law of value – they are determined by entirely different factors, and his theory is a separate, irrelevant matter which, thanks to the aid of "fudge factors," runs parallel to the facts.

That is, his theory and reality are two entirely separate matters; their results may appear to run parallel, but the theory exists only in Marx's mind. It never enters into the considerations of any of the people actually involved in the economic events in question; nor does it in any way determine any economic quantities. It is entirely fictitious.

It is much like astrology. There are people who believe that events in the heavens control, or predict, or "correlate" to, events on earth. There have been elaborate texts written showing how astrology has predicted events, like wars, deaths, and prices on the stock market. By a selective use of data, perhaps some such correlations can be shown.

But actually, astronomical events and earthly human affairs are separate realms. Both exist, but they are independent of each other. (That is, they are independent in the astrological sense; it can't be denied that the influence of the moon, in causing tides and so on, affects some human events.)

This comparison between Marx's theory and astrology merits some further treatment.

Comparison to Astrology

Astrology purports to relate human behavior to material phenomena, with the motion of the planets and stars being held to predict, if not actually control, human events.

It may be noted that believers in astrology are, like Marx, vague about just what kind of a relationship exists between the planets and men's fates. If human events always come to pass as predicted by the stars, it would seem that there must be a cause-and-effect relationship. But to say that would be to say that we are controlled by the stars, and that would deny our free will. Thus astrologers tend to say, "The stars impel, they do not compel." Leaving aside the question of how they impel, we may say that if they only impel, we may disobey, and if we may disobey, then the stars have no sure-fire correlation or predictive power. Yet astrologers claim there is such power.

Some astrologers explain that there is no compelling or impelling, that is, no causing of our behavior by the stars. Rather, there is "correspondence" or "correlation" – the stars only predict, they do not control, events. I.e., events on earth come about as the stars predicted, presumably as a matter of sheer coincidence. It is a coincidence which holds true in every case, as it were. But again, if there is that high degree of coincidence or "correlation," it can only be because one causes the other. There is no such thing, in the real world, as 100% correlation or coincidence with no element of cause-and-effect or natural law.

While people may purport to point out correlations, the correlations are actually bogus; no genuine interconnection exists. As in Marx's labor theory, there are two elements that are supposedly interrelated, but the two elements involved do not impinge; there is no possible cause-and-effect relationship between the juxtaposition of various heavenly bodies and the outcome of human plans and endeavors here on earth, just as there is no relationship between congealed labor and market price. (Again, this is disregarding the trivial sense, in which a flood caused by the influence of the moon may affect a person's fortunes.)
In one book about the reality of astrological "correlations" and specifically, the effects of astrological phenomena on the stock market, an author gives an interesting response to such objections as the above.

This book's purpose, in the words of its author, is "to present conclusive proof of a neat correlation between the Dow-Jones Industrial Average and certain planetary patterns and cycles derived from traditional Astrology, over a period extending from 1899 to 1971." Stating that his analysis is "built upon a sound statistical foundation," the author presents such "discovered correlations" as these: "Virgo...relates generally to unions and the labor movement, and to crops..."; "The planet Mars appears to act as a 'trigger' for certain 'bad' or undesirable long-term stock market movements"; and so on.

Recognizing the absence of a coherent explanation of cause and effect, the author submits this analogy:

Let the reader imagine that he is a 14th century fisherman living in a small fishing village... Part of the fishing lore he learned from the older men while he was growing up was the fact that high tide tends to occur about every 12 1/2 hours, and that every other high tide occurs as the moon reaches the meridian (that is, its highest elevation in the sky). Now, to the fisherman the cause-and-effect relation between the moon and the high tide is not the least bit important. He does not know that the moon is a body in space tied to the earth by... gravitational attraction, nor that this attraction is responsible for a bulging out of the water at antipodal points on the earth aligned with the moon. But his ignorance of the 20th century scientific explanation of tidal phenomena represents not the slightest hindrance to his use of the observed correlation!

Extending the above reasoning to Astrology, the reader will now appreciate that an investigation of the laws to which Astrology conforms should not be hobbled by the absence of a scientific explanation as to how the conformation comes about... 5

That is, the author is saying, the stock market may conform itself to, or correlate with, astrological events, even though we cannot yet give a scientific explanation as to why that is so.

The difference, however, is this: the sea is a merely physical body of water, conforming to the behavior of another merely physical body, the moon. The sea does not have a mind and does not decide to have a high tide at a certain time and place. The laws of physics assume that physical, or that is natural,

phenomena may affect one another. The purely impersonal phenomena of matter, energy, force, motion and so on are interrelated within the natural order of the universe. That is understood and accepted.

But when there is an element of choice, or mind, or will, then strictly impersonal, mechanical laws cannot apply. For example, human beings in motion do not "remain in motion in a straight line until acted upon by another force or object," as mere physical objects do (in one formulation of Newton's first law). Volitional beings, and even more so, societies, occupy a different order of existence from physical phenomena, and cannot be related to them by any scientific "laws." There is no possible way the stock market – subject to human economic behavior, decisions and events – can be governed by the signs of the Zodiac. Likewise there is no way prices of goods – set by people, written down on price stickers by people, previously estimated by people, paid by people – can be impersonally and mechanically governed by "internally-contained congealed labor" in some sort of scientific law. Price is not a physical, impersonal, deterministic quantity, and no law conceiving of it as such and purporting to prescribe its magnitude can be valid. The very nature of the law and its suppositions is anti-scientific and superstitious.

