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the Italy Lectures

WHAT ONLY COMMUNISTS KNOW

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Table of Contents

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Editorial

Race Against Time

At this moment, the human race stands closer to destruction than at any time in its history. The remaining loyal elements of the Rockefeller political-financial machine — which once bestrode the world like a colossus but now rages in the mortal terror of its impending extinction as a species — are determined to salvage what they can by bringing the world to the brink of nuclear war. Under present military-strategic circumstances, such desperate folly means the total thermonuclear destruction of North America and major destruction in Europe and the Soviet Union.

As this is written, Rockefeller's employee Henry Kissinger — still stinging from a major defeat at the North-South Conference — has unleashed his re-tooled Black September terrorists in hopes of provoking a new Middle East conflict which can be used to blackmail the Soviets and Middle East pro-development forces. If this provocation does not work, the crazed Nelson Rockefeller will order Henry to try some even more risky and dangerous provocation, bringing the world perilously close to World War III.

If the human race survives the next few weeks, it will only be because anti-Rockefeller forces in the United States and anti-Atlanticist forces in Western Europe have moved with sufficient boldness and determination to remove Rockefeller and Kissinger and their valets from the positions of power from which they can wield the levers of thermonuclear terror.

The present desperation of the Rockefeller machine is actually the death-agony of the Rockefeller dollar empire. In a matter of weeks, a few months at most, either the dollar empire epitomized by the Rockefeller banks will be collapsed and forever finished, or Rockefeller will have "successfully" defended his empire at the cost of destroying the human race. Either the "New World Economic Order" now demanded by leading Third World spokesman will be underway with the full participation of the Comecon sector and the cooperation of industrial forces in the capitalist sector, or thermonuclear holocaust will have engulfed major portions of this planet.

The prospects have never been better for launching a new program of industrialization and development, of reversing the present depression-collapse and for embarking on a new era of East-West and North-South cooperation. But the final obstacle which blocks the way into this new international economic order are the hundreds of billions of dollars of dollar-denominated debt now strangling the world's productive forces.

It is Rockefeller's unrelenting demand for full payment of these debts which impels him into more and more desperate threats of nuclear war. If the debt goes, Rockefeller's power goes. Debt moratorium means the death of the dollar empire, and the extinction of the Rockefeller financial species.

The Strategic Shift During 1975

Things were not always so grim for the Rockefeller species. It was only during the late spring-early summer of this past year that the international correlation of forces began to shift dramatically against Rockefeller and the Atlanticists. During most of 1974, the Labor Committees stood virtually alone in warning of the dangers of the Rockefellerpest. But by late 1975, the programmatic policies first proposed by the Labor Committees have become the operative policies of governments representing the majority of the world's population. The strategic thinking and outlook of the Labor Comittees have been reflected in profound policy shifts undertaken by the Soviet Union and various East-bloc governments as a result of a process of convergence of analysis and policy. The Labor Committees' intelligence estimates and scientific competence is increasingly relied upon by industrialists and other capitalist forces in the U.S. and Western Europe.

The series of articles published by the Labor Committees in late 1974 under the title "Rockefeller's 'Fascism with a Democratic Face'" provides us a useful point of reference for gauging the changes in the balance of forces during the past year and thereby, also, to locate the sources of Rockefeller's absolute fear and desperation at this point in history.

Fifteen months ago, the world looked quite different. All of the major world-governing forces were hell-bent on appeasing and capitulating to Rockefeller. The Soviet leadership was still displaying its Oblomovist tendencies, and had lost significant strategic ground over the previous period. Both the Soviet leadership and the Western Communist Parties were still subjected to the disastrous "Allende Syndrome" — keeping demands within the framework of capitalist toleration so as not to unduly provoke the rage of the imperialists.

On the military-strategic front, the Soviet leadership still appeared to be caught up in the psychological-warfare trap of the Schlesinger "flexible response" ruse. Through duping the Soviets into holding back on the all-out use of strategic nuclear weapons during a confrontation, the U.S. hoped to be able to get

the drop on the Soviets while maneuvering the Soviet bloc into making more and more concessions.

During 1974, the Rockefeller drive for the implementation of Schachtian austerity programs thrust ahead virtually without opposition. Slave-labor programs in the advanced sector combined with the most vicious self-speedup, "co-participation" industrial brainwashing, and the labor-intensive redeployment of industry to Third World countries proceeded apace, with a category of "Fourth World" countries officially condemned to genocidal starvation.

The circulation of the "Fascism with a Democratic Face" series had a profound impact in changing the very situation it analyzed. By the spring of 1975 fundamental questions about the ultimate consequences of Schachtian austerity methods began to be seriously discussed in capitalist industrial and "think-tank" circles in attempts to come to terms with the conception of labor power as elaborated in Labor Committee writings. The frightful collapse of the Brazilian "economic miracle" provided frightful empirical verification to capitalist circles of the competence of our analysis and conceptions. Likewise, the spread of disease and medical evidence already existing as to the relation between levels of nutrition and the spread of the threat of epidemics provided confirmation of the warnings of ecological holocaust contained in the "Fascism with a Democratic Face" publications.

In mid-April, Lyndon LaRouche, chairman of the Labor Committees and of the U.S. Labor Party, held press conferences in Bonn, West Germany, and Milan, Italy, to announce his proposal for the creation of an International Development Bank (IDB). Within a few months, the essential elements of the IDB proposal — debt moratorium, the creation of a new credit-issuing institution to provide for industrial and agricultural expansion, the use of the transfer-ruble for credit transactions — all had become part of the vocabulary and policy pronouncements of leading Third World countries, and were the subject of intense discussion within capitalist circles and the Comecon sector. "Triangular" trade deals began to proliferate, and proposals paralleling the IDB were issued by numerous spokesmen. In September, the United Nations Special Session on Development heard Third World spokesman articulate their demands for developmental programs which would apply technology to raise their populations' living standards. Labor-intensive programs and the mere "redeployment" of obsolete industries was firmly rejected.

Soviet "Open Diplomacy"

Meanwhile, the single most dramatic moment expressing the fundamental policy shifts occurring in the Soviet Union during the first half of 1975 was the issuance, May 9, of the proclamation "To the Peoples, Parliaments, and Governments" by the highest organs of the Soviet state. The call, issued on the occasion of the 30th anniversary of the victory over fascism in World War II, recalled the "immeasurably high price" and the "colossal destruction" of the war, and proclaimed the possibilities for an end to war and a "peaceful future of humanity."

> The gigantic growth of technical and scientific knowledge at the present, and the interrelated, powerful development of the productive forces in peacetime, now make it possible to transform the material culture and the life of humanity. The achievements of the scientific-technical revolution make possible the fundamental improvement of living conditions on earth, and the extirpation of hunger, poverty, and epidemics.

The Soviet call for peace and development was all the more significant because of the context in which it was issued. At that moment the world was extremely close to nuclear war, closer than at any time except the present moment. This was the period in which NATO forces moved to implement the "MC 14-4" policy of tactical nuclear warfare and "counterforce," the time in which Rockefeller was seeking a nuclear confrontation over Portugal, the Balkans, or the Middle East.

Issued virtually simultaneously with the "Open Call" was a warning from General Secretary Leonid Brezhnev on the nuclear threat. The Brezhnev speech reaffirmed — in unmistakable terms — the Soviet strategic doctrine of massive retaliation. "the unleashing of a nuclear war would spell the unavoidable annihilation of the aggressor himself..." announced the Soviet leader in an unequivocal rejection of the Schlesinger doctrine. At that moment, the delusions of Rockefeller's RAND Corporation theorists — that the Soviets could be drawn into a tit-for-tat nuclear exchange according to Marquis of Queensbury rules — were forever dashed against the hard rock of reality.

The fundamental shift in Soviet policy was seen as well in strong Soviet political support for the Portuguese Communist Party which had emerged as a Leninist vanguard out of the wreckage of the Spinola "fascism with a democratic face" experiment in Portugal. Its leader, Alvaro Cunhal, did not hesitate to ridicule the agent leadership of the Spanish and Italian Communist Parties which attacked the PCP for "damaging" the cause of socialism. In the context of the strong left turn then being carried out by the French Communist Party, the revolutionary process in Portugal signified the abandonment of the suicidal "Allende Syndrome" by a growing Leninist faction of the communist movement.

Taken as a whole, the various shifts in Soviet policy and postures toward the dominant Rockefeller-NATO imperialists amounted to a 180-degree shift in Soviet strategy. By summer, the Soviet leadership had abandoned its previous posture of making concession after concession in order not to provoke Rockefeller, and had instead forthrightly announced (1) that it stood fully in favor of expanding trade and economic relations with the West and with the developing countries, and (2) that it would tolerate no NATO incursions on what it considers its basic strategic interests.

At root, it was not the ideas of the ICLC, but Rockefeller's policies directed against the Soviets, particularly from October, 1973 to April, 1975, which were responsible for the reorientation of Soviet strategy. The policies pursued by Kissinger, et al. during this period convinced the Soviet leadership that any posture of conciliation or concession would be construed as only a stepping stone toward further inroads against Soviet strategic interests. Thus, if the Soviets were to avoid either total capitulation to the Rockefeller interests or nuclear war by the late 1970's, their policies had to be reversed of necessity. This was the context in which a convergence between Soviet thinking and our own became feasible.

The Capitalist Opposition

The last major force to emerge in opposition to the Rockefeller interests was that which emerged within the capitalist political machine during the summer of 1975. Earlier, anti-Atlanticist forces had come forward around the Cefis interests in Italy and the Stoltenberg industrialists in the BRD. Finally, and timidly, an opposition developed in the U.S. centered around the "Chicago faction" of industrial interests but including the remains of the Kennedy machine and the conservative Western and Southwestern "yahoo" layer.

Behind the emergence of the "Chicago" group was the failure of the New York banks to stabilize the economy in the face of impending defaults *and* hyperinflation. The coalescence of the pro-development and pro-trade bloc among Third World countries and the Comecon sector provided the context in which the industrialists began looking for an alternative solution to the depression breakdown. The manifest failure of the Brazil experiment in Schachtian austerity, and the notice served by Third World leaders that they were not prepared to tolerate the attempt to spread the Brazilian disaster, impelled the industrialist factions to seek an alternative to unworkable Schachtian austerity, seeking our opportunities for East-West trade deals and, to a much lesser extent, triangular trade deals which included development features for Third World countries.

At any point after June 30, Rockefeller was completely ripe to be knocked out. He was able to continue in power in spite of his extreme vulnerability only because of the spinelessness of his capitalist opposition and because the Third World bloc was not yet prepared to declare a debt moratorium after the June 30 debt-rollover period.

In the manner characteristic of capitalist politics, President Ford was finally convinced by the Chicago faction to move against Rockefeller, but he did so only by chopping away at the edges of the Rockefeller political apparatus, rather than by going for the beast's throat. The Halloween Massacre in which Ford dumped Schlesinger and Colby, and demoted Kissinger was the first major attack on the Rockefeller machine since President Kennedy tried — at the cost of his life — to gain control of the CIA and related intelligence capabilities in the early 1960's. Ford's subsequent failure to date to follow through by dumping Rockefeller and Kissinger themselves may well cost him the Presidency and perhaps his life as well.

The Present Danger

The shift in the strategic correlation of forces which has occurred over the past year then consists of four essential components: (1) the emergence of a coherent pro-development bloc in the Third World, led by Mexico, Iraq, Algeria, Peru, and India; (2) the fundamental shift in Soviet strategy and posture; (3) the emergence of an anti-Rockefeller faction in the U.S. and anti-Atlanticist forces in Western Europe; and (4) the growing strength of the U.S. Labor Party in the United States, to the point where the Labor Party now could command between 20 and 30 per cent in an honest election in industrial areas of the country.

All of these forces are committed to one degree or another to what is now popularly known as the "New World Economic Order." This encompasses programs for a new set of international monetary and trade relations, expressed most concretely in the ICLC's International Development Bank proposal. All of this has as its basic premise the declaration of moratoria on dollar-linked international debt payments, as well as on other categories of debt such as mortgage and municipal debt in the U.S. or Italy, for example.

It is precisely because the balance of forces has shifted so far against Rockefeller that he is so dangerous at the present moment. The mountains of debt which Nelson and David Rockefeller personify are now very close to extinction... unless, as the Rockefellers imagine, they can somehow force the Soviets and the Third World countries to back down from their present demands. The closer the Rockefellerpest comes to extinction, the more dangerous he becomes. The more threatened he is, the more likely he is to risk

everything in lashing out as a cornered rat would. But the essential distinction between Nelson Rockefeller and a cornered rat is that Nelson Rockefeller has nuclear weapons at his disposal.

This is the essential background for Hilex 75 — a "live" political-military deployment which combines every capability at Rockefeller's disposal: economic warfare, psychological warfare, terrorism, oil embargo, the "food weapon," "white communism," and the ultimate employment of nuclear weapons.

Hilex 75 is Rockefeller's last stand — under the guise of military maneuvers it is designed to culminate in a nuclear confrontation with the Soviet Union and the imposition of military rule in the capitalist sector. Rockefeller's drunken fantasy is that he can in this fashion force the Soviets to back down, isolate them through a Red Scare, and thus enforce the payment of his debts through blackmailing the world out of its demands for the New World Economic Order.

It cannot work that way. The fundamental fallacy of the Hilex scenario is that the Soviet Union will, in a moment of confrontation, back down. Flying in the face of all history and of explicit Soviet policy pronouncements, the NATO-Hilex operation is premised on the Schlesinger "flexible response" absurdity, the notion that escalation can be controlled in single steps. Henry Kissinger's step-by step diplomacy does not apply to the nuclear battelfield.

From the Soviet standpoint, as we have discussed elsewhere, a rational military approach would dictate that the Soviets should launch a thermonuclear first strike at the point at which all political opposition to the Rockefeller-Atlanticists has collapsed in Western Europe and in the United States. At the point at which the last gutless Congressman and the last elements of the Chicago faction, for example, capitulate, and there is no possibility of reversing the Rockefeller drive toward war, the Soviet leadership would out of a rational appraisal of its strategic situation, launch a full-scale nuclear attack on North America, which would result in the probable deaths of up to 200 million persons in North America.

As we have acknowledged, this would be a rational policy on the part of the Soviets. But it is not our policy; nor do we advocate this policy for the Soviets. Our policy is to fight for a *political* defeat of the Rockefeller-Atlanticist group, and were we in the position of Soviet leadership we would at once denounce and expel the NATO-controlled agent leadership of the PCI and the PCE, expel the agents who recently conducted the "cold coup" in the PCF, bring the DKP in West Germany into line, and so on. A working-class offensive in Western Europe against the Atlanticists would very quickly give the anti-Atlanticists some backbone.

There are in fact signs that the Soviets and the pro-Soviet East-bloc parties have begun to move in this direction. The Soviet denunciations of the PCF's anti-Soviet behavior, the statements condemning polycentrism and "national communism" recently published in *Warheit* by DKP politburo member Schroeder suggest that the Soviets and the East Germans in particular have warned the Western European CP leaders that they will be publicly denounced by East-bloc parties if they continue with their renegade "white communism."

However, from a military standpoint, the Soviets would be perfectly correct in launching a full first strike against the United States in the event of an unopposed Rockefeller-Kissinger drive for nuclear confrontation. It is now clear that the Soviets have geared their entire economy and their population for at least the past decade to the development of a war-winning capability. Soviet strategic doctrine is no longer Mutual Assured Destruction. It is war-winning. At great sacrifice, the Soviets have developed a highly advanced technical capability while making extensive civil defense preparations for the evacuation of cities and shelter of the population. Industry has been dispersed to small and medium-sized cities. Soviet estimates are that less than 10 per cent of its population would be destroyed in a nuclear exchange hitting Soviet cities. Whether or not this is a correct estimate, what is essential to understand is that if Rockefeller is allowed to carry Hilex 75 to its conclusion, *before that point* the Soviet Union is prepared to launch a preventive strike against the United States and Canada, attacking both military installations, and population and industrial centers.

That is the inevitable result of leaving the crazed Rockefeller beast free to roam and prey on the world's population in its death-agony.

The Role of the Labor Committees

Our organization, and its chairman Lyndon LaRouche, have been placed in a unique situation through the process which has occurred in particular over the past 15 months, so that our efforts are now decisive in preventing the early outbreak of World War III. Not only in the obvious way of our mass mobilization to alert the population and those in power to the immediate threat of thermonuclear holocaust, but also in our present ability to serve as a negotiating link between various capitalist factions, the Comecon sector, and the Third World.

