

The whole question technically when it's dialectical is the relationship between mathematics and science, not merely "in general" but most specifically at the present stage of high tech. Nothing like that was present either in Hegel's day or in Marx's. Hegel rejected mathematics as any sort of method for philosophy, but he gave it high ratings if you limited it to analytical problems. At that point, however, it ~~is~~ has reached the kind of high point that actually signifies its collapse, that is to say, all the pile-up of facts ~~can~~ cannot answer the next stage. to anticipate that, dialectics shows that it's not only a method for philosophy, but a method for all objective as well as subjective matters.

2. Marx went into it more concretely, and at the same time more abstractly, by singling out second negativity -- negation of the negation -- to prove that they had not been able to get beyond Newtonian physics because unless you work out what is the absolute opposite, not just the opposite, but that type which is the highest point of contradiction, just as it was necessary to see relationships to move from bare addition and subtraction to algebraic formulae and to geometric space, so it is ~~of the~~ of the highest necessity to develop ~~develop~~ calculus by working out the absolute opposite in the relationship of what you had heretofore as against what you are aiming at.

10790

who has
found it
or wants
Seymour
Seymour

In the case of Russia, what they were aiming at in 1931 was how to get the ~~Five~~ Plan, to produce what it is supposed to produce when they have no competition of private capitalists to monkey with. They ~~found~~ "found" Marx's Mathematical Notebooks and tried to see what it said about capitalism. And they found that the law of value in explaining ~~the class struggle, the exploitation of labor needed, the despotic plan of capital running~~ ^{the class struggle, the exploitation of labor needed, the despotic plan of capital running} into all sorts of contradictions in the competitive market world when each capitalist makes his distinction regardless of what the others do. They therefore promptly decided that the law of value is socialistic because they don't have that market competition, internally, never mind the world market. They therefore gave a very high priority to mathematical science. To this day they have the best of the world's scientists and the mathematical studies begin in high school, if not grammar school. To think that they cannot work out the computer because they don't have all the ~~mechanical machines~~ mechanical machines which the West, and more importantly Japan, has, is to forget that they were the first to reach space with the Sputnik, and that they now have a great deal more than we have in space-stations and it will take ^(more than) all the technology for us to catch up.

^{One} ~~the~~ real concrete point is the state of militarization that they have reached in armies and tanks to reach with Star Wars, and what the Iceland collapse did was to give the go sign to a deathly arms race between the two nuclear powers.

10791

11/5/86

Some very Rough Notes For a Letter if I will decide to write one, to Robert Cohan

1st, in relationship to it as a self-criticism of ourselves, not very full it is true, since I do not know computers or mathematics and in any case it would not be of interest to Cohen. But the point is that the self-clarification of ourselves on the question when a new phenomenon appears academically, how can dialectic method directly relate to that new phenomena.

2nd, as physicist can Cohen shed any light on the relationship between mathematics, natural science and history, not as mere fact but as to their meaning. Cohen didn't show that in his 2/15/85 note to Kevin where, 1st he thinks Bukharin is the issue to us because of its relevance to the scientific and technological revolution. No, it was of relevance because of his vulgar materialism as shown specifically in the Plan, so that he wasn't the least conscious of the fact that what was the consequence of Plan, the scuttling of the law of value the following decade, MUCH less that it would be preceded by the destruction of the "general staff"

10792

of the revolution, himself prominently included.

3rd, and the central heart of the issue at hand, is philosophically--that is, how can philosophically-- show the process and direction ^{for} a particular science, in this case mathematics/computers "resulting" from calculus. The whole task I put before Franklin was the specific quotation of the meaning of the changing method, the transforming method, i.e., dialectics vs. mathematics, the way KM used it in his Mathematical Notebooks which Franklin quoted on p. 19 of High Tech pamphlet, which talks about "differential calculus appearing as a specific type of calculation which already operates independently on its own ground. The algebraic method therefore inverts itself into its exact opposite, the differential method..."