It might be possible, by a highly selective choice of data, to find a statistical correlation between certain astrological events and earthly events such as the course of the stock market. That is apparently what the author of the abovenamed book does. But to assert that there is a relationship is still scientifically illiterate; it is an attempt to link what are and will remain phenomena of two unrelated orders of existence.

Likewise, Marx's labor theory shows us a certain defined quantity of congealed, social, homogeneous labor on one side, and market price on the other. He may claim a correlation, but he is actually just presenting two parallel, but unrelated worlds. Congealed, homogeneous, socially-necessary labor, as invented or described by him, is a concept having reality or pertinence only in his own mind. Capitalists have never reasoned in terms of it, and it does not determine market value, i.e., price. Indeed it is for economic purposes an entirely fictitious concept.

No correlation exists or can exist between the two entities, any more than the stock market actually reflects astrological events. Marx is describing two isolated, non-impinging pictures or worlds and attempting to show that they are related; in fact they are not.

It is interesting that in his labor theory, as he attempts to show a correspondence between labor and "value," Marx resorts to just the same kind of rhetorical vagueness as is found in astrology. He doesn't say the labor "causes" the exchange value to be what it is, but that the two are "forms" of "manifestations" of each other. In his theory as in astrology, a line of cause and

effect can never be shown between the phenomena involved. Therefore in both cases the theory invents some other kind of relationship, a fictitious one, and describes it in vague and orotund rhetoric so as to disguise its fallacious character. Regardless of anything, a law developed in such a way cannot be valid, any more than astrological explanations of human events can be valid.

This is even more the case with Marx's labor theory; for the planets, stars, and so on at least actually exist, while Marx's materialized, congealed labor is entirely fictitious. Marx's theory is only aberrant speculation; it has no basis in reality whatsoever. By strenuous means and tortured argumentation he may purport to show correlations, and may even seem to succeed in making his theory run more or less parallel to the facts in the majority of instances where such facts can be checked. But his theory is entirely bogus; it is a rationalization and a sophistry, propped up and adjusted so as to seem more or less true-to-life, but actually irrelevant. It runs parallel to the facts, but it only follows after them; it has no role in them, does not cause them, and cannot be considered the explanation for economic events. His is a closed, speculative system which actually refers only to itself, built up from axioms and definitions of Marx's arbitrary choosing. It is advanced as a picture of reality, but in fact it bears no resemblance to reality, but is a substitute reality. There is no explanatory power in Marx's theory, and no scientific content.

In short, Marx's modified law of value may appear to give the right answer, or at least to show value and price moving in the right direction under certain circumstances. Still, it is not scientific and not an explanation. It is specious; it cannot by its very nature be correct; and it is mere sophistry, a case of modifying Marx's theory after the fact in order to preserve a semblance of reality. Marx's theory is pure invention, and the qualifications added onto it are merely "fudge factors," deserving of no serious consideration as science.

What Kind of Statements?

The question should be asked about Marx's two qualifications, as it was about the basic theory: what kind of statements are they? Are they scientific? That is, what is the justification Marx advances for them; what is their motivation and origin; and do they make scientific statements about scientific entities?

As to their origin and justification, they are basically just pronouncements, arbitrary decrees. They have no credible justification in real-world events. Rather, Marx simply proclaims them because he needs them for his theory's sake.

On the subject of fudge factors, it should be added that not every modification of a supposed law of science is such a maneuver. To illustrate the

difference, we may compare Marx's qualifications to certain alterations that have been made in genuine scientific theories.

At one time, for example, the law F=ma, one of Newton's laws of motion, was held to be valid. However, when the theory of relativity was devised, it transpired that F=ma is an approximation, quite accurate at "non-relativistic" velocities, but further and further off the mark as velocities approach the speed of light. The formula had to be modified by the addition of other relevant factors.

Or to give another example: it is now known, as it was not before, that the speed of the earth's rotation is declining, so that days are becoming slightly longer. This contradicts a previous assumption that the length of the day is a certain fixed period.

In the same vein, the speed of light and the paths of planets in their orbits have been measured far more accurately within the last 50 years or so then they had been before. This too has revised previous scientific knowledge.

The significant fact about all these examples is that the revisions or qualifications of previous scientific statements have had as their basis newlydiscovered factual data. The qualifications derive from the real world – from the discovery of something in real-world events not known before, or from new measurements of real-world phenomena not possible before. The basis of these revisions of scientific laws was experiential; since science is a description of how the world actually behaves, new knowledge of that behavior has caused us to reassess our previous scientific assertions.

By contrast, in Marx's text we see no evidence of a coherent scientific method. There are no new facts which he advances to show that his theory in its current state must be modified. He adds qualifications to his imaginary world mainly because he needs them, supporting them by mere dogmatic, authoritative decrees.