We are not playing this role in the normal sense of sitting down at a negotiating table to conduct bargaining over trade deals, but rather in our unique capacity to define for the industrialist factions what precisely the working class, the Comecon sector and the Third World will and will not tolerate from them.

In the happy event that Rockefeller and Kissinger

are removed from power, and the Rockefeller machinery is dismantled — including the FBI-LEAA terror gang operating under soon-to-be-former Attorney General Levi — then the next immediate item on the agenda will be to negotiate the implementation of the International Development Bank and the Labor Party's proposed Emergency Employment Act of 1975. The IDB and the EEA are not the programs of a revolutionary worker's government — we are not to that point. They are rather the necessary means to reverse the depression collapse and the breakdown crisis now leading to global ecological holocaust. They are programs which are objectively acceptable to both the working class and to industrial capitalists, and to Third World governments on a world scale.

Our competence to perform this essential role is unchallenged. On a policy level, the programs we have proposed have already been accepted *in principle* by all the relevant forces. The question before us now is whether or not the implementation — including debt moratorium — can occur before Rockefeller and Kissinger get us all blown up. The anti-Rockefeller capitalist forces and political figures on whom this process depends are playing a suicidal game as they hesitate to move forcibly against Rockefeller and his apparatus in the hopes there may be some "middle way" out. Any attempt to compromise with the Rockefeller beast can only lead to early thermonuclear destruction. We are in a race against time. Those Congressmen who fear Rockefeller's blackmail or terror tactics must ask themselves which they fear most — the FBI's blackmail or thermonuclear incineration.

If the relevant political and industrial forces in the advanced sector find the backbone to put a stop to Rockefeller's Hilex insanity, then the prospects for world peace and for economic recovery are very good indeed — provided we then move posthaste to implement the IDB and EEA programs.

Why Our Role Works

How is it that our organization, a relatively tiny group of socialist revolutionaries, founded from scratch less than a decade ago, can perform such a mediating role between the major world powers? How is it that both capitalist and communist forces alike are dependent upon our programmatic proposals and our intelligence estimates for guidance out of the present breakdown crisis?

The "secret" is no secret at all — it is that the Labor Committees were founded on the basis of the dialectical method and Marxian economics and that membership in the organization is premised upon the mastery of that subject-matter. We are uniquely able to analyse and "predict" the course of events with remarkable accuracy simply because we understand how the world works when no one else does. We know why the world is falling apart and we know how to put it back together again — if we survive the next few weeks, that is.

That is the key to our astounding influence and the present crucial role we are playing internationally in guiding major world forces toward the new world economic order, while immediately trying to catalyze the forces which can prevent nuclear war. It is, as LaRouche once described it, like trying to walk a tightrope over a sea of molten lead. One slip, and that's it.

An important aspect of this process is the different ways in which the various relevent forces come to understand our programmatic proposals.

While the political leadership in the Comecon sector has not been trained in the rigorous application of the dialectical method, their social situation makes our concepts readily graspable. A Soviet leader who has responsibility for the leadership and administration of an entire economy can grasp without any great difficulty the conceptions of labor power, the relation between technological advance and economic development, the need for triangular trade deals, the approach of dealing with the world economy as a whole. (As one Eastern European official once commented, it is much easier for those involved in planning an economy in the East bloc to understand our method than for officials of Communist Parties functioning in Western Europe.)

The same general points hold true for Third World officials. While they may lack the cadre training and class struggle education of Communist leaders, their situation of having responsibility for the economic development of their economies as a whole under conditions of capitalist victimization and looting makes the conceptions of expanded production and development readily assimilable.

It is quite different with a capitalist. A capitalist is inherently incapable of understanding real economics. He is incapable of taking the methodological approach of analyzing an economy as a whole, of taking the view of the "total capitalist" in Luxemburg's term.

The best that a capitalist can do in attempting to obtain an overview of the economy as a whole is to consider the "total capitalist" as an aggregation of individual capitals. The heteronomy of capitalist property relations, based as they are upon individual property titles in the means of production, means that the capitalist's outlook is inherently anarchistic and non-dialectical.

The industialist, for example, is capable of empirically understanding the International Development Bank proposal, but he is incapable of developing

such a proposal on his own. He can recognize the correctness of a conception of labor power or the need to raise the productivity of the world economy as a whole, but he is absolutely unable to develop such conceptions on his own.

A skilled worker, on the other hand, is fully capable of assimilating everything there is to know about science and economics. A worker who has given some serious thought to the productive process and his actual and potential role in it is already more advanced in his thinking than the capitalist. A worker who has studied and understood the IDB and EEA programs knows more about real economics than any bourgeois economics professor or economic "expert."

There are no limitations on the ability of a skilled worker to assimilate the essentials of the dialectical method, but as for a capitalist — "it were easier to pass through the eye of a needle" as the old saying goes.

This is the significance on one level of the "Italy Lectures" published in this issue under the title "What Only Communists Know." It is the method explained in these lectures, originally written for Italian worker-communists, that has been uniquely validated by the Labor Committees in practice over the past period.

The method taught in the "Italy Lectures" is the method which underlies the programs now being advocated by governments representing most of the world's population. It is this method which "only communists know," which will enable us to embark on a new era of unprecedented growth and development — if humanity survives the death-agony of the Rockefeller pest over the next six to eight weeks.

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Italy Lectures

WHAT ONLY

Introduction

The world's Marxist labor movement is now again on the advance. Leading forces within the world Communist organizations, key non-Communist socialist forces of the developing sector, and the International Caucus of Labor Committees are presently leading a world-sweeping effort to rescue humanity from the present and impending horrors of capitalism's worst depression. Our forces — and only our forces — have the conception and determination to pull humanity up from out of the abyss of capitalist breakdown crisis, plagues and starvation, to launch immediately and actually the greatest expansion in global industrial and agricultural development even merely imagined before this time.

There can be no doubt of our forces' agreed program. The International Caucus of Labor Committees, leading Communist representatives, and leading developing-sector spokesmen have already publicly defined the 1975 - 1985 decade as the period of achieving the greatest scientific and technological advance in all human history to date: the breakthrough into the new technology of the thermonuclear fusion process for supplying mankind with an entire new source of basic useful energy and sweeping revolutions in productive technologies. To bridge the few years of time from the present to the age of fusion technology, the Labor Committees have widely proposed a junking of the bankrupt dollar-denominated International Monetary Fund and the fascist-austerity-pushing World Bank with a new International Development Bank using the convertible Comecon transfer ruble as the key gold-denominated reserve currency. The great "Open Call" of May of the Soviet government and the Soviet Communist Party, key addresses of CPSU General Secretary Leonid Brezhnev beginning with his May 8, 30th Anniversary address, and other key official and semi-official Comecon declarations leave no margin for reasonable doubts on this same issue. The

by Lyndon H. LaRouche Jr.

COMMUNISTS KNOW

growing developing-sector support for the initiatives to the same effect by Algerian and Iraqi spokesmen complete the general picture of the common strategic policy of our forces.

To this same end, Labor Committee and allied Communist forces within the capitalist sector generally are working overnight, constantly, to bring into being a new Marxist International throughout the capitalist sector. This is no mere federation of socialist parties from various capitalist states. The purpose for the existence of the new international organization is to unify our forces around a common strategic programmatic conjunctural perspective and to coordinate the national tactical struggles within each nation for the worldwide achievement of our agreed strategic programmatic goals.

No consideration can deter us from either of these interconnected objectives. There can be no competent question of avoiding actions "which might be regarded as provocative" by leading imperialist forces. The dominant imperialist forces, under the direction of the Rockefeller brothers, are overtly committed to general thermonuclear confrontations, to bonapartist forms of fascist dictatorships, and to a massive slave-labor "triage" designed to wipe out over a billion of the world's population during the next ten years or so. To what worse horrors can these *professedly* the worst fascist criminals in history be provoked? The human race has no alternative but to weaken, isolate, bankrupt, and eradicate the political and financier factions, led by the Rockefeller brothers, in the most rapid way at all costs.

No compromise exists between our world-development policies and those Rockefeller forces committed to thermonuclear holocaust and Schachtian Brazil-style genocide. Between us and the Rockefellers there are only those absolutely immoral muddleheads and agents of "historical compromise." It is impossible to find a "compromise" middle ground between the extinction and survival of the human species.

The only "compromise" between life and death is that offered by the Rockefellers' tame socialist leaders within the Botteghe Oscure (Italian Communist Party headquarters) and the PSI (Italian Socialist Party), the "compromise" whose impending actuality is *a sobbing Naples mother dying of bubonic plague as she holds an infant, already dead of cholera, in her withered arms.*

Our forces' Promethean tasks demand the rapid Promethean development of vast numbers of Marxist cadres in the same sense that war demands the emergency professional training of a large soldiery. Now, both within and outside the Comecon sector, fundamental tasks of Marxist education are being pressed with the urgency of a general military mobilization. Whether the initiative comes from key Communist educators or the Labor Committees, the central feature of the international cadre-educational training campaign is the same: the principled conception of *labor power*, which absolutely distinguishes the actual Marxist outlook from every expression of capitalist ideology within or outside the labor movement.

In Italy, among other countries, the Labor Committees have a major duty to collaborate with our Communist party comrades on this particular aspect of our joint efforts. The following brief development of the concept of labor power is written and issued to meet the urgent need for classes which provide Communist cadres and their cell members with an immediately usable and correct conception of the fundamental Marxist outlook within as short a time as a week or two of educational lectures and discussions.

We undertake this duty with special added joy, because of our long-standing desire to have justice done to the great 15th century Florentine genius, Ficino, in his own country. For this reason we do not think that the Communists of the other cities of Italy will object to our proposal that the upcoming convention of the reorganized PCI be held in Florence — where the basis for so much of the later achievements of European culture was first consolidated.

The Rockefeller brothers and their factional allies insist that the present world capitalist depression requires drastic reductions in incomes, employment, social services and even the human population. In place of continuing the industrial revolution's expansion through technological development, they propose conditions of labor-intensive employment, such as those already pointing FIAT and other plants in the direction of becoming industrial slave-labor death camps.

In place of industrial expansion based on capital-intensive technological advances, the Rockefeller faction demands a resurrection of the Nazi occupation's slave-labor projects of *primitive Bauarbeit* — the unskilled employment of masses of labor using relatively simple hand tools. In place of the urgently needed uses of fertilizers, tractors, irrigation, drainage and so forth for increasing food production through applications of modern industrial technology, the Rockefeller faction proposes to imitate the mind- and body-destroying slave-herd practices of today's rural Maoist China. What they propose for the entire world is already appearing in the plague-ridden, starving, dying South American nations of Brazil and Chile.

In its boldness and desperation, the Rockefeller faction is frankly confessing that its present policy proposals are a conscious, deliberate imitation of Nazi precedents.

One example of this is the Club of Rome. The Club of Rome is one of the organizations spawned by the Rockefeller brothers' Bellagio estate, Villa Serbelloni. Under the visible leadership of Aurelio Peccei, the Club of Rome is chiefly dedicated to the consciously genocidal "Zero Growth" policies of John D. Rockefeller III, while also acting as a propaganda agency in support of various fascist "world authorities" of the type of the International Energy dictatorship, the IEA.

The Club of Rome, during Spring 1974, called attention to cannibalism as a help for the growing world food shortage. Even the most extreme of the Nazi's spokesmen never reached such depths of degeneracy as Aurelio Peccei and his friends. The Club of Rome is chiefly the proponent of efforts to reduce the world population by more than one billion persons as rapidly as slave-labor and starvation methods can achieve that result — to provide *Lebensraum* for the Rockefeller faction's "master race."

Leading Rockefeller economists, ranging from social-democratic liberal Abba Lerner to Chicago's ultra-conservative monetarist quack Milton Friedman, do not conceal their admiration for Nazi Finance Minister Hjalmar Schacht, and freely admit that Schacht's Nazi economic policies are the model for the current policies being pushed forward by Rockefeller and Rockefeller's social-democratic and Maoist allies. They do not hide the fact that they correctly understand Schacht's Nazi economics to mean the 1933-37 practices of the Nazi Labor Front, and the hideous and vast Schachtian "social engineering" of Albert Speer during the 1942-1945 period. By Schachtian policies, they mean *Auschwitz* in practice.

The continued boosting of today's Brazil by the *New York Times* and *La Stampa* proves beyond doubt that *Auschwitz* is the model for the policies of Rockefeller factional allies as Gianni Agnelli. The very use of the word *triage* to describe the Rockefeller faction's economic and social policies means exactly that process used by the Nazi SS at Auschwitz and other slave-labor death camps. Triage means sending the "useless eaters" directly to their deaths *as an economic austerity measure* while simultaneously exploiting healthier slaves to the point that they, used up by minimal nutrition and slave-labor methods, also become "useless eaters." Triage is not something proposed for the future; it is the current official policy and practice of the International Monetary Fund and World Bank.

The Rockefeller faction not only admits that it is consciously applying the Nazi *Auschwitz* model on a world scale; the Rockefellers and their allies are openly committed to carrying out vast atrocities more criminal and hideous than any crime against humanity actually undertaken by the Nazis. *Why, therefore, does the general population of the capitalist world tolerate such monsters in positions of power for another instant?* Have we all learned absolutely nothing from 1933-45?! Why is it that the Rockefeller brothers, Robert McNamara, Franz-Josef Strauss, and their lackies — Berlinguer, Amendola, Santiago Carrillo, Lombardi, Giolitti, LaMalfa, Olof Palme, the Maoist scum and so forth — have not already joined the suspended figures of Benito Mussolini and his mistress?

The fundamental reason the Rockefeller brothers are not already in the Nuremberg dock for their violation of the law against "Crimes Against Humanity" is that, contrary to the pretenaed principles of the Nuremberg Code, capitalist *secular* culture has no inherent moral commitment to a fundamental distinction between human beings and mere domesticated animals. *Except for the strain of humanism leading directly into the world outlook of Karl Marx,* capitalist culture recognizes an absolute distinction between men and mere domesticated animals *only in religious belief — only in another world.*

It is true that capitalist culture developed on the foundations established by Renaissance humanism. It is true that Karl Marx himself is an outcome not only of the Renaissance humanist currents, but of the powerful enrichment of that same humanism under the impact of the capitalist industrial revolution. As

I The Destruction of Labor Power

You Won't Get Anywhere By Shouting— *Goya*

we shall show during these lectures, capitalist *alienation* divides man into two contending parts. Except for great scientific humanists generally and Marxist revolutionary cadres in particular, the conception and moral principles appropriate to a notion of a characteristic universal quality of humanity are delimited to a portion of the self which capitalism's man sees only as an object and subject of religious belief, the *soul*. The dirty, everyday side of the divided nature of capitalist society's man is a paranoid, agonized Caliban, obsessed with petty greed, and knowing no principles but those of pragmatic expediency.

This fact could not be denied in Italy. The Italian Communist's pervasive fascination with *Catholicism* is too easily —*and falsely* — explained by the fact that Italy is a Catholic country. Italy, drawn into the mainstream of capitalist industrial development only at the point of emergence of imperialism, has always endured a relative privation of its working class, and the continued relegation of large portions of its population to the condition of a lumpenized or semi-lumpenized Mezzogiorno. This is a most important key to the special kind of Marxist revolutionary potential of the Italian worker.

The Italian worker and intellectual clings to his aspiration to hold close his human rights chiefly through the great music, painting, sculpture, architecture and literature of Europe's development from the Renaissance through the 19th century. Take away that worker's or intellectual's joy of Monteverdi, Mozart, Beethoven, Rossini and Verdi and you rob him of his right to a sense of inner humanity. Destroy his musical life and give him, instead, jazz and Rock, and he senses himself slipping into the insane demimonde of Fellini cinema. He slips into a world of the *strega, malocchio,* "Sicilian Vespers," beggars, thieves, and the drugged, polymorphous perverse fantasies of *La Dolce Vita*.

Caught between that which the Hapsburgs robbed from him and what capitalism has failed to restore, the Italian worker and intellectual seizes his sense of universal humanity within himself in science and the great art of Europe's more noble past. It is in music, for example, that such a worker or intellectual best sensuously proves to himself the existence of his own human *soul*. It is the interconnection between great art and Italian religious traditions — as Bach, Mozart, and Beethoven represent somewhat differently for Germany — which fulfills the need sensuously to grasp that within oneself which places oneself above such a polymorphous perverse beast-in-a-human-mask as a character in a Fellini cinematic production.