I asked Franklin to continue this question of transformation into opposite, "derivative," "inversion" and "reversal of roles", "operational symbols" all the way to the negation of the negation and not be diverted by calculator lingo like algorithm and instead stick to Hegel's synthetic method in that chapter two on the Idea of Cognition in Section 3.

10793

I felt that Franklin had caught, but none of us did, but was so modest about his "modification" that we didn't notice*, I wanted him to tell me this time exactly what happened. And this he wrote me on 11/4/86:

June
1st, at 1984 Ron had not used the words limits at all, that he suddenly brought in in a modified version in August 1984, footnote 9 on p. 6, he not only introduces as if that were the point at issue was "limited value", but says of Marx pointing "to the 'childishness' of the assumption that the right result is attained by hanging out in the right neighborhood...without taking the plunge to 0" and then Ron expands the error: "the point of no return is 'no limited value' but stands by itself in a relation of equivalence. It's not so much a 'limit' as a new beginning** which can itself undergo differentiation.

*The first (6/84) that Ron issued on his own had a fantastic end of the title and that was that the fetish of high tech that we was writing on Marx's MM AND MARXIST-HUMANISM'S GREAT DIVIDE. When did we ever use in print Great Divide except for Lenin's PN during world war I. Only once, did I use in a Archival sense (probably some perspectives) that another Great Divide could be said to be in the 1980s as the designation of Marxist-Humanism. But to say Marxist-Humanism's Great Divide ~~is~~ in a discussion bulletin of one, with no ~~is~~ one having seen that one which was so declared, is incredible.

**Please note how he misuses new beginnings! Not only is it not a new beginning as we have made it a category of open doors at the highest point, ~~the~~ after the Absolute, but at the best it could only be the beginning of the same type of thing.

10794

Franklin calls attention that Marx did not only criticize Newton, that was the beginning of his historical study. "Ron ignored the second and third phases that Marx saw in the historical development, 'rational' D'Alembert, and 'algebraic' La Grange. What I meant at the time was that Newton's method was not the method used by mathematicians today, when the critique of Marx did not apply. I should have noted that Marx had a different critique of those two phases, and Ron should have showed what those criticisms were and what was new today as Marx didn't stop here Hegel stopped, with Newton and Leibniz."

Franklin also mentions that where Ron talks of "the limit that defines differentiation as 'the limit of dy/dx as dx approaches 0' this is wrong, because dy and dx are symbols introduced after the limit is taken not before."

What Franklin ends with on the ~~question~~ whole question being how does the function change, not just what is it at a certain point, would really require my digging into the philosophic critiques of rationalism before I can really write a letter, again if I do decide it should be written at all.

VIL's PN, p. 209-210 from chapter 2, 'Idea of Cognition', but first touched in Doctrine of Being, Section II On Quantity, VIL's PN p. 118.

OVER

10795

vll, p. 117, on infinite mathematics
and refers to Engels.

10796

RSC

Dear Robert Cohen,

Suddenly, I remembered when first we met in Connecticut soon after M&F was published and I am sure I did not speak on the Absolute in your class, and I certainly did not have Hegel's three final syllogism in M&F, although I had worked on them in 1953. So you must have challenged me on the parallelism I drew on the Absolutes of revolution and counter-revolution. I do remember that when I was at your home you had Philosophy of Mind in your library and we then discussed those three final syllogisms. Now I know that it wasn't only because I didn't know about computers, and I doubt the computers in the 1950s were anywhere near center-stage that they are now.

Despite the fact that I know you didn't think our bulletin on Marx's Mathematical Manuscripts was any sort of important breakthrough, and you get referring in your letter in Kevin to "facts" as all that had been written on these Manuscripts long before our bulletin. Of course I disagree with you, because I know very well what had been written, and I know very well that it was no Marxist-Humanist view point. But that is not what I want to argue about. What I wish you would help me with, and as a physicist you must know a great deal more than I do on the subject, is the direct relationship between what Marx did in the Mathematical Manuscripts on differential calculus and what is now the problem with the computer. And the Russian specs are doing the very same thing as the Western specs, trying to wish away the time lag between science and its "application" i.e. the production line.

10797