His qualifications are not in fact descriptions of how the world behaves, nor are they based on any evidence or observation of events in the real world. Like the basic theory itself, they are based on theoretical conjecture, on "dialectics" – the mere shuffling around of words. They are part of an invented, speculative system and they are added to the basic theory to preserve a semblance of validity for that system.

In other words, Marx in no way aims at describing how the real world functions and what rules and factors govern it. He has created a parallel world, one existing purely in argumentation or words on a page. Marx adds the qualifications to his labor theory, within this self-contained system, because he is intent on passing it off as a description of the real world. Thus to a theory invented basically from whole cloth and ordained or decreed to be reality, Marx adds certain qualifications or alterations also trumped up from whole cloth. The result is not coherent or rational, but it does preserve the appearance of accuracy. To the question of what kind of statements the qualifications are, then, we must respond that they are not scientific. They are not further reports on the workings of the real world; they are not descriptions of newly-discovered phenomena and events in reality. They are pronouncements or decrees, supported by specious rhetorical gyrations; they are sophistries. They do not in any way conform to scientific standards of what constitutes factual evidence and scientific standards of proof.

Objections

It may be objected that if Marx has to modify his original theory in order for its results to coincide with the facts, then it is entirely proper to do so. If his revised theory predicts the right results, it might be asked, how then is his theory any less scientific than any other? This is a valid question, worthy of serious consideration.

For one thing, Marx's finished theory doesn't actually predict the right results. It removes certain patent absurdities, such as the implicit need for minor variations in value from item to item (which would be required by his original theory). And it makes the *direction* in which value moves more or less consistent with actual prices. But his theory doesn't quantitatively show that prices correspond directly to magnitudes of labor. In fact, it is known, as certainly as anything can be known in the realm of social phenomena, that prices are not a function of labor only. Price covers a variety of factors and must be sufficient to recompense them all: labor costs, other costs of production such as rents, and a margin of profit. In the face of massive, overwhelming factual data and daily experience in the economic realm, it is senseless, if not infantile, even to pretend that the price is composed of labor alone.

To the extent that one defers to the evidence of facts as a basis for establishing credibility of assertions, classical theory must be held to in preference to any labor-only theory. To the extent that one is entranced by verbal gymnastics and the stringing together of abstract assertions and deductions isolated from the real world, Marx's labor theory may be convincing. It is a difference of mentality, a choice between science and sophistical argumentation.

Unverifiability

So, for one thing, Marx's theory doesn't give the right answer. For another, the reason it appears to give the right answer, and the reason we can only say it moves in the same direction as the right answer, without being able to say quantitatively in any instance what magnitude it actually does predict, is that

Marx's theory is non-verifiable, since it deals in non-scientific entities. The terms and entities in which his theory deals are not sufficiently concrete or "real-world" to enable us to measure or observe them. They are speculative, and they do not lend themselves to definitive measurement.

Marx's "value," after all, is invisible. The labor that creates it, or condenses into it, is of course visible and, in principle, measurable. But value, while it lies internally within the commodity, is invisible, unmeasurable, unobservable. Unlike such physical properties as mass, color, and volume, it cannot be seen or measured. And we cannot calculate its magnitude by simply timing the labor that produces the product, for that is just what Marx is telling us – the actual labor creating the product may not be what is embodied in it. Some of the labor, by some unknown mechanism, may fail to embed itself within the commodity, and its value may turn out to be less than we would have expected. Or in other circumstances the commodity may attract to itself labor floating free in the atmosphere, perhaps released from other commodities where it previously failed to embed, and thus an article may end up with more than the strictly "local" labor or value to which it seems to be entitled.

So we can't tell what the value is by measuring anything directly observable about the commodity. We can't see "value" in Marx's sense of "congealed labor"; we can only take his word for its existence and magnitude.

And by the same token we can only take his word that value is as described by his qualifications. He decrees that only "homogeneous" value, or an average amount, congeals in the commodity. He decrees that value is the minimum amount practicable – that only the amount of labor needed using state-of-the-art equipment congeals: that is, only the smallest price is acceptable. We have no way of determining any of this ourselves. We can only accept Marx's word for it, and grant credence to his Byzantine line of argumentation. We have no way of measuring value – that is, internal "congealed labor" – for ourselves.

Metaphysical Confusions

It might be thought that price is equivalent to value, and that market price is a measure of value. In normal vocabularies the two terms are nearly equivalent, yes. But we are dealing now with Marx's Aesopean, or private, definition of "value." It no longer means market value or economic value – these being for practical purposes identical with price. For Marx, value is just internallycontained labor. He says it exists, and he says market price is a "phenomenal form" of it – that is, a kind of alter ego or mystical incarnation of it.

We have no way of verifying this. In fact, his concept of "forms" is profoundly unscientific. It is either a throwback to Greek mythology or Greek "natural philosophy," or an early attempt by Marx at science, filtered through Hegel. For Hegel there is an ideal entity in spiritual or ethereal realms, and material objects are copies or emulations or "forms" of it.