It is not the Catholic Church per se which fascinates the Italian worker and intellectual in a distinguishably Italian manner. It is *the question of the soul* that prompts him to glance repeatedly over his own shoulder in a sense that something like religious belief is coming up upon him from behind his immediate consciousness. As we shall see, the soul the Italian worker and intellectual seeks is nothing but the *Geist* of Hegel's *Phenomenology of Mind*.

Institutionalized forms of religious belief reflect capitalist alienation exactly by relegating the desire for a human life to another world, and so minimizing the interference of human principles into the everyday affairs of the capitalist secular world.

As long as capitalist society is advancing through technological development, through the spread of modernized industrial production and industrial production's contributions to the development of agriculture, capitalist everyday practice is colored by humanistic influences. It is not accidental that capitalism's humanistic reforms of its practice so frequently have the form of spill-overs from religious practices, or are sometimes advanced outrightly in the name of religious humanism. These spill-overs among capitalists and their political institutions assume the form of reform movements based on advocacy of what is called "The Idea of Progress."

Especially under conditions of capitalist collapses, the capitalists tend to throw away reformism in preference for bloody-handed measures of austerity and to revert to the so-called Darwinian "Law of the Jungle." The role of the Rockefeller family in directly leading the financing of Hitler's drive toward January 1933 is one expression of this. The Rockefeller brothers' Club of Rome, with its undisguised hatred for human beings, its fascination with the use of man as a domesticated animal source of meat, is another typical expression of such outbreaks of Malthusian moral imbecility.

Such Malthusian criminalities demonstrate that the secular capitalist culture considers humanism and reformist progress merely as *an optional tactic*, and not a moral or scientific principle. Although the World War II victorious allies prosecuted Nazis under the Nuremberg Code, and although U.S. prosecutor Justice Jackson cited the existence of an unwritten law of nations by which everyone indicted "either knew or should have known," today's Rockefeller brothers violate *every section* of that Nuremberg Code with effective impunity. This does not constitute a violation of existing actual principles of capitalist culture. It demonstrates that the Nuremberg trials were a matter of giving the name of "principles" to a *tactical* undertaking of the victorious capitalist forces.

Nonetheless, as we have already stated, the principles to which Justice Jackson referred do exist within capitalist culture. They are explicitly embedded in the forms of religious belief characteristic of capitalist culture. The universality asserted for those principles by Justice Jackson is a reflection of the implicit

belief in the existence of a universal humanity, a universal humanity which capitalism relegates to *another world.*

It is only in the knowledge of Marxist cadres that the human qualities of mankind are recognized on principle as belonging *to this world.*

Agnelli Versus Cefis

At the moment of writing out these lectures, Italy is seized by a mass-strike wave in the ascendancy. Since the recent elections, in which the strike wave produced a massive vote for the Communist Party, the European capitalist class has been in a state of panic. The Italian capitalists, especially, are so panic-stricken by the continued mass-strike upsurge that no capitalist faction is able to maintain a semblance of consistent policies from even one day to the next — excepting an hysterical wish that the strike wave would miraculously evaporate. With that important qualification it is possible and useful to refer to certain very significant differences which had been erupting between the Agnelli faction and Cefis forces just prior to the elections.

It is proper, in the strictest sense, to describe a profound factional division as having recently existed between the forces of Agnelli and a more progressive industrial capital-based faction gathered about the Cefis-Montedison group. Gianni Agnelli's policies and his close alliance with the Rockefeller brothers places him in the pro-fascist reactionary camp of the Club of Rome, the Italian Institute for International Affairs (IAI), the RAND Corporation, London's International Institute for Strategic Studies (IISS), the Council on Foreign Relations, and so forth. The Cefis faction's countermoves of the pre-election period represented the more traditional outlook of capitalist industrially-based factions oriented to progressive development of the productive forces. A summary of the differences which erupted between the Agnelli- and Cefis-led forces clarifies the argument we have just previously introduced.

As Marxists, we must not undertake this comparison without first stipulating the broader setting within which that comparison must be properly understood. We admit — and also emphasize — that there are important, bitter differences between the Rockefeller faction and the perceptible immediate self-interests of certain industrial capital-based factions typified by Italy's Cefis-Montedison. It is nonetheless also clear that Cefis and similar Rockefeller opponents in West Germany, France, and so forth are committed to their own version of anti-labor austerity. We must therefore permit ourselves no consoling illusions concerning either of such factions.

It is the central subject of these lectures to show that actual humanism is limited to those committed to enriching the material and cultural preconditions for the development of the quality of labor power. What religious belief mystically identifies as man's *soul* is that aspect of his human mental development which is susceptible of comprehending humanity as an actual universality. this is the individual's *mental creative powers*, as distinct from his *mere* learning or conscious capabilities of inferior "logical" or "grammatical" argument.

It is this intellectual power of the individual which enables him both to make scientific discoveries and great inventions and to assimilate those discoveries and inventions for advancements in the general quality of human social practice. As Marx repeatedly emphasizes, the entirety of his world outlook, from the beginning (1843 - 1845) to the last section of *Capital*, Volume III is absolutely and entirely based on not only the discovery of those creative qualities of *universal labor,* but the discovery of the way in which increasing leisure and improved material conditions of production and household consumption indispensably enable the individual to develop and increase those powers. We shall demonstrate that concept during these lectures; at the present moment, we merely state it for reference.

This quality of man, his historically demonstrated capacity to qualitatively transform the way in which our species reproduces itself, is what absolutely distinguishes man from all the lower beasts. It is the capacity to develop more advanced powers both to create new scientific discoveries and to realize those technologies as advances in the preconditions for still further scientific discoveries for general social practice which is the distinguishing essence of man, his *soul*. Where religious practice merely recognizes and cradles the *soul*, Marxist practice feeds that soul, provides it with the essential leisure for its mature development. Marxism thus brings humanism and the principles of universal humanity from the fantasy world of religious imaginations into the realm of actual human practice.

Hence, the policy of maintaining and enriching the material preconditions for development of labor power in this way is an absolute principle to all those who recognize the distinction between man and mere domesticated animals *in this world.*

Although Cefis' factional opposition to Agnelli and other Rockefeller agents is relatively progressive from our principled standpoint, the degree of anti-labor austerity proposed by Cefis and similar capitalist factions is a substantial violation of the *principles* essential to continued human existence. In the final analysis, both the relatively saner Cefis-type factions and the genocidal maniacs of the Rockefeller faction exhibit a common fundamental error, despite the ex-

tremely significant factional differences among them concerning *tactics.*

These differences concerning tactics are fruitfully studied for a deeper, practical comprehension of the principles which must govern our own practice.

All of the leading bankers, economists and other "expert" spokesmen and apologists for the Rockefeller faction share a common barbaric ignorance of the ABCs of those principles of capitalist development defended by Cefis, Stoltenberg and others. This condemnation applies as much to the foolish, ignorant Pastor Lombardi of the PSI leadership and to certain wretched class traitors within the Botteghe Oscure as to the contemptible Rockefeller Chilean specialist, Milton Friedman of the "Chicago School." If we employ the terminology of the professional economic historian, the monetary and economic spokesmen and apologists for Rockefeller policies and "historical compromise" are exactly defined as resurrecting a bastardized version of the 16th and 17th centuries' pre-industrial "mercantilist" doctrines.

Those mercantilist doctrines are rationalizations of the policies by which the Bardi, Medici and other Renaissance bankers went into bankruptcy and contributed at the same time to causing the economic collapse of Renaissance Italy. Those are the same policies through which the Spanish Hapsburgs (Charles V and Philip II) drove both Spain and southern Italy into the ruined condition from which they have not recovered to the present day.

These are also the policies through which the Spanish Hapsburgs drove the population of 16th century Mexico from about 25 to less than two million persons during less than a century. Looting of natural resources, destruction of indigenous agriculture, and what we would describe today as Maoist-style slave labor triage against the Mexican, Peruvian and other indigenous populations caused this genocide in the effort to maintain the debts of Charles V and Philip II — just as Rockefeller today demands the importation of Brazilian genocide into the Mexico — and Italy — of today. During the same 16th century, the Hapsburgs, for the same reasons of meeting debt payment, ruined the agriculture of Spain through persecutions of Moorish peasants and the exacerbation of the La Mesta sheep-grazing privileges. (No doubt, there is some connection in this latter to Pastor Lombardi's pompous utterances on economic questions.)

The Hapsburg methods of genocide against 16th century Mexico depended upon the methods Rockefeller is attempting to impose upon that nation today. Mass labor-intensive projects using primitive agricultural methods will quickly ruin the soil, while producing epidemic conditions of starvation and slave-labor debilitation like those already running uncontrolled throughout Brazil and Chile. These are in fact the same policies Rockefeller and Gianni Agnelli praise as the "Brazilian success" they propose for Italy. This is a deliberate program of genocide. Leading Rockefeller spokesmen have explicitly stated that their objective is to reduce Mexico's population of 58 million by 30 million deaths as rapidly as possible. The "Fourth World" policies of the International Monetary Fund and World Bank are also conscious triage policies aimed at producing mass genocide.

During the late 18th and early 19th centuries, the old mercantilist idiocies had been generally discredited among capitalists through the lessons of the industrial revolution. In the course of introducing machine technology and powered machinery into production, capitalists learned that it was indispensable to improve the quality of productive labor through improved consumption, working conditions and social services.

To be exact on this point, it must be admitted and emphasized that not all proletarians directly benefited from that discovery. To the extent technological development permitted, the capitalists distinguished between working-class households producing skilled and semi-skilled workers and raw masses of unskilled workers. Nonetheless, advancing industrial technology progressively reduced the ratio of super-exploited raw labor. Now, Agnelli and other supporters of the Rockefeller faction are committed to reversing that process. Agnelli, in particular, has indicated that he is prepared to abandon Italy, to take his factories to the Malthusian paradise of dying Brazil. Cefis has tended to cling to the progressive tactic of maintaining what his faction considers the most essential material preconditions of Italian industrial productive potential in terms of basic social services.

The resurrection of the imbecilic Spanish Hapsburg mentality within the Rockefeller faction is not accidental. Although that faction controls, as Agnelli illustrates, large industrial interests, its outlook is not based on the viewpoint of the industrial capitalist. The relationship of the Rockefeller brothers to industry is that of the thieving milk wholesaler to the debt-ridden dairy farmer. The Rockefellers are no longer interested in developing or even maintaining the industrial productive capabilities of society; they concentrate on stealing the farmer's milk at the lowest price, not caring whether the farmer or his cow exist tomorrow. The historic basis of Rockefeller wealth in petroleum is a relevant consideration; the traditional Rockefeller outlook, the looting of a natural resource, is related to their Hapsburg-like cretinism on all important monetary and economic issues.

More immediately, the Rockefeller brothers' political and financial empire is principally based upon an enormous mass of world debt, the same debt which is now driving the entire capitalist world toward the depths of history's worst depression. The industrial capitalist who thinks in terms of ownership of productive capacities and trade in the commodities of indus-

trial production, can conceive of surviving a general repudiation of finance-capital's debt — if absolutely forced to discard all the alternatives he might prefer. However, the same unique capitalists' solution to the present depression would wipe out the power of the Rockefeller brothers. Consequently, the Rockefellers — and their PSI and PCI lackeys — are determined to prevent debt moratoria *at all costs.*

This has been the exact reaction of the Rockefeller faction to the onset of the June 30, 1975 debt-rollover crisis. Western Europe and U.S. industry and state and local governments were systematically stripped of every dislodgable item of liquidity, and these funds concentrated in Rockefeller-controlled financial institutions — simply to provide Rockefeller with the leverage needed to manage the June 30th crisis for a few more weeks before the next, still greater crisis struck. The inevitable result in the U.S. itself has been the most catastrophic rate of collapse of employment and social services in U.S. industry.

The same Hapsburg mercantilist sheep's-eye view by the Rockefeller faction is the motive for the World Bank and other IMF and IEA efforts to wipe out over one billion of the world's population as quickly as possible through slave labor, starvation, epidemics and triage. The Rockefeller faction — with modest and enthusiastic assistance from its lackeys in the PSI and PCI leaderships — has shown itself prepared to wipe out most of the human race to secure payments against its vast holdings of parasitic debt.

The capitalist opponents of Rockefeller, Agnelli, Franz-Josef Strauss, Biedenkopf, Giscard and so forth have so far opposed certain of Rockefeller's worst measures in favor of three-way economic cooperation among industrialized capitalist nations, the Comecon, and the developing sector. However, they have so far schizophrenically declined to attack the Rockefeller horrors at their source, the issue of dollar-denominated debt. So far, Rockefeller's capitalist opponents have foolishly limited themselves to attempts to force a compromise upon the Rockefeller brothers' gang. By refusing to confront the issue of Rockefeller's parasitical, depression-causing debt holdings, they have fallen into concessions to Rockefeller austerity measures which, if continued much longer, will mean Rockefeller's gleeful slitting of the throats of Stoltenberg, Cefis, et al. as well as enslavement of and genocide against the European and developing sector workers and farmers.

The trade-union militant who refuses to think clearly will merely shrug his shoulders and say: "You are only telling us that Cefis, like Rockefeller and Agnelli, is committed to robbing the Italian workers of wages, sweat and social services." He will emphasize, "That is nothing new; all capitalists do that all the time. We know how to deal with such problems quite well without your advice." *Such a militant would obviously be attempting to justify his lack of courage to face up to the very special problem actually confronting him.* Such a frightened braggart would be making a fundamental — and potentially suicidal — mistake.

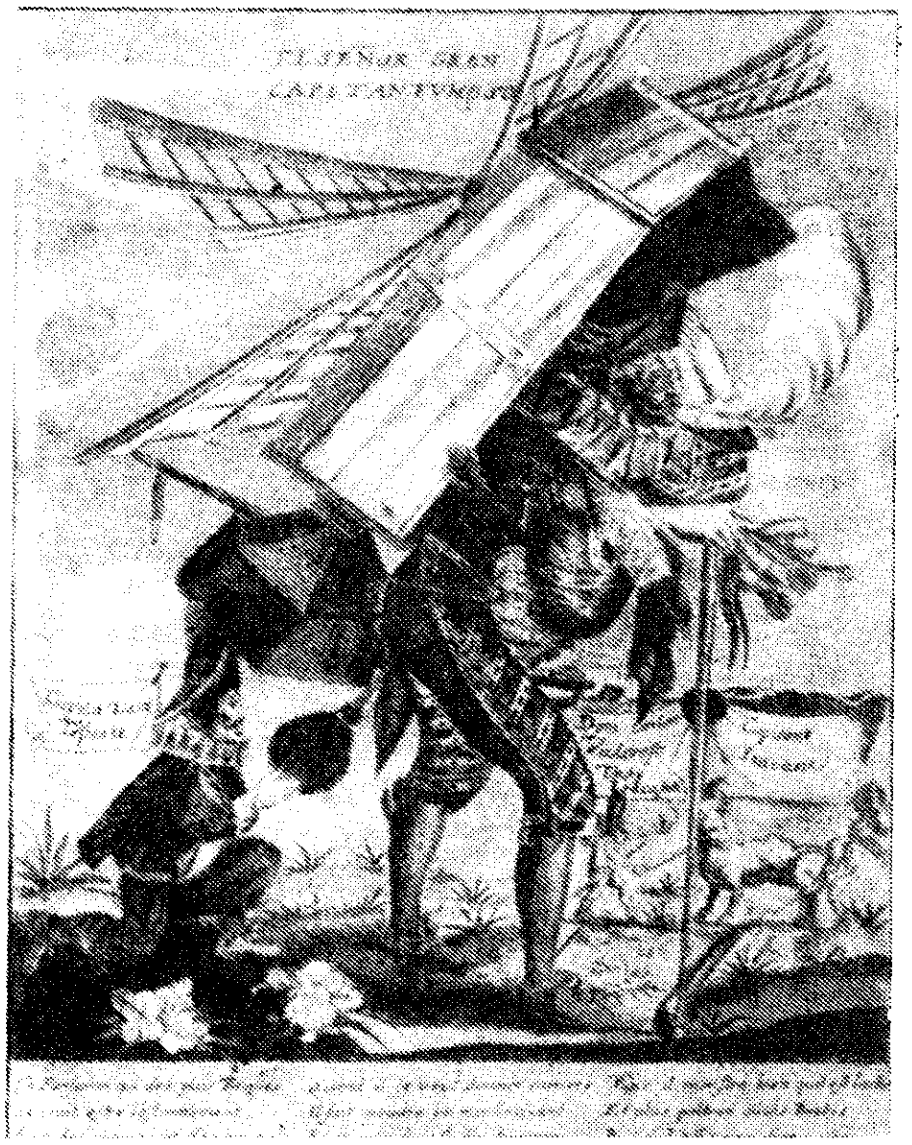
It is typical of cowards among working-class militants that they reason like paranoid witches. They justify their swaggering cowardice by arguing *"If one does not attack the capitalists too aggressively, they will not respond with drastic repressions."* This is the same argument we hear in the socialist coward's imbecilic "theory" of fascism: "Fascism," he warns us, "is no danger unless the working class provokes the capitalists into taking desperate measures." The bragging socialist coward thus reassures himself that the threat of fascism will not appear *until he is ready for such a danger*, which is to say, "never."