There is no such scientific relationship as one entity being a "form" of another, in Marx's sense. A quantity may be proportional to another quantity, or may depend on another quantity, for valid, rationally-explainable reasons. This kind of relationship makes sense, and a relationship of cause and effect can be demonstrated. But to assert that one entity is a "form" of another is to descend into metaphysics and mysticism.

Thus on one hand labor exists and can be measured. And on the other, price can be known. But "congealed labor" is invisible and unknowable, not to mention scientifically incoherent. We can know nothing about it except what Marx tells us (assuming we take his word for it). Not only is the notion of "congealed labor" a scientifically incoherent one, the concept of some such relationship as one entity's being a "phenomenal form" of another is scientifically illiterate – a nonsense phrase. It is thus not just that Marx's laboronly theory is wrong in fact, as to the magnitude of value it would predict; the very nature of the theory, its foundation in the entities and relationships he describes, is profoundly unscientific. It owes more to mysticism, verbal gymnastics, and metaphysical speculation than to science.

It is not only not the right answer; it is not capable of being the right answer, by its very nature at the most basic level. Unless we are willing simply to abandon ourselves to Marx, and to discard all the methods and discipline of modern science, reverting to the superstitions and ignorance of past eras, we must reject Marx's theory and qualifications as much for their form as for their content.

We have seen how the entities and concepts found in Marx's theory are of a pre-scientific age. We should now say what he fails to provide in his qualifications, namely a description of a cause-and-effect mechanism whereby price, the "phenomenal form" of value, manages to equal the homogeneous, socially-necessary, internal value.

This is a great difference that exists between Marx's theory and genuine scientific theories. In genuine science, the relationship of cause and effect is never ignored; in fact it may be said that that relationship is one of the primary focuses of attention of science. It is not always pertinent, however. On the most elementary level, that is, looking at the most elementary laws, the only thing one can say about the reason for a law is, "This is how the world works; this is the natural order of the universe." Assuming F=ma to be a valid law, we cannot say *why* F=ma; that's just how the world works. Or taking Einstein's law, we cannot say why the speed of light is constant with respect to any observer. Such laws are fundamental, part of the basic "givens" of the universe. (Of course in the future

we may find out that they were not as fundamental as we thought, and that there are still more fundamental ones underlying them.)

"Higher" laws, by contrast, are drawn from more elementary laws, and a line of cause-and-effect explanation can be drawn. An example is $S = V_i t + 1/2at^2 - this$ law can be derived from the law (or approximation) F=ma.

In addition, particular instances can be derived from general laws. The paths of missile shots into outer space are predicted from general, universal laws of motion, applied to particular instances, launching spots, desired trajectories, and so on.

Thus in genuine science there is always an element of cause and effect; if the relationship of cause and effect has not yet been discovered for a certain phenomenon, we still do not deny the existence of an explanation; we do not abandon the search for it or deny the very need for a rational, cause-and-effect relationship.

That is however what Marx does in his qualifications. He advances "proofs," specious argumentation, verbal acrobatics; but the relationship he posits has no coherent element of cause and effect, nor by its nature can it have. His assertion of the qualifications is not based on any natural mechanisms which might exist in the real world. By clever, or at least convoluted, "dialectics" Marx manages to "prove" value correlates to the theory as modified by his two qualifications; he never gives us any explanation or demonstration in practical terms of how this is so. He gives no line of cause and effect by which it is possible for it to be so.

Thus, to repeat, Marx's modified labor theory is not the correct explanation of what determines the value of a product; and it is not capable of being the explanation. That is to say, not only is it factually wrong, in that a different set of factors actually determines value; but also it is metaphysically wrong: the very nature of the explanation is such that it could not apply in the real world and could not conceivably be the correct answer. The very terms and paradigm via which the theory is envisioned are contrary to reality.

The Mechanism

Consider again the two sides of the equation, labor and value. Labor is in principle a measurable quantity; it is an observable event. And the amount of labor required to produce a commodity is more or less determined by the current state of technology, with some variations related to the degree of efficiency of management and labor.

Thus the magnitude of labor may be said to be human-determined, in that humans develop the machines and perform the work. But at the same time it is mechanically determined, in that the state of technology at any given time constitutes more or less a physical constraint on the amount of labor which must be invested. And also this amount of labor, once performed, may be considered a merely physical, impersonal quantity.

As for "value," that is an invisible essence, an ethereal substance congealed within the commodity, which we cannot observe or dissect out; we must take Marx's word for its existence, and for the fact that it equals – is identical to – the invested labor.

And finally, at the other end where Marx's theory again touches ground – where he once again talks about something we can see – there are prices, the "phenomenal form" of value.

It is difficult to see how these various entities could be related in a causeand-effect manner. By what mechanism does market price come to equal, in every case, the magnitude of the internally-contained "value" – an entity which no one can see or measure, and which no one had ever heard of until Marx wrote?