It is true that the depression is driving *all* capitalist factions to robbing the workers to the limit that each faction believes economic principles permit. Agnelli has indicated that he is prepared to loot Italy to the point of abandoning it. The Cefis-Montedison faction is prepared to rob Italian workers only to the extent that they believe the productive potential of Italian industry can nonetheless survive. Only when such important tactical distinctions are understood, is it possible — for anyone but a fool — to say that both factions are determined to rob workers.

To say that these forces are *merely* determined to rob workers is so useless a statement that no serious Communist party would issue a membership card to a person who made that argument. If the only problem before us were a capitalist effort to rob Italian workers of part of their incomes, sweat and social services, we would face an entirely different — and much less serious — task than the absolute life-and-death issues actually now before us.

The issue is not merely that capitalists intend to rob workers, but that the extent of this robbery can not stop short of destroying the labor power of the entire working class. If that destruction of labor power occurs, the ability of the human race to maintain its own existence *in any form* will also be destroyed. This is no mere issue of robbery; it is an issue of the existence of the human species. With mere robbers we may be forced to reluctantly compromise; with a threat to human existence itself, there is no compromise.

We admit that Cefis-controlled publications have pointed out the existence of the problem of maintained labor power. We admit the importance of that fact. We admit that the human race would survive somewhat longer under Cefis than Agnelli. However, with Cefis' continued adherence to even his faction's austerity policies, the human race would ultimately die as certainly as it would much more quickly be destroyed under Rockefeller or Agnelli.



(l.) El Señor Gran Capitan Fumoso.

(r.) St. Augustine, Botticelli, 1980

II Marsilio Ficino

The conception of *labor power* is by no means merely an included aspect of the Marxist world outlook. When the conception is fully and competently understood, every *essential* philosophical and scientific question even confronted by mankind to date is conclusively answered. There could not be the slightest exaggeration in that statement, *provided that labor power is competently understood.*

What we have to show and clarify is this. The progress of man from an ape-like existence during the early Pleistocene Age a million years or more ago is centered upon technological improvements in the methods by which man produces the material pre-conditions for a generally expanding population. No lower animal species has been able to duplicate this, nor could any of those species begin to duplicate that achievement. This evidence shows that there exists a quality of the human intellect which is capable of *self-development* to the effect of achieving an increasingly effective understanding of the underlying laws of the universe as a whole. It is this creative intellectual process which uniquely and absolutely distinguishes man from beasts. It is the empirical actuality of that same creative intellectual process which religious belief identifies as the human *soul*. It is a certain kind of empirical demonstration of such processes which causes the religious believer to *know* that he has such a soul, *a soul he mistakenly attributes to another world.*

Commonplace knowledge recognizes such connections foggily by using the word "genius" in connection with the achievements of the greatest scientific discoverers and creative artists. What is commonly overlooked is the fact that nearly every human being has such a quality of genius. It is commonly overlooked that the same general quality of genius which initiates great scientific discoveries is essential to enable ordinary workers to assimilate the fruits of such discoveries in the form of effective technological advances in productive practice.

Commonplace knowledge also tends to the mistaken opinion that genius is a mysterious, fixed form of inspiration. As the history of scientific ideas demonstrates, the quality of genius is a *developing* magnitude, whose advances depend on the material circumstances of life and leisure.

When we make that indispensable connection between the developing quality of genius and the scientific discoveries it produces, all the old conceptions of philosophy and science are permanently overthrown and shown to be barbaric crude approximations of positive knowledge of ourselves and our universe.

That discovery is the gist of the Marxist dialectical method, to which the concept of labor power is central.

The development of this scientific conception of humanism erupted initially in the writings of the great Florentine Marsilio Ficino during the last half of the 15th century. Despite the fallacy of Ficino's attempted solution to the problem he attacked, only from our standpoint, five centuries later, is it possible to recognize fully the quality of his formulation of that problem.

The Italian Renaissance

Ficino's achievement would appear to be somehow mysterious unless we took into account a few of the principal facts concerning the Italian Renaissance.

The period of development of European culture from approximately 1450 through 1525, will remain one of the most important episodes in the history of the human race. Before 1450 (approximately) Europe is sickened by the combined burden of a bestialized feudal past and the ravages of the great plagues. From the accession of Charles V into the middle of the 17th century, Europe is plunged into a hideous crisis of mass depopulation, decay and despair, a Satanic night illuminated chiefly by such exceptions as pre-1589 Tudor progress and continuing Low Countries development.

Today, that contrast among the three successive periods is directly demonstrated by comparing the best examples of paintings, sculptures, architecture and literature from those respective times and places. How pathetic is the painting of the Italian Counter-Reformation period in comparison with that of the age of da Vinci and of its Flemish contemporaries. How poor, relatively lifeless is the Italian painting and sculpture of the time of the Bardi and earlier Medici bankers. In Italy, in certain regions of France, in the Low Countries, and in Tudor England, the last half of the 15th century witnesses an explosion of creative intellectual ferment which the late 17th and early 18th century would be obliged to regard with awe.

The irony of that period of Italian history is that the economy of southern Europe as a whole was plunging into the collapse which would overtake it more fully in the period of Hapsburg domination. It is the age of Cosimo de Medici, Ficino's patron, in which Renaissance Italy *celebrates the accomplishments* then being transferred to the destiny of northern European mercantilist and capitalist development. Although the detailed elaboration of that process is richly complex for study, it is sufficient for our present purposes to understand the great intellectual ferment of 1450 - 1525 Italy as *the magnificent intellectual and artistic celebration* of Renaissance Italy's — and especially Florence's — contributions to preparing the foundations for the emergence of capitalist society.

Within that general historic setting, it is proper and essential to realize also that the second half of the 15th century is the age of printing. To understand Ficino fully, it is important to compare him directly with his fellow-Augustinian, the Rossini of the Renaissance printed word, Erasmus. Two interconnected features of that initial age of printing must be understood. First, the leading role of the Augustininan current within Catholicism in raising the Platonic *Logos*-concept in a form beyond that of the ancient Platonists, and the ancient and then contemporary Aristoteleans. Second, the specific significance of the Renaissance neo-Platonic outlook must be noted. It would be a reckless gesture of incompetence to attempt to separate the Augustinian Catholic and neo-Platonic aspects of that 1450 - 1525 ferment.

The more recent example of Beethoven helps us to appreciate the case of Erasmus and, thus, the great Augustinian Ficino. Beethoven, too, was intensely preoccupied with securing earnings from publication, and also sometimes accused of sharp practices on this account. The example of Mozart's death in poverty at the hands of the wretched city fathers of Vienna fully justifies Beethoven's conduct, and not dissimilar circumstances justify Erasmus' priority in the example otherwise available from Rossini and Beethoven. Nor can Erasmus be accused of the same wretched dilettantism later made notorious by the circulation of *Il Cortigiano.*

As the essence of Beethoven in his time was the circumstances of new conceptions of creativity not yet fully digested to the present day, the essence of Erasmus' work is that of a brilliant Augustinian factionalist fighting to enrich the literature and speech of his age with conceptions beyond the power of communication through the impoverished existing language. (François Rabelais is a not unrelated example of this same concern.)

Ficino stands above Erasmus in going directly to the issue of the content of the conceptions themselves. Yet, without understanding what commonly moved them in opposition to mere scholastics, Aristoteleans generally, and the pathetic nominalists, the historical basis and importance of the late 15th century neo-Platonic Augustinian humanism can not be properly comprehended.

Feudalism As Bestiality

To get at the central importance of Ficino's work, one must contrast the titanic advance over rural bestiality embodied in the urban culture of Renaissance Italy. The essence of pre-1200 feudalism is given by the hideous Norman Domesday Book and the degrading inventory of Charlemagne's realm. Feudalism regarded the technology of its society as approximately fixed, and thus calculated into perpetuity the

estimated yields of each hectare. The peasant was calculated in the manner appropriate to mere cattle, so many per hectare of a given quality of soil and forest. To feudalism, the peasant yielded fixed quotas of grain, honey, vegetables, wood and meat with the same bestial constancy as a particular breed of cow gives so many liters of milk each year or a sheep so many kilos of wool.

This underlines exactly the meaning of Marx's phrase, "the idiocy of rural life." It also points to the bestiality of those primitive religions in which man worships trees, beasts and other "natural phenomena," or in which brutalized peasants and lumpen-proletarians consult witches and wizards against the evils of *malocchio* and so forth. Such rural and lumpen cultures are not accidentally lacking in a human morality, since for them — as for Aurelio Peccei — man himself is no better than another lower beast. The feudal crusade, typified by Charlemagne's genocidal expeditions, is exemplary of the prevailing degraded sort of morality of feudal society.

The ideology of feudal society was that of a "Zero Growth" society, in which development was significantly prohibited in preference for looting neighboring populations or herding them into serfdom like so many cattle. The "manhunts" of Charlemagne and the Teutonic Knights, the bestiality of Rumania's Vlad the Devil (Dracula), in which men and women were hunted down for pleasure in the manner of wild animals, is the kernel of feudal — rural — morality. It is not accidental that the sponsorship of "Zero Growth" is the program of bestial fascists.

In the town and city of the Italian Renaissance, there is change — development. By contrast with the feudal rural countryside, the man of the Italian urban centers is becoming actually human. The episcopal form of Catholicism of bestialized feudal society is inevitably becoming abhorrent to the thinking man of the developing urban centers of Europe of the 13th century onward. From decaying, polymorphous perverse, Byzantium and — more importantly — from the remnants of Arab Renaissance culture of the Baghdad Caliphate and Alexandria, by the way of the Moors and Jews of the Western Mediterranean, the European Renaissance develops. First, the feebler strain of Moorish Aristoteleanism and then the more powerful strain of Augustinian Platonism.

The subject is the power of human reason to change the order of reality. It is not accidental that Florence, the emerging Italian center of Renaissance economic development, should have become the site of the furthest intellectual advances of Platonism or that even the otherwise improbable Cosimo de Medici should have been its sponsor.

The subject of the Renaissance internal revolution in Catholicism was both the human soul and that soul's congruence in essence with a permanent *creative* principle of *universal humanity.*

Whereas, for feudal man of Charlemagne's realm and the Norman Domesday Book *the fixed order of human behavior* was essential, to Renaissance man of the urban centers the central concern was man's power, through his own intellect and wilful practice, to *change his own nature.* It is that *motion of change* which is the subject of Renaissance man's religious concerns, the *motion of change* which the Augustinian current of Catholicism rightly recognized as the essence of man's soul.

The Castilian Degradation of Spain

The essential point is aptly illustrated by contrasting the Augustinian humanism of Florence with the degeneration of Spain and Spanish culture from the time of the Castilian monarchy's persecution of the Jews and Moors. The essence of the Castilian *grandees'* policy of *Reconquista* and vulgar-chauvinist *limpieza de sangre* was the reactionary effort to eradicate every humanistic influence within Spain and Spanish culture. This began with the persecution of Jews, of *converso* descendants of converted Jews, was extended to the *moriscos* and Moorish cultural influences, and finally against the feeble influence of the followers of Erasmus. This *cruzada* in behalf of the *limpieza de sangre* was fought in behalf of the rural idiocy of the *conquistadores*, a semi-literate, swaggering paranoid wretch who proudly likened himself to variously a bull and a *macho* (*Macho* from *masculu* : jackass).

The *grandees* and *conquistadores* of Castile were, for their place and time, a murderous pathetic imitation of the reactionary factions of ancient Republican Rome who defeated and butchered the Gracchi. The *conquistadores* and their Hapsburg leaders were the Ceasars and would-be Ceasars of the Holy Roman Empire, which is to say the Roman Empire resurrected as a murderous farce, the Roman Empire with its immorality but without its cultural achievements.

The immediate form of the 16th century Castilian monarchy and its *grandees* and *conquistadores* was a deliberate effort to turn back the clock of history to an earlier feudalism. Sixteenth century Castile was the spectacle of stupid *conquistador* machos and their stupid Castilian sheep of *La Mesta*, which together ruined the Spanish peasants and the nascent industries of Catalonia. Industry collapsed. The Spanish farmer was looted and relooted into a state of ever-more-primitive toil while the soil itself was transformed, in large areas, from a rich grain-growing region into a leached-out infertility approximating that of a macadamed highway.

Under the Hapsburgs, Spain suffered a hideous in-

flation relative to commodity prices in other parts of Europe. This was partly, and most immediately, the result of the massive taxes raised to pay debts to foreign bankers on account of both Spanish military adventures and Castilian genocide against the indigenous populations of Mexico and Peru. More profoundly, this tax looting and feudalist squeezing of Spanish production lowered the quality of Spanish agricultural production *below that which had existed under the Moors*, or which had existed in the principal Spanish Christian states during the century preceeding the expulsion of the Moors.

The notorious stupidity of the Spanish *grandee*, the bestiality of the Spanish Inquisition, and the economic collapse of Castilian Spain are the respective subjective and objective expressions of the same general cultural and economic decay. The mentality of the Hapsburgs was "Zero Growth," a policy which inevitably achieved negative growth and which acted with bloody-handed hysteria against the same Renaissance outlook which Moorish Spain had earlier done so much to contribute to Europe as a whole.

The same general principle is fundamental to understanding the Counter-Reformation generally. The economic and cultural history of Italy, most of France, and most other regions of Europe during the last half of the 16th century is a spectacle of depopulation and decay continuing into the middle of the 17th century. It is absolutely correct to say that Hapsburg Spain led the Catholic Counter-Reformation not because Spain led in ideas, but because nearly all Europe followed the Spanish sheep into a century of rampant economic and cultural decay.

The last half of the 16th century is an age of national bankruptcies and *Jacqueries* of ruined farmers culminating in the orgy known as the Thirty Years War. Until 1589, Tudor England is a general exception to this, as are the Low Countries' and Swedish iron-and-cannon industries' other pockets of emergent capitalism. However, from 1589 into the middle of the 17th century, England, too, plunges from the humanism of Thomas More, Spenser, Marlowe, Gilbert, and the early Shakespeare into the relative moral and intellectual decay of Francis Bacon and Locke.

This pattern is shown in the plastic arts. Apart from mere technics, how wretched, even at first glance, are the painters of the Italian Counter-Reformation when compared with the painters of the age of Ficino and da Vinci? Great Italian art is suspended for that time until the names of Scarlatti and Monteverdi emerge to join Purcell, Schuetz, and Bach as the apostles of a new wave of humanism emerging in Mozart, Beethoven, Kant, Hegel — and ultimately Marx.

Meanwhile, at the end of the 16th century in Spain, Cervantes, like the later Shakespeare of the same period of writing, emerges in contemplation of the cumulative achievements and ironies of a greater preceeding age.

Ficino's "Five Questions"

Marsilio's lasting contributions to humanity are summed up in a writing first published in 1476, and no longer than a brief article in a modern magazine, his *Five Questions*. Although his attempted answer to those queries is fallaciously based on an arbitrary misassumption concerning the nature of "infinity," his statement of the problem itself represents in fact the beginning point of all modern European science. It is only from the vantage point developed variously by Hegel, Riemann and Cantor during the 19th century that Ficino's error can be competently criticized and the fuller implications of his actual achievements comprehensively understood. Moreover, there is essentially a direct line leading from Ficino's *Five Questions* into Marx's development of his dialectical method and the concept of labor power.

From the standpoint of the formal history of modern ideas, Ficino's *Five Questions* are focused on a key aspect of a general philosophical scientific problem termed the "ontological paradox." Although Ficino, like most leading Renaissance and earlier rationalists, situated the statement of that problem in theological terms, the argument can not be competently regarded as a matter of "medieval metaphysics"; the same paradox, in the form revived by Immanuel Kant, is the central issue of all scientific progress during the 19th century and remains as the key issue of scientific crisis in connection with the continued failure of contemporary science to solve the problem of the "unified field."

We shall state the paradox in its ostensibly theological form, and then identify the direct connections of that form to modern scientific thought.

If the universe were created by an *omnipotent* God — then at the point of creation there were brought into being permanent, perfected universal laws — this would show, if proven or accepted, that God is also implicitly *omniscient*. For, given knowledge of the laws of the universe at any given point in time, every subsequent event in that universe is explicitly pre-determined by permanent perfected laws.

Continuing the argument, a profound, ostensibly insoluble contradiction is encountered. If God were still omnipotent, then he could alter at will the sequence of events. If he can not do this, then he is *no longer* omnipotent, but is rather as impotent as any mere beast or even a pebble in respect to predetermined, permanent universal laws. Furthermore, he can not be omniscient, either, without being impotent.

The point of that paradox is that if the argument is true for God, it is true for man. If the laws of the uni-

verse are permanent and perfected, then the human will is not only impotent but does not exist. Human reason, judgment and will have no more reality than the reason and desire of a pebble on the beach.

In the latter form, the ontological paradox is identical with the argument of Immanuel Kant in such key locations as his *Critique of Practical Reason*. In fact, the Kantian construction, including the notion of a *categorical imperative,* is a direct parody of the concluding argument made by Ficino in the *Five Questions*.

Kant, unlike ultra-Calvinist clowns, and, to that extent, like Ficino, acknowledges the efficient existence of human reason and will. The human mind does innovate — in that sense, creates "miracles" — and such innovations do alter the sequence of events in the universe as a whole through man's wilful practice. Therefore, Kant emphasizes, the real, fundamental laws of the universe are not in correspondence to the kinds of permanent perfected laws imagined by such 18th century mathematical physicists as Euler and Lagrange. However, Kant qualifies this, the kinds of *apparent* permanent universal laws described by Euler and Lagrange represent the only aspect of reality which man is capable of knowing *in this life*. It is only at "infinity," where the esthetic categories of space and time vanish *into rest*, that there could be a direct perception of the otherwise unknowable real laws of the universe.

That is the key to the fallacy of the Kantian system. Kant's misconception of the notion of "infinity" is the characteristic clinical symptom of his fundamental error. To the extent we have so far represented the problem, that is also exactly the specific error committed by Ficino three centuries before Kant.

If that were all that Ficino accomplished, we should regard him essentially as a forerunner of Kant, and so delimit our inquiry. In fact, on important points Ficino was qualitatively more advanced that Kant. Together with the famous Giovanni Pico della Mirandola, Ficino's sometime student, Ficino is not only a forerunner of Kant but, more emphatically, the predecessor of that neo-Platonic current typified by Kepler, Descartes, Spinoza, leading into Hegel, Riemann, Cantor and the notions of General Relativity.

The closest approximation of the exact neo-Platonic conceptions of Ficino and his Renaissance co-thinkers is found in Rene Descartes and B. Spinoza. This is the aspect of Descartes and Spinoza *hysterically* denied by Kant, and the germ of Hegel's solution to the fallacies of the Kantian system.

The essential kernel of the world outlook of Descartes and Spinoza is summed up by considering two Cartesian hypotheses as representing an interdependent whole. The first of these is the famous *cogito ergo sum*, which is properly understood as merely a prerequisite auxiliary hypothesis for the central conception, Descartes' hypothesis concerning *perfection*.

In the first hypothesis, *cogito...*, all man's knowledge occurs in the form, "I think that ...." There is no human knowledge which does not properly exist merely as a *predicate* of the statement-form, "I think that ...." Thus, if one numbered all the kinds of things man could know by a symbology, X_i, in which *i* stands for numbers 1,2,3, ..., then all such knowledge can be symbolically stated, "I think that $S(X_i)$," in which the symbol, *S*, stands for the operation of summation. Since no part of $S(X_i)$ exists without the constant, unifying "I think...," if any part of $S(X_i)$ exists, then "I think" also exists in terms *superior to* any and all of $S(X_i)$. In conclusion: "I think" exists, therefore "I" exist *as intellectual activity: cogito ergo sum.*

In the second hypothesis, one considers the case of *changing knowledge*. This difference between the first and second hypothesis is exactly parallel to the difference between the notions of *simple reproduction* and *extended reproduction* in Marx's *Capital*. The notion Descartes adduces (as described by Spinoza) is congruent with the concept of *labor power* in *Capital.*

To state the second hypothesis in symbolic terms of illustration, we replace (X_i) with (X_{ij}). *j* stands for successive advances in knowledge concerning a class of phenomena designated by a particular value of *i*, so that *j* also corresponds to a numbering sequence, 1,2,3, ... We now have "I think that SS (X_{ij}) in place of "I think that $S(X_i)$."

There are two opposite ways of interpreting that symbology. If the universe is assumed to be ultimately composed of primitive discrete particles, then the meaning of the symbolic expression for any advancement of knowledge is of the form

"I think that $S(\dot{X}_{i(j+1)})$" / "I think that $S(X_{ij})$";

or, a simple *logical* comparison of two discrete states of knowledge. However, the existence of the change signifies that the primitive substance of knowledge is not any particular state or knowledge, but rather *the process of creative thinking* which produces the change from one state to another. It is nothing but the latter conclusion which is absolutely emphasized by both Descartes and Spinoza to the same effect as Ficino in the *Five Questions.*

The primary being of the universe for Ficino, Descartes, and Spinoza is *the self-moving substance of creative thought*. From the standpoint of the banal formal logician and grammarian, what Ficino, Descartes and Spinoza identify as *primitive universal being* is represented by the apparent "in-betweenness" connecting successive advances in specific creative advances in knowledge and practice.

It is that common feature of Ficino, Descartes,

Spinoza, and Hegel which causes them to be broadly classed as "idealists." They locate primitive reality, primary universal being, in abstract *creative* thought

This use of the term, "idealism," does not mean that those persons were in any sense inferior as philosophers and scientists to the so-called "materialists." *Exactly the opposite*, as Marx emphasizes in the first two of his famous "Theses On Feuerbach."

Materialist philosophy was a temporarily useful dead-end, which absolutely discredited itself during the 18th century by progressing to the state of philosophical and scientific bankruptcy achieved, notably, by Lagrange. The fallacy of the genuine, neo-Platonic idealists, including Hegel, is that they attempted to reconcile the irreconcilable; they attempted to reconcile the dialectical neo-Platonic universe of Ficino, et al., with the sterile universe of fixed, formal, permanent mechanistic lawfulness of Lagrange, et al. That is the fundamental fallacy of Ficino's conclusion in his *Five Questions*, as well as the fallacy of Kant's *Critique of Practical Reason* and Hegel's *Phenomenology* and *Science of Logic*.

The idealists explored the real nature of the universe only as a formal question of knowledge, in the abstracted study of mentation apart from real practice, and failed to consider the problem of the kind of material universe in which such creative primitive qualities of thought could occur.

They failed, in short, to actually solve the ontological paradox. They merely developed the initial form of conception of a correct solution.

Platonics, Aristoteleans, and Nominalists

The leading thought of the Renaissance was dominated by bitter, sometimes bloody-handed factional differences among three dominant currents of philosophical scientific outlook. Moreover, those factional distinctions have dominated all modern philosophical and scientific currents of capitalist thought down to the present day. These are efficiently identified as the *neo-Platonic, Aristotelean* and *nominalist* factions.

There is nothing mysterious or supra-historical in the connections indicated. It is only in intellectually bankrupt historiography that the period of European history dating from approximately 1200 to the middle of the 16th century is considered a "feudal" epoch. If we distinguish one form of society from another in any rigorous way approximating that of distinctions among biological species, actual feudalism — such as that of Charlemagne's realm and the Norman Domesday Book — is specifically distinguished from capitalism by absolute distinctions in the way in which the two societies reproduce themselves. Feudal society, as such, reached a point of collapse during the so-called Crusades, and was superseded by a transitional form of society dominated increasingly by mercantile capitalism. The general supersession of feudal by mercantile capitalist institutions is signaled by late 13th century England's Edwardian reforms, involving the expulsion of the Jews and the replacement of feudal modes of reproduction by introduction of alienable property forms.

Mercantile capitalism is *neither* feudalism nor capitalism, but is rather a kind of larval form of metagenesis of future capitalist development within the womb of a dying feudalist order. This general problem has been adequately developed within this author's textbook, *Dialectical Economics*, and is not in itself a key feature of our subject in these lectures. However, the point which is essential here is that the various currents of medieval thought are initial, axiomatic elaborations of a specifically pre-capitalist culture. Hence, there is no mystery or supra-historic taint to seeing such currents of capitalist thought as emergent during the Renaissance.

Two things must be added to this. First, there were several valid reasons behind the Renaissance thinkers' searching for teachers among classic philosophers. Hellenic philosophy was an outgrowth of Ionian and subsequent mercantile-capitalist development. The collapse of the Roman Empire represents a "common ruin of the contending classes" broadly paralleling the degeneration of Spanish culture under the Hapsburgs; the failure of the Gracchian faction of the internally decaying Roman Republic is key. Morally, intellectually, economically, the Roman Empire is a catastrophe for civilization, a catastrophe to which the Arab Renaissance and the combined and uneven development of European feudalism are the main contributing links to man's recovery from the hideous calamity that was Rome. Consequently, Renaissance Europe rightly perceived that ancient Hellenic civilization represented at its pinnacles a higher form of intellectual development than the feudal society from which man was freshly emerging toward becoming truly human.

Second, Renaissance thinkers — especially those of the late 15th century — are commonly grossly undervalued by scholars who ought to have known better. Despite a considerable debt of the Renaissance neo-Platonics to the Hellenic Platonics and neo-Platonics, the Renaissance thinkers were qualitatively more advanced than the ancient teachers upon whom they otherwise significantly depended. Despite the hideous catastrophes about to be visited upon humanity under the Hapsburgs and their kind, the distinguishing feature of the Renaissance — and of 1450-1525 Florence in particular — is a creative urban technological, political and intellectual development beyond anything which the ancient world experienced. The an-

cient world was not altogether ignorant of the concept of progress, but the "Idea of Progress" permeating the greatest literature of the Renaissance is qualitatively beyond that of the classic Hellenic world.

The transmission of a diluted Aristotle by way of the Moorish culture of Spain is the central feature of the early Renaissance. This produces the scholastics and their degenerated opponents, the nominalists. This is the *lower* Renaissance of mere formal logic, which does not recognize the existence of *creative* change. This is the lower Renaissance more deeply enmired in the vestiges of decaying feudal culture, the Renaissance of man seen as a *reasonable* domesticated form of animal life. This leads, at best, into 15th and 16th century Padua and the Aristotelean current of the European capitalist enlightenment, typified by Galileo. The degenerate form of Aristoteleanism, emerges following the post-1589 relative subsidence of the English Renaissance in the form of the unhappy Francis Bacon and continues through Hume into modern empiricism and pragmatism.

Neo-Platonism erupts as a principal current of the Renaissance during the late 15th century as neo-Platonic humanism of the greatest 1450-1525 writers and artists of Italy and northern Europe. With the neo-Platonics, the creative principle is the essence of man, the essence of his soul. In place of the relatively bestial, mere logical reason of the scholastics and the anti-rationalism of the nominalists, the neo-Platonics situate the self-movement of creative thought as the primitive basis for successive advances in the quality of the individual self and society.

Like Hegel, the Florentine and other great neo-Platonists, painters, sculptors and architects of that period seek in the apotheosized personalities of the great men changing society the approximate expression of the self-moving quality of perfection.

More important, the greatest neo-Platonists conceptualize the self-moving quality of creative development as susceptible of being wilfully strengthened, and the cause of human perfection so ensured and accelerated. That is the essential significance — in broad terms — of the major writings of Ficino, Pico, et al.

However, as we shall explore more fully, like Kant, Ficino erred in conceiving perfection as a convergence upon a state of rest.

The Harvester. Brueghel the Elder understood the bestial idiocy of rural life more clearly than the much later Physiocrats.

III The Physiocrats

At this point, we are wisely guided by Karl Marx himself in proceeding from *Capital* to Marx's 1843-1845 achievements, rather than retracing his evolution into 1843-1845 and from there into the elaboration of *Capital*. We are not suggesting that the 1843-1845 writings do not stand on their own feet, or that it is not possible to rigorously develop those conceptions. We have done just that in other locations, including the textbook, *Dialectical Economics*. We are emphasizing that for a brief lecture series, it is more efficient to go from Ficino, Descartes, and Kant directly to *Capital*, and then consider Marx's development from Hegel and Feuerbach in that light.

That does not mean that we have yet finished with Ficino, Pico and so forth. As we have already stated, a fuller understanding of Ficino and his contemporary neo-Platonic humanists demands the more advanced standpoint based on Marx, Riemann, Cantor, and so forth.

It is useful and correct to identify Marx's solution to the problem of the French Physiocrats as a *unique* and *comprehensive* solution of the Renaissance's ontological paradox. By the terms, "unique" and "comprehensive," we are emphasizing that Marx solves what modern science terms a "crucial experiment," as the demonstration of the constant velocity of light became a crucial experimental basis for the Einstein Special Relativity theory. In fact, Marx's discovery is the most important crucial experimental scientific discovery in all history to date, as we shall demonstrate.

As any reader can determine for himself by consulting the Moscow edition of *Theories of Surplus Value*, all Marxian economic theory depends upon and is derived from that critical refutation of the fundamental error of the French Physiocrats.

The French Physiocrats are associated with two fundamental conceptions essential to any competent theory of economy and ecology. The first is the conception of "absolute profit." The second is a major advance in the elaboration of the conception of "absolute profit," Quesnay's *Tableau Economique*. The in-

dividual who has not mastered such conceptions is ignorant of all economic and ecological theory worth knowing.

Absolute profit means simply the increase in total useful *material* wealth resulting from net production by society as a whole. It signifies, in particular, that the apparent profits of local farms, industries, and nations are not necessarily an increase in the totality of human wealth, since local profits may appear as the result of policies and practices which diminish the wealth of society as a whole. The notion of *absolute profit* demonstrates that there can be no competent political economic theory except one which takes the production of the entirety of society as the primary fact, and that any theory which sees the wealth of society as the mere sum of locally produced wealth is nonsensical.

Quesnay's *Tableau Economique* recognizes that the wealth of whole societies forms an interconnected whole through a kind of causal network of all extraction, agriculture, and industry taken as a whole. In modern industrial engineering terms, this means analyzing the *bills of consumption, bills of materials,* and *process sheets of production in terms of their worldwide interconnections.*

Marx's *corrected* representation of the Physiocrats' achievements is depicted in *Figure 1*. In any society based on the *labor process of industrial development* the following principal categories of the total economy exist.

The population as a whole is divided into three principal *classes*. First, there are the two *productive* classes, the *farmers* and the *working class*. Second, there are the *non-productive* classes, principally composed of *capitalists* and various petit-bourgeois strata which act, economically, as house servants of the capitalist class in production and in the administrative and service functions of capitalist rule of society.

Outside these classes, there are the marginal populations, notably including aristocrats and lumpenproletarians.

The productive classes are represented by the totality of households from which productive agricultural, extractive, and manufacturing labor are obtained. For purposes of illustration we have combined these two productive classes in bar *a*, a condition which actually exists only in industrialized agriculture, but which is nonetheless a useful and admissible simplification of the illustration for the limited purposes immediately at hand. We have similarly combined capitalists, petit bourgeoisie, aristocrats and lumpenproletarians in bar *b*.

Within bar *a* we have indicated a subdivision of the population of the classes by categories of economic maturity. The "young" represent those who, according to existing social modes have not yet been matured to the level of productive workers. The "aged" represent those who, also according to existing social practices — rather than any absolute biological distinctions — are not practically included in the age group corresponding to regular productive labor. (The meaning of these distinctions is elaborated within *Dialectical Economics*.) A *percentile* of the age group lying between those two categories is the existing productive labor force. This percentile is obviously principally determined by the importance of intra-household activities in producing and maintaining the working class as whole. (The point of noting these social distinctions within the productive classes will be clear soon enough.)