Karl Popper addresses this issue, as follows:

The fundamental law of the theory of value is the law that the prices of practically all commodities, including wages, are determined by their values, or more precisely, that they are...proportional to the labor hours necessary for their production. Now this "law of value"...at once raises a problem. Why does it hold? Obviously, neither the buyer nor the seller of the commodity can see, at a glance, how many hours are necessary for its production; and even if they could, it would not explain the law of value. For it is clear that the buyer simply buys as cheaply as he can, and that the seller does exactly the opposite... In order to explain the law of value, it would be our task to show why the buyer is unlikely to succeed in buying below, and the seller in selling above, the "value" of a commodity. This problem was seen more or less clearly by those who believed in the labor theory of value...⁶

Popper then goes on to discuss their response. Indeed, Marx himself supplied an answer to this problem, (but that will be treated later in this text).

Another question, apart from how price comes to equal Marx's "value," is how labor alone comes to be "value" in the first place – these are related questions. For Marx, abstract theorizing is the first source of the answers – that tells what is value, the fact that price must correspond to it, and so on. Then afterwards reality and the real thoughts and actions of economic agents are retrofitted onto his theory. The point is, real economies don't work like that; they

work as Popper describes above; and these real-world facts, rather than a theoretical picture drawn up from whole cloth, should be the starting point of our analysis.

Our question, again, is what mechanism, what real-world line of cause and effect, causes price to correspond to internal "value"? Is it the sheer magical effect of the phrase "phenomenal form" that acts as a powerful incantation or magical charm? The phrase "phenomenal form" is a mere nonsense phrase; it has no explanatory content at all. However, it is at the heart of Marx's method. He carried the concept of "forms" over from Greek philosophy and Hegel: everything is a "form" of something else; or all objects are manifestations or "forms" of the one ideal model or paragon of each particular thing.

There is in it also a large component of Greek mythology, in which the gods assumed various guises and forms. And it implies a superstitious belief in the power of mere words or force of logic to define or compel reality – the "dialectical" view of science as it were: because Marx can come up with a line of argumentation, or with a few hand-waving phrases like "phenomenal form of value," by which to define reality, he assumes that reality is thus constrained and must conform to his verbal formulations. This is exactly backwards from the workings of genuine science.

"Forms"

To return to the subject of "forms": the Greeks depended heavily on the concept of various "forms" of things, envisioning all phenomena as alternate guises of other things. For example, Heraclitus: "Everything is an exchange for fire, and fire for everything; just as gold for wares, and wares for gold."

Karl Popper described the philosophy this way:

The things in flux, the degenerate and decaying things, are...the offspring, the children, as it were, of perfect things. The father or original of a thing in flux is what Plato calls its "Form" or its "Pattern" or its "Idea." As before, we must insist that the Form or Idea, in spite of its name, is no "idea in our mind"; it is not a phantasm, nor a dream, but a real thing. It is, indeed, more real than all the ordinary things which are in flux... for the Form or Idea is a thing that is perfect, and does not perish.

The Forms or Ideas are outside space, and also outside time (because they are eternal). But they are in contact with space and time; for they are the primogenitors or models of the things which are generated, and which develop and decay in space and time... Since they are not with us in our space and time, they cannot be perceived by our senses, as can the ordinary changing things which interact with our senses and are therefore called "sensible things." [Or, "phenomenal things."] Those sensible things which are copies or children of the same model or original resemble not only this original, their Form or Idea, but also one another...⁷

Thus tables have certain differences from one another, varying in size, materials, etc.; but they are alike and are recognizably tables in that they are imperfect copies or offspring of the one perfect table, which is their Form or Idea.

Marx borrowed this bit of speculative philosophy or metaphysics for use in supporting his "scientific" labor theory. Value, as he presents it, is almost a Form or Idea – it is unseen, unexaminable, and inhabiting an otherworldly realm. It is represented on earth by its "phenomenal form," prices. This superstitious metaphysics Marx passes off as science:

In the *Republic*... Plato had explained his point even more clearly, using as his example the "essential bed," i.e. the Form or Idea of a bed: "God...has made one essential bed, and only one; two or more he did not produce and never will...." If two things resemble each other, "The resemblance would thus be explained...not as one between these two things, but in reference to that superior thing which is their prototype," as Plato said in another context.

The Greek philosophers "all agreed with him [Plato] in determining the task of pure knowledge as the discovery of the hidden nature or Form or essence of things." ⁸

"And a description of the essence of a thing they all called a 'definition.' " The ancient Greeks were making the first stumbling stabs at understanding the universe; but Marx should have known better than to revert to a long-displaced philosophy and to substitute it for modern science.

At any rate, the mere waving around of the phrase or incantation, price as a "phenomenal form" of value, cannot cause prices to conform to the internal value of commodities. What then is the mechanism?

Prices are governed by people. Someone decides what to write on the price sticker – what to ask. Someone decides whether or not to pay that price – how

much he will give. How does the price thus arrived at – which would seem to be arrived at partly by the action of free will of men, or at least by the interaction and "conflict" of their free wills – how does that price come always, in every case, to equal internal unseen "value"? What is the mechanism?

Of course, Marx himself doesn't give us one. He has proved his theory to be true, by various twists and turns of "dialectic." Thus if the theory is proven, it needs no other elucidation – logic can compel the facts.