Bar *c* represents the totality of productive activity of society. This totality produces an output of wealth which is divided into three principal categories. We define these categories in terms of the requirements of social reproduction rather than their capitalist disinctions.

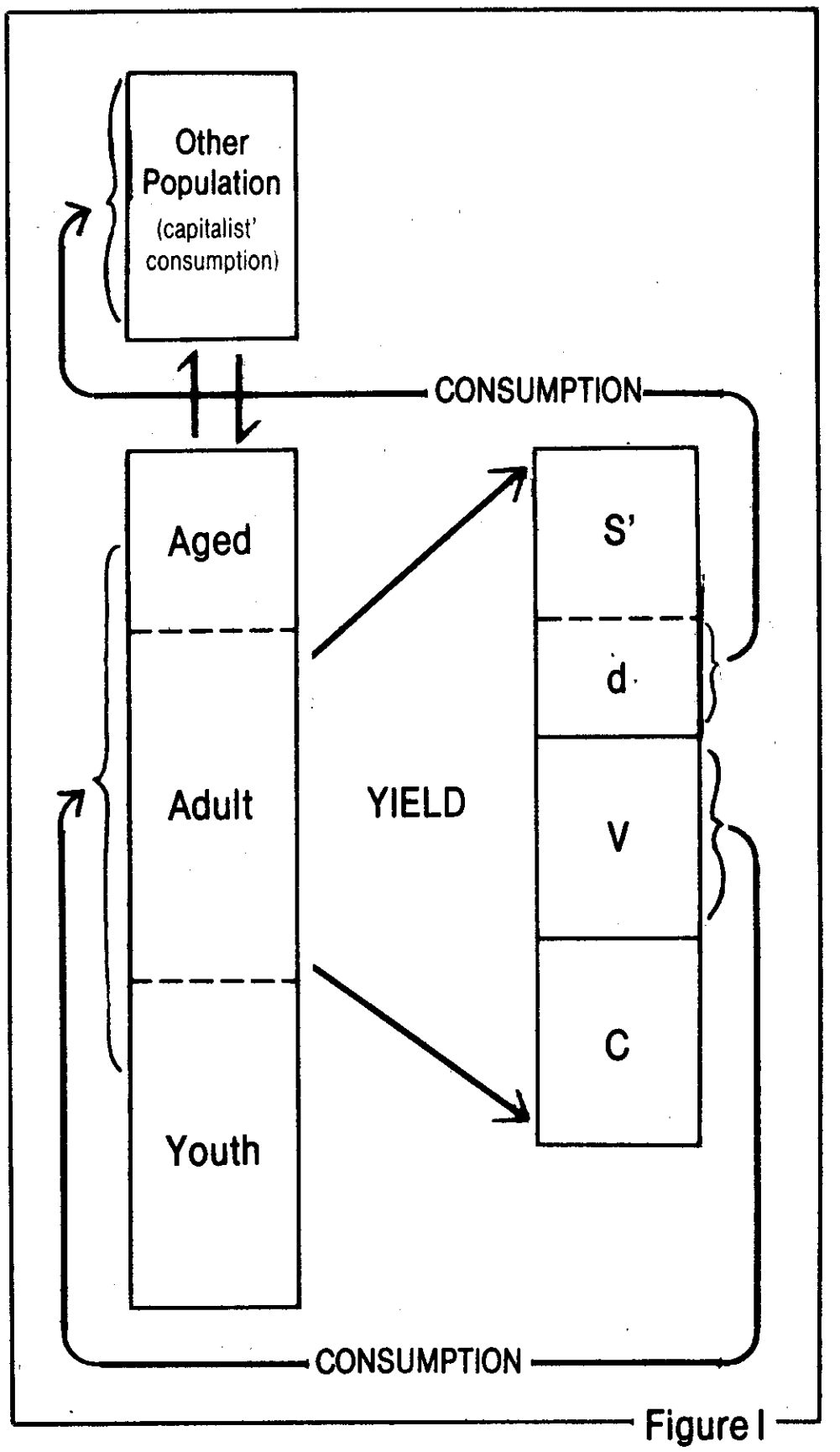


Figure I

The first category, approximately corresponding to Variable Capital (V) in capitalist political economy, is the portion of the total product required to maintain all households of the productive classes at the level of consumption and quality of leisure required to produce labor of the quality required for modern productive technologies. The second category, approximately corresponding to Constant Capital (C) in capitalist political economy, is that portion of the total output which must be allocated to maintain factories, machines, tools, natural resources, improved agriculture, and so forth in a condition of equipotentiality for continued production on at least the same whole scale with technologies at least as advanced as those presently existing.

These are the "prime costs" of simply reproducing the existing wealth-creating capacities of society, or the "prime costs" of an abstract, hypothetical state of *simple reproduction* of the existing productive forces (wealth-creating capacity). The residue of total production of society is social surplus, approximately the Surplus Value (S) of capitalist political economy.

Out of this Surplus Value, the non-productive classes obtain their household consumption and also the "capital goods" consumption (office buildings, computers, military equipment, and so forth) of those classes' included activities. This is *capitalists' consumption* (D).

From that analysis we derive two ratios, on which all economic theory is properly based. The first, approximately reflected by the rate of capitalists' profit, is $S/(C+V)$. The second, the rate of net social surplus, is $(S-D)/(C+V)$ or, shortened, $S'/(C+V)$, where $S'=(S-D)$.

If $S/(C+V)$ is measured for the entire society in terms of real social reproductive relations, *rather than capitalists' monetary terms*, S corresponds to what we mean by "absolute profit."

Those terms defined, we can now proceed to further discussion of the Physiocrats.

The fundamental fallacy of the Physiocrats was their *bestial* misconception, that the source of absolute profit was the "bounty of nature." This bestial misconception was directly connected to the fact that the Physiocratic current was socially based upon quasi-feudal landlords (aristocrats) who saw production on their estates in approximately the same terms as Charlemagne's feudal bookkeepers or the Norman Domesday Book. To a Physiocrat, a peasant-serf was a special kind of cattle, which yielded a certain product if he pastured so many peasants per hectare of a given fertility of land.

However, the 18th century French aristocrats were *not* feudal aristocrats, but only mercantile capitalist caricatures of actual nobility. The French aristocrats were *essentially* mercantile capitalist landlords with delusions of feudal pomp and glory. (Cf. *Dialectical Economics*, Chap. 10). Although they resorted perfervidly to mice-nibbled feudal lawbooks as a notary's trick to be played upon victimized peasants, 18th century French agriculture was capitalist production for a capitalist market.

That point is no sidelight on the issue at hand. The Physiocrats' hatred of Colbertism and John Law of "Mississippi bubble" fame is the political motive for Physiocratic theory; Physiocratic economy theory is politically an aristocratic populists' polemic against mercantile capitalist creditors and governmental tax-gathers. Their argument was that manufacturing, in particular, produced no real wealth, and that Colbert-type measures aimed at developing manufacturing through taxes and debts imposed upon agriculture was simply parasitism. It would therefore have been impossible for the Physiocrats to have existed if they had been feudal aristocrats and not essentially capitalist landlords. The problem to which they focused their attention (and venom) would not have existed for them otherwise.

No amount of such facts will convince some imbeciles that every parasite passing most of his day peering at young women's cleavages is not almost a feudal aristocrat. (He is only, in reality, an infantile creature not yet reconciled to his weaning.)

The Physiocrats understood economy only from the standpoint of *simple reproduction*, from the standpoint of "Zero Growth" bestiality.

If there were no change in the value of the expression, $S/(C+V)$ from period to period of capitalist production, then — it might be granted — the difference between the Physiocrats and Marx might be considered a moot difference of opinion. However, once it is demonstrated that the ratio of the total population required to satisfy food production requirements is reduced by the benefits of industrial development for agricultural production, the Physiocratic argument collapses.

At the same time, and in the same way, the scholastic ontological paradox also collapses.

That human technological innovations not only result in an increase in the value of $S/(C+V)$ but occur under conditions of increasing levels of per capita household consumption and increasing leisure, demonstrates that the source of absolute profit is not the "bounty of nature," not "natural resources," but is the development of the intellectual powers of man both to effect new scientific discoveries and to assimilate the benefits of those discoveries as advancing technology of social productive practice.

However, that is not the end of the point. The crucial experimental demonstration of human progress is not limited to the benefits of particular scientific discoveries. Human progress is not a matter of the benefits of

isolated discoveries; rather, the history of human progress under modern European culture is the fact that the improved conditions of production produced as a result of one advance provides the basis for a higher quality of further advance. The history of that development is that the development of the productive power of human labor is *self-perpetuating*. Human intellectual progress is *self-moving* through the mediation of advances in human productive practice.

The Notion of Labor

The development of the idea of "labor" by Kant and Hegel has the same significance as the self-moving intellectual creative quality of the soul in Ficino's *Five Questions* and Pico's posthumously published *Oration. Labor* to Hegel is the *wilful practice* (realization) of creative discoveries of the intellect. This is the concept carried forward by Marx to develop the notion of *labor power.* The difference between Hegel and Marx on this notion of labor is that for Marx labor power was delimited to effecting mediating changes in the order of material processes which acted as the more advanced material preconditions for further advances in human creative intellectual powers.

Labor power is absolutely not an *epiphenomenon* of the individual worker. Labor power is a quality which exists as a primary quality only in the world's working class as a whole, which is reflected through the activity of the individual worker. Labor power is the power to produce a continual increase in the rate of absolute profit, and is thus unique to the entire world economy. The labor power of the individual worker is the power he expresses through the universal (worldwide) network described by the *Tableau Economique*. Apart from that worldwide network, the labor power of the isolated workers ceases to exist.

Labor power is the power to increase the value of the social reproductive expression, $S/(C+V)$ and is *not* simply the power to produce. By acting to increase the technology of the worldwide network at any given point, the individual worker cheapens the cost of production of everything to that extent on a world scale, and contributes to the spread of such technological advances more generally, effecting thus a further advancement in the power of the human species to develop. It is *not* the worker's mastery of learned procedures of production that makes him labor power, but his intellectual powers to innovate and to assimilate *new* kinds of productive techniques.

What gives a worker labor power is only that which absolutely distinguishes him from a domesticated farm animal, a horse, a mule, or a trained circus-performing dog or bear. What he has learned to do on orders does not distinguish him from a well-trained circus animal or one of a pair of farmer's oxen. It is man's creative intellectual powers — to accomplish what no lower beast can attempt — which makes man human. It is that creative intellectual power which makes him human which also makes him capable of becoming an essential part of the world's labor power.

Does this by itself solve the old ontological paradox? Does it solve the problem stated by Ficino? Not completely. Our crucial-experiment summary of the matter has one principal further piece of evidence to consider before the notion of labor power is fully comprehended.

Constant Capital

Marx's treatment of the Physiocrats is not the beginning of his comprehension of the principle involved. The principle is already summarized in the "Feuerbach" section of *The German Ideology.* The development of *Capital* situates that earlier fundamental discovery rigorously within the setting of systematic capitalist political economy.

In the "Feuerbach" section of *The German Ideology* Marx begins — after a brief introductory section — by setting forth a sequence of interconnected summary statements which represent *a general law of evolutionary social reproduction,* which he correctly and emphatically stipulates to be the sole premise of *any sort of* scientific knowledge. If those passages and the "Theses on Feuerbach" are read, as they must be, from the standpoint of Kant, Hegel, and Feuerbach, they represent the entirety of Marx's essential world outlook for all his subsequent life. They also represent a sweeping breakthrough in general scientific knowledge which is only now on the verge of being accomplished.

It is not irrelevant to emphasize here that the power of the relatively tiny Labor Committees organization is entirely a product of the explicit assimilation of those essential scientific principles. The importance of Marx's revolution in scientific knowledge is by no means limited to the fulfillment of its implications for the physical sciences so-called; the germ of that forthcoming sweeping revolution in physical science is already the indispensable substance which gives revolutionary Marxism that *creative force of ideas* lately seen in the tiny Labor Committees' powerful effect on certain key aspects of the course of world developments.

We restate Marx's law of evolutionary social development here in our terms, leaving it to the reader to compare this with Marx's own text. The order in which we arrange the points of the argument seems to be somewhat the reverse of Marx's, but the reasons for that choice here ought to be obvious enough that we can merely acknowledge the fact and then proceed directly to business at hand.

The existence of humanity in any fixed mode of social reproduction depends upon a relative finiteness of existing natural and man-altered resources for the technology characteristic of that mode. This may be represented by wild game, land of a certain kind of fertility, mineral resources of a certain kind, and so forth. These tend to be depleted not only by an expansion of the society's population, but even by efforts to maintain a fixed or reduced population in that same mode.

Thus, the development of man from his Pleistocene ape-like mode of existence to a population of approximately 3.75 billions today, with the largest part of that occurring under capitalist development, is the outcome of a progressive advance in modes of social reproduction. Although this progress has occurred in a significantly multilinear rather than unilineal succession for various branches of development, the overall effect is ultimately the same as if the development had been merely unilineal. As each mode of existence apparently converges upon the limits of its continuation, human progress is maintained by revolutionary advances in technology and forms of social organization, in which old definitions of resources are superceded by new definitions of resources.

The source of these advances is creative innovations in the realm of what we today would retrospectively term basic scientific discoveries. These technological advances correlate with the discovery and elaboration of new social forms of organization appropriate to that technology.

The social relations within a society characterized by a definite range of technology and form of social organization define a definite set of man-to-man practical relationships among the members of that society — a set of relationships which determine the rights, privileges, and duties of each person with respect to various others. Thus practice, communication, forms of social identity, and so forth determine sets of ruling ideas which are characteristic of that culture and which, all together, permit us to adduce a characteristic set of ruling ideas for that culture.

The significance of this evolutionary succession in social development is immediately best understood by comparing it with the evolutionary development of lower forms of life. Man, through his mind, accomplishes progressive evolution in his species-nature of a quality which is paralleled by the less successful "genetic" evolutionary progress among lower species.

This becomes clearer when the thermodynamics of the biosphere are studied as the framework of reference for comparing pre-human biological and human social evolutionary progress. All living processes are characterized by negative-entropic (or, *negentropic*) thermodynamical relations of reproduction analogous to increases in the value of $S'/(C+V)$ for the modern labor process. Contrary to hysterical Darwinians and their descendants, the location of species variation is not located in the individual member of the species or even in the entire species, but is necessarily determined by the effect of the existence of the species as a whole on the negentropy of the immediate whole ecology and — ultimately — on the negentropy of the entire biosphere. It is characteristic of a negentropic process, such as life, that, unless it develops a higher degree of negentropy, its negentropic feature causes it to become autocannibalistic and to degenerate in a *directed* devolutionary way. (Cf. "Rockefeller's Fascism with a Democratic Face.") Evolution is not something which may or may not "randomly" occur; evolution is indispensable to the continued existence of a biosphere and is the most essential, characteristic feature of a biosphere as a whole.

Although specific forms of "inorganic material" are characteristic of biospherical processes, it is the thermodynamical qualities of the carbon combinations and water molecules, not their atomic essences as such, which is significant. The essential feature of living processes is their energy-throughput characteristics. In terms of approximation, the overall quality of the biosphere is, first, the increased mass of energy embodied in it, second, the rate of increase of the capture of energy, and, third, the increase of the rate of increase of the capture of energy. It is the latter quality — increase of the rate of increase of capture of energy — which is the empirically characteristic feature of the biosphere, its evolutionary development through which it qualitatively increases its ability to capture and retain larger ratios of energy from solar and (ultimately) other sources, and, thus, continue the thermodynamical negentropic expansion upon which its continued existence absolutely depends.

This is also the central feature of social evolution. The characteristic features of progressive development of society is the net useful energy throughput per capita expressed in production and household consumption, which represents *secularly* an advance of the biosphere as a whole.

If caloric measures are used as a means of illustrative approximation, we have the following elementary features of social evolution. As animal herding, agriculture, and so forth are part of man's evolution from an ape-like hunting and gathering existence, the amount of caloric throughput of production and consumption represented has increased in that way. Irrigation is a gross prototype of increasing the biosphere as a whole by such developments. Yet, these developments demand a secular tendency for an absolute increase in the caloric per capita content of consumption. Hence, to maintain human existence through successively advancing modes, these increases in consumption must be absorbed *before* reaching a net gain in the equivalent of a rise

in S/(C+V) or S'/(C+V) . Generally, there must be a characteristic tendency for an exponential increase in the value of S'/(C+V) relative to any moment in order to realize a simple increase in the same ratio during the succeeding period.

This illustrates the significance of the discoveries upon which social evolution depends as having the effective ultimate content of a developing thermodynamical theory, whose empirical proof is the capacity of the human species to absolutely increase its population at a potentially general higher caloric content of consumption. In other words, the characteristic feature of those discoveries of creative intellectual effort which produce such social evolution is *negentropy* !

Scientific knowledge exists for man only in the terms of reference we outlined in stating Descartes' notion of perfection. The reality of human knowledge is not the particular knowledge of a moment of development, but is located in the historical process through which the successive progressions in particular knowledge are accomplished. *The only truth which man can prove to be fundamental, considering the supersession of each existing form of knowledge, is the historic ordering of progress in knowledge on the empirical basis of progress in the power of the human species to perpetuate and advance its own existance as an evolving species.*

This conception is crucial to all Marxism; without comprehending it there can be no claim to comprehend any fundamental aspect of the Marxist world outlook. Therefore, we must dwell upon it, restating the point to converge upon direct recognition of the key point which must be understood.

First, we restate the point we have just made above in this way. *Man does not gain real knowledge from his practice, but from the development of his practice.* Man's knowledge does not consist of learning what does or does not appear to succeed under particular kinds of circumstances; knowledge, in the sense of that which distinguishes a man from a shrewd pig or circus animal, is uniquely and exclusively premised on experience of *the progressive evolution of* successful practice. Knowledge is limited to understanding of the kinds of mental problem-solving behavior through which creative scientific discoveries are made, and through which workers learn to assimilate such discoveries as replacements for the ideas of practice which they formerly considered adequate.

That a certain form of society and associated technology appears to work under immediate investigations proves almost nothing. The question of knowledge is a question of man's power to change his practice successfully, not a question of learning a fixed form of existing practice. The subject of circus animal behavior is learning a fixed mode of practice; the primitive, elementary subject of human knowledge is the successful progressive evolutionary development of human practice...the "in-betweenness" linking successive states of progress in particular human knowledge.

The problem we are considering here is exactly the irreconcilable issue between the Augustinians and the Scholastics, between the humanists and the bloody-handed reactionaries of the Holy Office of the Counter-Reformation, the irreconcilable difference between the great Pico and the miserable, ignorant scholastics who censured his great project of 1486-1487. Ficino, Pico and the other leading neo-Platonic humanists despised the pettifogging Schoolmen as holding back the human intellect to the status of merely a noble animal. It is the irreconcilable issue between the relatively bestial world outlook of miserable logical formalists and the dialectic — the issue which Plato described as the need to relieve the "night of reason" with the light of the dialectic.

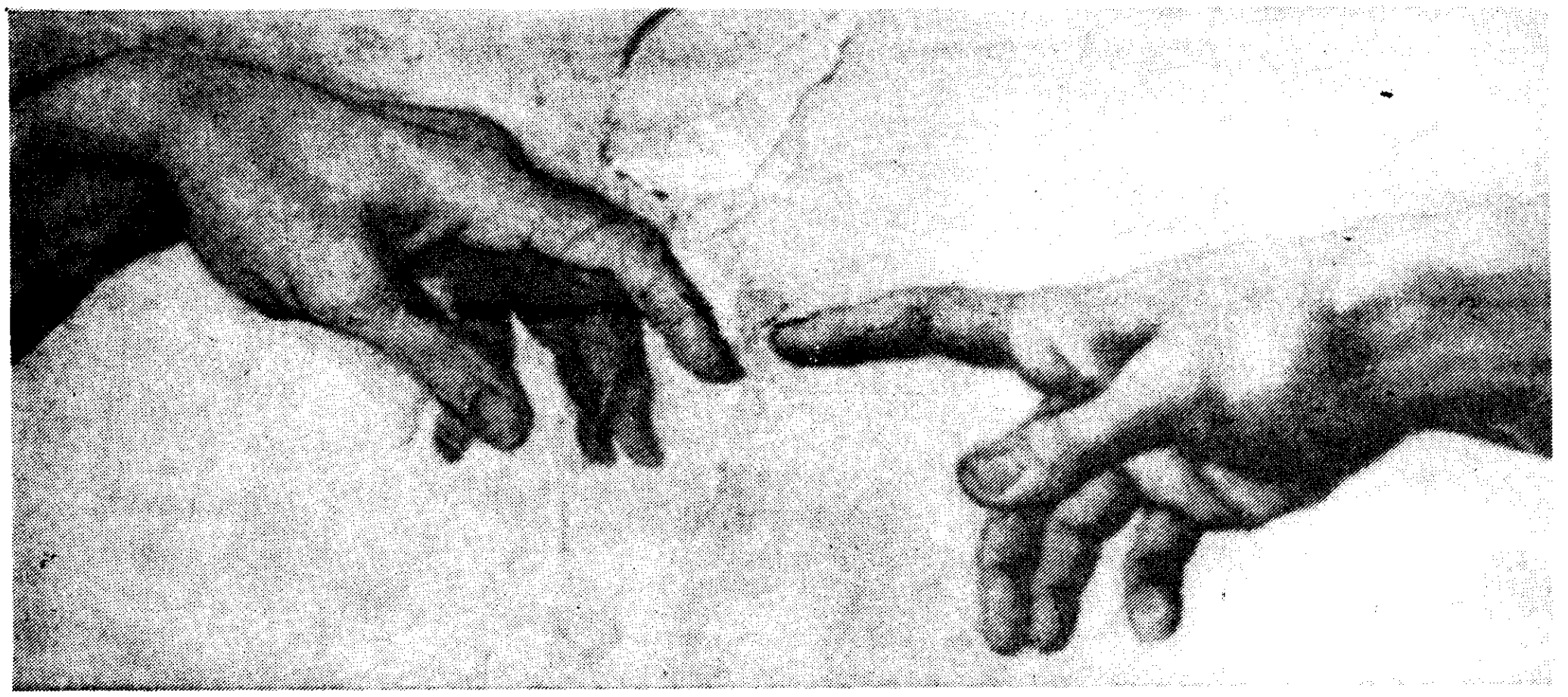
Matter does not exist in and of itself, nor is actual matter known merely as the subject of simple practice. Man actually knows the material universe not as the subject of simple practice, but only from the standpoint of his *progressively evolving practice.*

That is absolutely key to Marx's development of his unique conception of *Constant Capital*. The natural and man-altered material preconditions of human productive existence are not represented by a fixed array of objects for all time. Any array of such objects of man-altered nature is merely a *potentiality*, whose potential is determined entirely and uniquely from the standpoint of society's evolving technology and associated forms of social organization. Constant Capital is not determined by the historic valuations attributed to the present by the past; Constant Capital is not a matter of depreciation of past investments, but of the needs of the present and future.

Indeed, in just that distinction between "dead capital" and dialectical conceptions of Constant Capital is located the fallacy of capitalist reproduction leading into depressions and breakdown crises such as the present collapse. Where the capitalist point of view, the overriding commitment to payment on accumulated debts, leads to an ever-deeper depression, the Marxian conception of Constant Capital leads — with the same actual productive forces at hand — to unprecedented expansion.

The Physiocrats, like the then-contemporary mathematical physicist Lagrange, saw capitalist development from the standpoint of the scholastics, from the standpoint of the bestialized "night of reason," through the prism of simple reproductive, fixed-practice relationships. So, for them, Constant Capital, like labor power, had no real existence. Marx, attacking the simple-reproduction outlook shared by the Physiocrats and Lagrange, used the crucial experimental evidence of evolving social-reproductive practice to upset the scholastical-Newtonian world view entirely and situate human knowledge where the great neo-Platonic humanists had sought — brilliantly but unsuccessfully — to found it.

The Creation of Adam (detail), Michelangelo.



IV Religion and Physics

The fact, as we have emphasized repeatedly, that Ficino's *Five Questions* can not begin to be adequately criticized until Marx, Riemann and Cantor have been assimilated, implicitly poses the issue: How, then, could Ficino himself have elaborated such conceptions? Although the conceptions he summarizes are most advantageously situated in a critique of modern physics, they were presented and based in the form of theological arguments.

All sorts of nonsense have been variously scribbled and uttered from academic lecterns to account for the "religious ideas" of thinkers such as Ficino, Pico, Kepler, Descartes and so forth. It is not truly necessary to argue against such chattering academic *papagalli* ; what would the trustees of any self-respecting capitalist corporation do promptly if they found the president of that establishment perpetually arguing corporate policy with his pet parrot? We know to what cages *papagalli* belong, and to what other institutions one should dispatch those who treat the arguments of *papagalli* seriously. What is written and uttered on Pico's religious beliefs by academicians merely certifies what we otherwise know, that those chattering birds have not the slightest understanding of that subject matter.

Religious belief, notably in its evangelical Christian form, is a very serious affair. To imagine that the religious belief of an Augustinian intellectual of the 1450-1525 period was in any sense a matter of habits or expediency is to understand absolutely nothing. Ficino and Pico, in particular, were passionately religious, and the essential feature of all their philosophical-scientific conceptions is passionate religious belief. Until one understands why that is the case, nothing is understood concerning religious belief, Ficino, Descartes, *or any scientific subject.*

The highest degree of passionate excitement to which any human being can attain or aspire to attain is to seize for a moment on the experience of the "in-betweenness" of the mental processes connecting important progress from one idea to its successor. Ordinarily, this occurs only among the greatest scientists, philosophers, musicians, and so forth. Every human being, excepting paranoid-schizophrenics, has some recurring experience with a sense of an "electric" moment connecting a preceding moment of relative ignorance with an immediately following moment of freshly seized new scientific conceptions. However, despite the extent of such brief direct experiences of the creative moment of "in-betweenness," among ordinary people of this society the experience rarely occurs with sufficient frequency and duration to permit experimental investigation of the phenomenon itself.

Not Manic Impulses

There is an added difficulty which must be identified to prevent confusion of these phenomena with pathological emotional experiences of a different

quality. All emotion as emotion occurs in such an elusive form (relative to ordinary formal methods of cognition) that this very difficulty seems to be a dominant common feature of qualitatively opposite emotional conditions. It is sufficient to identify some of the pathological states which the neurotic, uncreative individual will tend to mistake for our descriptive identification of the "in-betweenness" of creative mental achievement.

The most readily accessible indicative example of such neurotic states is the emotion which seizes the kleptomaniac during initial possession of the stolen object. After the theft, the victim of kleptomania loses satisfaction from the object, and must — like a Rockefeller — steal another, and another...always another. What this pathological syndrome reflects is the reality that the goal of the kleptomaniac is not the possession of the objects themselves, but the emotion which evanescently glows within them during the act of theft.

Kleptomania is usually an interchangeable mental disease for female nymphomania. (It is related, as in the manner of a "second cousin," to male satyriasis, to the effect that a male kleptomaniac is almost certainly an active or repressed homosexual in every instance.) In nymphomania, the woman is elated at the initial act of possession of the object (and being possessed as the object), a pleasure which evaporates as soon as she has initially experienced the mere *onset* of the sexual act.

Kleptomania, pyromania, nymphomania, satyriasis, and related pathological "elative" syndromes are part of a general disorder called *manic* pathology. The manic-depressive cycle which inclusively characterizes kleptomania, nymphomania and so forth in the most obvious way, is a characteristic by-product of paranoid-schizophrenic disorders. What the psychoanalyst diagnoses as a specifically manic-depressive pathology in certain paranoid-schizophrenic individuals is only one of a large variety of forms in which this same pattern manifests itself — ranging from the woman who is occasionally keptomaniacal, through the pathetic nymphomaniac into such extremes as homocidal psychosis.

Among neurotics and psychotics, who, at best, seldom experience distinctive actual creative moments, there is an inevitable tendency to equate a description of the creative emotion of "in-betweenness" with manic elation. The confusion has been complicated enormously by Sigmund Freud and his followers. Freud, who *refused* to recognize creativity as a distinct empirical psychological phenomenon, committed the baseless blunder of equating creativity with sublimations of the manic "sexual" impulses of the paranoid neurotic.

The Catholic Church generally makes the same blunder. As we have shown in our *The Case of Ludwig Feuerbach*, the Catholic Church accomodates under the same general heading the neo-Platonic or Augustinian currents of the apostolic evangelical tradition with the paranoid-manic elation of the episcopal or "mother" Church. That distinction between the church of the apostolic *fathers* and *mother's* Church is the clearest distinction between the state of mind of the adult and the paranoid world outlook of the infantile person. In the mind of the child, "father" is the image leading into the real "outside" world, while "mother" is degraded into the image of the two year old child clinging to his mother's skirts, the child hoping desperately that his oppressed superstitious mother is really a powerful witch capable of protecting him from the mysterious, aversive potencies of a magical world beyond the shadow of the local belltower.

The manic or paranoid-schizophrenic form of elation achieves its most approximately rational form in what Pico aptly denounces as the "night of reason" in the scholastical or logical-positivistic world outlooks. For example, the effort to reduce the study of psychology to a formal-mathematical statistical form and the effort to degrade music to the banality of mathematicized computer composition of counterpoint are clear symptoms of schizophrenic tendencies. Formal-logical reason, like the paranoid academic effort to reduce language to the forms of institutionalized "logical grammar," is characteristically anti-human. It is an extension of the domestication of such wild species as cattle, the training of a performing circus animal, into the realm of human social practice. It is an army of jackasses made "rational" by being trained to perform military parade drill in formation under command. It is the bestial degradation of human activities and mental life into a body of fixed practice — or to wild anarchy — according to a fixed set of axioms, theorems and procedures. It is the attempt to approximate — or, to simply negate — among men and women the idealized order of a well-kept barnyard or poultry house.

The emotion of "in-betweenness" of the creative insight is characterized by its rejection of the world of fixed objects per se, its revolutionary transformation of human knowledge and practice superseding the bestialized fixedness of logical relationships. This absolute distinction in the characteristic "geometry" of the creative emotion is the basis for infallible distinctions between the creative impulse and manic-paranoid elation.

Religion As Science

The case of the Augustinian neo-Platonics properly compels us to regard such experiences of religious belief as a model form of *fundamental* scientific

inquiry and practice. The immediate, primary or elementary subject-matter of that science is *the human soul* as the primary particular phenomenon of a continuum of universal laws and relations. Only a paranoid atheist could insist that such specific aspects of religious activities are not a valid expression of empirical science.

In the greatest scientists and greatest creative artists, the outbursts of the creative "in-betweenness" is a recurring experience. More important is the fact that the creative personality is distinguished as such by his or her increasing capacity to bring that creative power into sustained activity more or less wilfully. Only when that point is emphasized and explored is it possible to understand the High Renaissance of 1450-1525 Florence. It is the recurrence of the creative moment under conditions in which it becomes susceptible of wilful empirical investigation which makes Renaissance Augustinian currents of neo-Platonism a form of religion as science.

It is also a denial of such a "religious experience" of wilful creative life which is the capitalist alientation of modern man.

The primary distinction which must be made between neo-Platonic humanism and Marxism at first glance is the distinction already underlined by Marx and Engels. Neo-Platonic humanism envisaged the creative process of man's self-perfection as converging upon a state of happiness *in rest* at the achievement of reconciliation with the infinite. Neo-Platonic humanism and its parodizers were thus *utopians* like the humanist Sir Thomas More. Marxism by denying what we shall show to be the paralogical misconception of infinity, and locating human creative self-development in man's wilful transformation of the laws of the universe itself, denied the existence of any utopia to replace the achievement of socialism.

Marxian socialism is no utopia, no final state of fixed laws and fixed ordering of social practice and relationships. Socialism is simply an endless series of successively higher states of human self-development, distinguished from earlier, less-than-human forms of society by the elimination of alienation. Socialism is a perpetual state of *endless human labor and strife* in man's perpetual exercise of his distinguishing human quality of creative self-development.

Socialism is man's self-consciously wilful cooperative dedication to increasing his species' power over the universe. Not the universe as a mere object to be mastered by an external *deus ex machina* ; our universe, as we shall show, can only be mastered by its self-development to higher states of negentropy as a whole. This, as we shall show, is no utopia, no mysticism.

Great creative intellects are usually "spontaneously" developed during their childhood and youth. They digress from the ordinary course of development by their arrogance toward logical forms of learning, their hubristic resentment of confinement to the Apollonian authority of formal reasoning. This development is only apparently spontaneous, achieving that appearance because of the contrariness of the emerging creative intellect to the norms. In any broad study of the most notable cases of mature creative geniuses in philosophy, science and art, the characteristic features of their achievement are not only characteristic of the greatest intellectual ferment of their immediate culture and age, but in studying them in that way it becomes clear from intensive study of their childhood and later circumstances that their emergence, however exceptional, is not accidental.