Thus price, which is set by human decisions or at least partly by the interaction of human decisions, somehow corresponds fatalistically, without the exertion of any conscious effort by anyone, directly to the congealed, internal value. There is a physical, naturalistic law of the material universe, linking the physical property "Value" to what appears to be a human, volitional quantity, price. Such a linking must be done by black magic, or fate, or an astonishing degree of sheer coincidence.

For the remarkable thing is, no one pricing a commodity ever sets out to calculate the internal "Value." No one says, "I have to calculate the one, true value for this commodity, namely its internally-contained congealed labor; I have to put that price on the commodity, otherwise I will be violating the laws of the universe." No one has to take thought to keep from violating the laws of the universe! For the laws of the universe – natural laws of physics, chemistry, etc. – apply to purely material phenomena. They apply spontaneously – they enforce themselves, as it were. And they are not concerned with matters where human will and choice enter into consideration. That is Marx's scientistic fallacy, one common to this day – though few people have been as abjectly under its sway as he was.

So if no one calculates the internal "Value," or indeed the embodied labor, if no one consciously tries to peg price to this internal "value," how then does price come to equal, in every case, the internal value? Again, what is the mechanism?

One possible answer is that perhaps someone *does* calculate the embodied labor. While true "value" lies unseen within the commodity, it equals the labor, and labor is recognizedly a significant economic factor. Perhaps for purely economic reasons, because of some complex of real-life economic constraints and considerations (unelucidated in Marx's system of abstractions), price is forced to equal labor, and thus value. Could there be a line of cause and effect like that?

Perhaps there is. Labor, after all, is probably the main factor in production costs, so it would seem plausible that prices might end up corresponding to labor. This could be so even though no one consciously calculates the number of hours of labor and says, "This product took X hours of labor to produce, so the one correct price corresponding to its true value is" – whatever the amount may be. It may result simply from the production costs, i.e., the amount of the payroll.

Price may indeed correlate somehow to labor, but the above-described process is more like the classical view; it depends on economic entities, not metaphysical ones; and it is certainly not what Marx posits. His explanation is that labor congeals directly into value, which is a substance within the commodity. He rules out conscious calculation of any kind, including the pegging of price to payroll costs. (Any such conscious calculation would bring in human will and the possibility that such calculations and considerations might be ignored or overruled or changed, thus flouting Marx's law of value.)

Marx's explanation is that by sheer force of logic, or by a physical transformation, labor becomes value. And price, for its part, equals value because it's a "form" of it, in the mystical or philosophic sense; it is an alternate guise of it, a manifestation in alternate form of it, a different incarnation. Thus price equals value, essentially, by philosophical mumbo-jumbo, by dogmatic pronouncement, or by the effects of "a specious and fantastic arrangement of words." Marx tells us that it is by a chain of metaphysical necessity that price equals value – not from pedestrian economic considerations.

In short, the whole paradigm Marx envisions, and the entire basis of his argumentation, is not a matter of real-world economic constraints. To admit market forces into the argument would be to break the spell of his entire veil of shimmering, abstract pronouncements by admitting grubby, pedestrian economic facts. We might devise or suggest some argument or line of cause and effect such as we've suggested; but it would be foreign to the nature of Marx's text.

To admit market forces into the picture would be to dismiss the whole selfcontained, philosophical system of proofs and mechanical inter-relationships Marx has set up. It would be to abandon his purely speculative automation or self-referring, automatic system and his materialistic quasi-physics. Once we are on the firm ground of market forces and human choices, there is no reason to stop with labor alone. We would go all the way and say price is a complex of three factors, not one: labor costs, land costs or rents, and profits. If real-world considerations and actual facts are to be admitted, then the classical explanation will overwhelm Marx's theory with ease.

Marx's "explanation" of value, actually a non-explanation, is not in any way based on human choices or market, economic constraints. For him, price equals value, and value equals exchange value, automatically and impersonally. His economics is first of all a quasi-physics: purely physical interrelationships determine various quantities, in accordance with the impersonal laws of the natural universe. People do not enter into the determining of price. An economy is an automaton, a machine or system governed by its own internal logic.

Moreover, his economics is a quasi-mathematics: each deduction or theorem is based on previously-derived deductions or theorems, and his argument proceeds primarily by way of these theorems, axioms and definitions of his own

choosing. These deductions, proofs, and so on are deemed in and of themselves to be compelling, and Marx apparently sees not need for any further elucidation. The fact that an assertion is proven is considered enough; to seek understanding of how his conclusions can be true in the real world, is to ask for more than Marx felt required to give.

Thus, once Marx has proven, to his own satisfaction, that price is a "phenomenal form" of value and that value equals labor, it is senseless to ask by what mechanism in the real world such an equivalence could come about. He saw no need for any explanation or elaboration of any working mechanism.

There is no line of cause and effect possible by which a humanistic or volitional entity, such as price, can be determined by a purely physical "substance" such as Marx's internal "value." Nor can it be determined rigorously and infallibly by a factor like the amount of labor invested.

Matters subject to human will or choice inhabit a different realm, as it were, from purely material phenomena. They are phenomena of a different order, subject to not only different laws, but a different kind of laws. This is the fundamental difference between "social science" and natural science. This is something Marx never grasped – that different orders of phenomena behave in accordance with different kinds of laws. Events subject to human choice cannot be governed by purely physical quantities and relations – the two do not impinge; they are not on the same level.

In a trivial sense they are on the same level, of course: if a boulder falls on your head you will probably decide not to go to work today. But in the sense of there being a law relating human or volitional matters, such as price, to supposed physical quantities such as "congealed labor" – in that sense it is nonsense, and scientifically illiterate nonsense.

What must be understood is that phenomena of different orders are subject to laws of different levels of complexity. For instance, take mere material objects such as rocks: the laws which describe their characteristics and behavior are basic ones which apply on a purely mechanical level to all physical objects in the universe – the law of gravity, laws of motion, and so on. On the next-higher level are biological entities – algae, cows, and all living things; the laws of biology are quite different from purely physical laws. They are less rigorous and mathematically exact than purely physical laws, more generalized and descriptive. Examples of these are, that all organisms must take in nourishment or energy in some form; that they consume energy or nourishment in order to carry on biological functions; that life comes only from reproduction, not from spontaneous generation; and so on. These are the kind of universal generalizations, or laws, that apply to biological entities, and they are of a different order from purely physical laws. Of course, on a certain level, biological organisms are also material objects, and as such they obey material laws. Cows and other creatures are subject to the laws of gravity and motion, just like all other objects. If you put a cow in a catapult and launched it into the air, you would expect it to describe roughly the same characteristic parabolic path as any other projectile. Entities on each succeeding order of complexity are also subject to the laws that govern things on the lower levels.

Human beings are yet a third case. They are on one level material objects, and as such are subject to physical laws. Then again, they are biological entities, and have the same biological nature as all living things; they ingest nourishment, are subject to disease, and so on. But then again they inhabit yet a third, higher level of existence. What makes this level different from preceding ones involves the element of will or volition for one thing, as well as a higher level of intelligence, and in addition (some people might say) a spiritual nature which makes pertinent such issues as morality or right and wrong, and which sometimes proceeds under the name of having a soul.

But for our purposes the significant issue is the one of volition. Of course, animals have volition too, as anyone who ever plowed behind a mule knows.

The subject of the difference between the animal "mind," if such it may be called, and the human, is a complicated one, as is indeed the whole subject of what makes people distinctively and uniquely human - too complicated to go into here. One thing is certain, however: human beings have volition of a different order from that of rocks. That is, people do not function on a purely material level. It is all right to say that "An object in motion tends to continue in motion at the same velocity unless acted upon by an external force or object" that is an accepted law; but that applies to objects as objects. Human beings have volition and leg muscles; once in motion in a particular direction, they may decide to go in another direction. If you hit a billiard ball into a group of other balls at a known velocity, theoretically you should be able to predict how each individual ball would move; the outcome in such a case depends on purely physical quantities. But you cannot predict where a human being will be in a few minutes just from knowing his present position and velocity. Human beings are entities of a different order, and obey laws of a different level of complexity. That is why Marx's pretensions to applying the "laws of motion of matter" to human society are scientific ludicrous. And that is why his attempts to formulate purely physical laws governing the price of goods on the market are also ridiculous Yahoo science.

Marx's theory is not based on the facts, and not designed to explain the facts. His logic proceeds in the other direction: first he selects his theory, then he attempts to make the facts appear to result from his theory: he co-opts the facts. Rather than seriously and honestly – scientifically – allowing any theory he

devises to be subject to the facts, he would subjugate the facts to his theory. If to do so requires sudden and illogical revisions of his theory, transforming its entire basis and theoretical framework, then such changes of course will be made. Anything to preserve his "labor-only" theory.

Evaluation

To sum up, we may say that Marx adjusts his theory to make its results correspond superficially to facts; and since the actual outcome conforms to his law of value, one might be tempted to say his law is as scientific as any other. However, while the results predicted by his theory seem to tally loosely with actual results, that is just a result of sophistry and rationalization.

Marx's theory, even though it seems to give the right result, is not science. It doesn't actually give the right results – it only seems to because it is vaguely formulated and not quantitatively investigable.

Not to put too fine a point on it, his explanation is incorrect because the classical explanation is correct, and is known to be correct from massive amounts of observation. Second, the very nature of his theory, purporting to reveal deterministic laws governing a realm subject to human control, is antiscientific and superstitious. And thirdly, the justification or reasoning he advances for the qualifications is specious. There are "internal contradictions" in his theory, a lack of logical coherence between the basic theory and its modifications.

The first qualification is justified mainly by declamation and bombastic rhetoric, by simply declaring that only "homogeneous" labor "counts" or creates value. It is supported with hand-waving arguments (like the flourishes and hand-wavings of magicians, used to distract attention from the central point). That is, Marx devotes himself to describing how labor can be divided up into "homogeneous" units, but fails to give any coherent reason why only these "homogeneous" units create value. He shows that the invested labor can be averaged; but this is not a revelation. He doesn't really say why the average should be taken as the value.

For use in both qualifications, Marx announces a new standard, pulled from thin air: "socially necessary" labor, as opposed to plain old actual labor. And he arbitrarily defines what is socially necessary.

None of these "social" redefinitions of value can merge coherently with Marx's initial picture, which has labor directly, materially embodying itself in the commodity.

Marx's second qualification leans even more heavily on the arbitrarilyannounced standard of "socially necessary" labor. Marx defines that term as meaning only the minimum amount of labor, that is, the smallest practicable amount (or to give it a classical interpretation, the cheapest price). This minimum amount of labor is the only valid value. Again, this new definition cannot merge into a coherent whole with Marx's picture of labor congealing directly within a commodity. It is mere arbitrary re-definition, an attempt to constrain and delimit reality by mere force of words, not based on any facts.

Thus the basis of Marx's qualifications, the source of their justification, is just "dialectics" – glib rhetoric and specious manipulation of words. There is no solid foundation for them in any event or fact, and his theory contains no attempt to describe or codify real-world events. It is not science, but speculative theorizing, or the creation of an imaginary world from words, assumptions and argumentation. It is at best science on the Scholastics' model.

The net result is this: Marx's labor theory of value as originally stated, together with the added qualifications, is an attempt by sheer force of words to make that which is untrue seem true. There is no effort on Marx's part to find out how the world really works and to describe it. He does not exert himself to fit his theory to the facts; rather he would co-opt the facts for his theory and make only such modifications or sudden reversals to his theory as will keep it more or less in line with the facts, at those few points of reference where his theory can be factually checked.

His method is primarily one of inventing a self-contained, fictitious world, and of imposing this science-fiction world as the real one. His is a bullying theory, seeking to overbear reality. When necessary, he modifies or indeed reinvents his fictitious world. But his theory does not describe or explain the world; the laws he posits are not actually what control the events in question. Rather he is inventing a parallel world, and attempting to pass it off as real. The real world, and description of that world, *is not his topic*. It is his theory, or his parallel world, which he deems to be of highest validity; the facts are secondary and subordinate. He fits the following characterization, written by Medvedev (but about Stalin, not Marx):

His approach to theory was wrong in essence. He did not derive theoretical positions from concrete reality; he forced theory to fit his wishes, subordinated it to transient situations – in a word, he politicized theory.⁹

To take a patent falsehood and attempt to make it seem true by sheer force of logic, voluminous flow of words, and circuitous and convoluted argumentation – that is just the kind of thing Marx does in his "labor theory of value."

Final Appreciation

Marx's treatise bears very few of the earmarks of an empirical investigation. It is not an analysis based on the facts, a search for the underlying order and regularities behind observed phenomena. Rather it is a statement of the convictions of Marx's own mind, an elaboration of the picture of the workings of the world which Marx had constructed in his own internal thought-processes. This structure of preconceived notions about the nature of the capitalist, with various added assumptions and deductions, is what Marx advances as a scientific account. He offers it with great conviction and vehemence, mostly in the form of dogmatic utterances supported by nothing but his own inner convictions.

Marx's method, then, is simply to elaborate the picture he has formed in his mind of the way the world works. He sometimes condescends to adduce deductive proofs of what he says; at other times he just issues his decrees *ex cathedra*. But in whichever way he attempts to convince the reader of what he says, he is always inventing a world out of his own mind, not describing the real one as it might appear from any serious investigation or observation. His method is "dialectical" in the sense that it is based on argumentation, on armchair theorizing and syllogistic deductions. It is a reversion to Scholastic methods, with no investigation of facts. Direct observations, experimentation, and objective verification of his theories are not employed. His main concern and interest is in constructing a self-consistent schema; each feature he adds to his theory must be logically consistent with what has gone before it, and make a unified whole. His picture of the world, like the worlds of science-fiction writers, may be fanciful and imagined, but it should hang together as a unified piece.

Another concern is this: there are certain points where his imagined world does touch the ground, so to speak: where it concerns observable phenomena and where the results as the theory would predict them can be compared to the results that actually obtain in the real world. These touch-points are few, and Marx's theory generally is able to present a semblance of preserving an accord with reality at these points.

One example is the matter of prices, or the whole end result of the theory of value. Marx's theory is of course a labor theory, wherein congealed labor alone automatically constitutes value. His theory predicts roughly that when there is more labor, the price is higher. This is in general accord with the real world, or (to be more cautious) with classical theory: the higher the labor costs of an item, the higher its price.

The correlation between reality and Marx's theory at these widely-scattered touch-points adds credibility to his theories. But while the end results may correspond, the actual explanation of what caused those results is not found in Marx's theory. Moreover, the points of comparison are so widely scattered, and the correspondence is so vague and inexact, that these comparisons (of results predicted versus those obtained) constitute no proof at all.

Marx's "scientific" method is to create a fantasy world from his own mind and inner convictions; and to invest this fictitious picture with all the credence and authority at his command, asserting its validity, if necessary even above that of objective fact. His conception of science is "whatever I put down on the page."

It has been said that for every event there is always someone who believes it happened according to his pet theory. Marx always takes that attitude; but we should be suspicious of his glib efforts to give his theory credit for real-world events.

Notes

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- 4 USA Today, June 2, 1988..
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- 7 Popper, Karl, op. cit..., p. 28.
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