The much studied case of the greatest musical genius of all time, Beethoven, is exemplary of all key points. He was born to an intensive musical environment in that section of Germany then enjoying the richest impact of French, English, and Low Countries' cultural influences. Not only was music his principal language of thought, but he was trained in Bach, Mozart and other leading musicians of that period in the most thorough way. If he was an exception among others who shared similar circumstances, he was nonetheless a product of those circumstances.

From the standpoint of music itself, his great achievement, essentially accomplished in his late compositions, was to explode the conception of counterpoint from the Physiocrat-like search for completed perfection characteristic of Bach, and to develop a self-moving contrapuntal development of contrary musical conceptions which is both terrifyingly free (at first encounter) and yet ruthlessly self-disciplined by a fierce comprehension of an implicit necessary of coherence. This impassioned exercise of creative freedom within the discipline of a newly discovered order of coherence *for each case* of further development is nothing but the purest form of religious belief expressed in the celebration of creativity itself.

It is relevant to the subject at hand that none of Beethoven's principal successors, notably Brahms and Wagner, were able to replicate the degree of conceptual advancement the Promethean Beethoven continues to represent to this day. Although Wagner, for example, grasped with a powerful partial completeness the contrapuntal ideas of the late Beethoven compositions, he was relatively an anarchist or almost a mere existentialist, such that the ultimate failure of Wagner as a musician was his Dionysian lack of rigorous conception of coherence. He did not understand that each creative advance in freedom brings man into encounter with new ruling laws. Brahms erred in a manner exactly opposite to

Wagner, reverting to the Apollonian safety of a formal coherence of the type from which Beethoven freed counterpoint.

Although the points just made appear to belong to specialist musical concern, that presumption would be a profound error. Great music may be primarily composed as the activity of professionals and impassioned amateurs among musicians, but the conceit of art for the sake of a compartmentalized world of specialists in that art is the infallible symptom of moral and intellectual degeneration. The impelling state of mind to the general audience, in respect to which the business of the professional musician is to master the compositions for that broader social purpose.

This is readily demonstrated empirically among creative persons generally. What is the effect of saturating oneself in this or that group of musical compositions upon one's mustering of one's specific creative concentration? Total absorption in various composers and groups of works by those composers has determinable immediate influences on the ability of the creative person to muster his or her best creative efforts. This influence is precisely the purpose for which the greatest musicians worked.

This does not signify that one listens only to the late Beethoven — any more than one ignores the writings of Ficino, Pico, Kepler, Descartes and so forth for exclusive reading of Marx. Once one has secured a first comprehension of the world outlook of a Beethoven or Marx, their predecessor's contributions to that outcome acquire a richer meaning. One no longer listens to Bach per se, but adduces from Bach that specific excitement which arises in recognizing his creative advances over his predecessors and in comprehending more fully the basis for the further advances of the later Mozart compositions and Beethoven.

One does not despise one's parents or teachers because one has superseded their achievements; one loves them the more compassionately and learns from their efforts more deeply in the way of seeing them as essential predecessors in the process of human self-development, of self-moving progress which each creative personality expresses relative to the tasks set before him in his time.

Our poor opinion of modern musicians and the pathetic "atonalists" is not merely that they are so vastly inferior to Brahms and Wagner, let alone Beethoven, but that there is nothing *human* in their musical efforts. They are like well-trained painters who lack any artistic conception and who therefore made mere random technical alterations in mode of the subject which *replaces* artistic conceptions. A half-hour of immersing oneself in "atonal" moderns or viewing modern painters is self-degrading to the creative person in the same sense as an evening of *La Dolce Vita*.

This point is key to the importance of religious compositions in Bach, Mozart and Beethoven. Indeed, all their great musical efforts are properly collectively situated within the category of evangelical neo-Platonic *religious* celebrations.

The creative personality is *internally* different than ordinary men and women in those aspects of himself which pertain to his specific mode of creative work. He has a different sense of personal social identity, and a different set of self-regulating emotional qualities than ordinary non-creative personalities. That is precisely the main reason for the difficulty which merely educated scientists, philosophers and artists experience in their invariably pathetic failures to comprehend anything essential concerning great thinkers and creative artists. This is, in particular, the reason it is so extremely difficult for ordinary persons to grasp the point that neo-Platonic Renaissance religious thinkers base themselves entirely upon the most rigorous empirical scientific premises. It is also the reason why nearly all the modern academic literature concerning "alienation" is such wretched drivelling.

The difficulty is that, the creative personality's central preoccupation with wilful exercise of creative activity presents him with massive empirical evidence of phenomena which do not exist *in that way* for the ordinary person. Since it is the ordinary person's deprivation of such wilful creative activity which constitutes his alienation, no such person could ordinarily locate for himself the empirical reality of that which alienation deprives him.

Descartes' and Spinoza's elaboration of the conception of *perfection* as *self-moving substance* is exemplary. As any person who has replicated their insights knows immediately and directly, the terms of argument which Ficino, Pico, Descartes, Spinoza, Hegel, and Marx employ — as is also the case for Riemann and Cantor — could not be proposed by an individual who had not "seen" the "in-betweenness" of the creative mental process in the way we have indicated. Beethoven could not have composed his later chief compositions (in particular) unless that same "in-betweenness" of the creative moment was a solid empirical actuality for him.

The viewpoint of the creative personality, from Ficino through Marx and so forth, is that the reality of the creative moment is established by the real power its innovations demonstrably contribute to general social practice. What the creative personality confronts somewhere in the course of his self-development is this. He finds himself knowing realities which ordinary educated persons about him are not only unable to comprehend but he discovers

that the formal-logical procedures of reason used by such persons do not permit knowledge of this reality. Looking within himself to find the reason for that difference, he is self-consciously confronted with the empirical actuality of the creative processes. "Is this real?" he asks himself, not without agony. "Is this some fantasy? Or, is what I know real?"

As Marx responds directly to this question in the second of his "Theses On Feuerbach," the reality of intellectual processes is located entirely in the "this-sidedness" they represent for social practice. Anything else is a purely scholastic question without redeeming scientific merit. It is therefore, invariably, by showing the superiority which creative conceptions attain *in practice*, conceptions which could not be attained except through the creative processes, that the reality of the creative processes is demonstrated conclusively, and an entire new view of the fundamental laws of the universe is implicitly attained.

Although, to ordinary opinion, Descartes' demonstration of the necessary, real existence of some "in-betweenness" of self-moving perfection represents merely an inference that something like that must exist, to Descartes and others like him the existence of the self-moving quality is no mere necessary inference; it is not the result of some "black box" "thought experiment." The self-moving quality of existence of creative mental powers has never occurred in literature — to the best of our extensive knowledge of the principal philosophical and scientific literature — except with accompanying direct indications that the writer had discovered the empirical existence of such creative impulses first and then, thereafter, sought to test and demonstrate the reality of their empirical existence.

This distinctive feature of the greatest creative intellects is only qualitatively more advanced than a related more widespread experience. The empirical certainty of a wilful creative power of the intellect which occurs peculiarly to creative intellects is otherwise more primitively experienced by numerous ordinary persons in varying degrees of *the evangelical religious experience*.

This tendency to locate the creative essence of the human personality as a religious matter, the soul, arises inevitably from those circumstances in which the soul seems to be something external to the world of discrete objects with mysterious practical power over that world. Finding in himself a power over the world, a power which is inexplicable to his understanding of the world on which he acts, each of the greatest creative intellects into the early 19th century almost without exception located the fundamental reality of the universe in metaphysics.

This belief in metaphysics is no failing relative to atheism. Once it has been crucially (uniquely) demonstrated that the creative processes expressed by the mind of the scientific discoverer represent an efficient power over the laws of the ostensibly physical world, then it has been scientifically demonstrated beyond all future competent doubt that the realm of the creative processes is superior to, more fundamental than the restricted realm of material phenomena as such. Hence, through Hegel, all the greatest creative intellects of the High Renaissance and Enlightenment located the fundamental reality of the universe in the domain of religious belief. Like Hegel, all the greatest thinkers and creative artists of that period were preoccupied with a rigorous *phenomenology of the spirit*, an inquiry whose quality was necessarily inseparable from the fact that its primary empirical subject matter was nothing but the highest degree of passion to which man is susceptible, the passion otherwise known to alienated man as the evangelical religious experience.

Two Universes

All modern study of the universe, including mathematical physics, has been divided into two irreconcilable fundamental views. The Aristotelean outlook and its degenerate offshoot, nominalism or empiricism, has defined the universe as axiomatically composed of elementary (primitive) *discrete* entities or "existences," particles which are assumed to exist in definite fixed sets of relationships to one another. Opposed to this has been the contrary axiomatic view emanating from neo-Platonism that the universe's *primary* existence is nothing but its entirety, not any of its parts. This neo-Platonic view is otherwise known as the axiomatic standpoint of *continuity*.

The crudest versions of the neo-Platonic view, exemplified by the case of Joseph Schelling, foolishly assume *continuity* to be analogous to the extension of a simple "straight" line. In short, the vulgar parody of the neo-Platonic view interprets axiomatic continuity in the sense of Euclidean continuity.

Turning to Ficino and Pico, we note immediately that neither of them intended anything so crude as Schelling might impute to them. For Ficino's *Five Questions*, the primitive or axiomatic primary quality of extension of the universe is *self-motion*, the quality of *self-moving self-development*. Ficino and Pico are also correct in emphasizing that even the ancient Platonics and neo-Platonics were not so foolish as to propose axiomatic continuity in the mere Euclidean sense. Ficino's and Pico's view is also the standpoint of Descartes' perfection thesis and Spinoza's notion of *primary universal substance*.

The problem is this. Naive opinion readily accepts the Euclidean view of the universe. Naive opinion accepts the notion of the existence of three spatial

dimensions and the scalar extension of time per se as independent scalar values *without substance*, abstract measuring sticks onto which configurations of physical processes can be arranged for analysis. It ought to be immediately obvious that such a Euclidean or quasi-Euclidean schema can not represent axiomatic continuity, since the idea of esthetic *a priori* qualities of space and time external to material substance is unique to the contrary axiomatic viewpoint of discreteness.

This problem was implicitly solved by Riemann and Cantor *better than either of those two understood*. With the aid of Minkowski and others, Einstein attempted to realize the Riemannian solution to the problem of continuity. In his relativity schema, one proceeds correctly, as far as it goes, by rejecting Euclidean *a priori* space and time categories and locating the geometry of space entirely in the characteristic or invariant features of the most universal laws of process transformation occurring in the *physical* universe taken as a whole. In other words, the standpoint of General Relativity builds upon the foundations of Riemann in the efforts to eliminate everything external from an understanding of the universe in favor of the single characteristic feature of *universal substance* as a continuous process.

However, General Relativity as developed fails in this effort on two fundamental counts which ought to be obvious from the standpoint even of Ficino and Pico. First, General Relativity carries over from Aristotelean (e.g., Newtonian) physics the Euclidean conception of primary substance as a *scalar* magnitude. Second, in a connected error, the mathematics of General Relativity (e.g., Hermann Weyl's *Space, Time, Matter*) carries forward the elementary fallacy of the Euclidean system in the inclusion of what is termed the *affine* basis for definition of what are called *vector* and *tensor* formulations. The definition of continuity already properly understood by Ficino, Pico, Spinoza, et al. is overlooked by Einstein, et al. The intrinsic fallacy of developed General Relativity lies not in its direction of effort but its attempt to fashion the result with the wrong tools. The effort to achieve a general relativity within a unified field inevitably failed on axiomatic grounds because of the failure to recognize the implications of self-moving, self-developing continuity.

How does one know that the criticism is sound?

There are two complementary proofs of the argument we have just summarized. First, every effort to define the universe in Aristotelean — or "reductionist" — terms is reduced to an absurdity on its own terms. That is to say, the axiomatic assumptions on which the entire Aristotelean conception of the universe depends are proof that the Aristotelean and its derived views of the universe are nonsensical. This *reductio ad absurdum* proof is ultimately identical in each case with the ontological paradox. Second, positively, the empirical evidence of creative mental processes — as we outlined the case of Marx's discovery — is unique and comprehensive proof that the fundamental quality of the universe, its characteristic or invariant feature, is negentropic self-development.

There is nothing mysterious in our indicating a correct understanding beyond the errors of General Relativity. We summarize the heurism we have given before in other locations.

The Riemannian theory of manifolds as enriched by Cantor's discovery of what is termed the *transfinite*, directly enables us to conceptualize the existence of a coherent group of universes, each with a slightly different set of universal physical laws. Furthermore, provided the notion of "energy" employed to define the substance of each such universe is not simple scalar substance but negentropic substance, the conception of the evolution of a universe with one specific set of universal laws into another universe with a new specific set of laws is also implicit in a development of the Riemann-Cantor schema.

Let us represent such a collection of related universes symbolically by a set of concentric spheres, in which the simpler universe is relatively innermost and the more developed relatively outermost. A line drawn from the common center through each of the concentric shells then symbolically represents the order of evolutionary self-development of all of those universes. This aspect of the symbolism correctly indicates that the fundamental feature of each universe is "at right angles" to the ordering of that shell according to its apparent internal laws, its internally invariant relationships.

If we acknowledge that each shell corresponds to what is a universal manifold (i.e., the universe at any moment of its evolutionary development), then the kind of evolving universe so depicted fulfills the requirements of Ficino, Pico, Spinoza, Marx, et al. In that evolving universe, the self-moving, self-developing primary quality of extension recognized as fundamental by Ficino, Spinoza, et al. corresponds, symbolically, to the line connecting the shells. If we are to be consistent with the established language of modern science, that line is to be termed a "worldline," and represents the self-movement of the development of the universe to higher forms.

"But," one hears the protest, "this may be the kind of universe which conforms to the empirical evidence of creative mental processes, but what proof is there that this is the universe to be discovered by physical science?"

That objection is twofoldly key to the issue of theology.

On the first count, as long as the ostensible evidence

of physical scientific knowledge denies the existence of any basis in experience for a physical world of such qualities, civilization is apparently confronted with two opposing sets of empirical evidence for which there exists no apparent reconciliation. On the one side, there are experimentally founded reductionist (Aristotelean) laws of physical processes. Yet, at the same time, the empirical evidence of mental life and the power of those mental processes to wilfully determine material progress proves the existence of a universe axiomatically based on the continuity of primitive self-development. As long as such two arrays of empirical evidence remain in that form, man is left with two kinds of universes, one of which, the world of the soul, is empirically superior in power to the other, the physical world. As long as this predicament persists, the most rigorous form of human knowledge is relegated to a separate domain of *metaphysics*.

Consequently, on the second count, all fundamental scientific inquiry was compelled to continue in the guise of theological metaphysics for as long as man failed to discover a means for reconciling the physical and metaphysical evidence.

The Irony Of Newton

This division of human knowledge into two irreconcilable universes includes the irony that the advancement of physical scientific knowledge to the point of ripeness to make its impending breakthroughs was achieved through a philosophical degeneration of the axiomatic viewpoint of scientific inquiry.

From Kepler to Newtonian physics there is a massive drop in conceptual outlook. In order to turn Kepler upside-down, Newton — as he himself largely admitted and emphasized — was compelled to introduce a variety of transparently absurd *paralogisms* into physics. Specifically, Newton resituated Kepler's universal laws away from the standpoint of continuity, through which they had actually been developed, into the Aristotelean domain of axiomatic discreteness and action-at-a-distance. Newton himself was well aware that he had discarded a kind of axiomatic universe *capable of existing*, to fabricate *a purely fictional universe incapable of perpetuating its own existence*. As Newton stated — and Leibniz later emphasized — Newton's model of the universe could not represent the real universe, but only a poor, mechanical imitation which God would have to wind up periodically.

Newton clearly understood — unlike most Newtonians — that the universe's imputed property of general entropy (the so-called Second Law of Thermodynamics) was only a delusion incurred by the arbitrary misrepresentation of universal reality he had constructed.

Einstein, notably, began to recognize this implication of the opposition of Kepler and Newton from the lessons of relativity. To a large degree, the standpoint of General Relativity is the resumption of the Keplerian world outlook at the expense of the Newtonian, substituting Riemannian for Kepler's Euclidean geometry. Yet, and this is the specific irony, *it would have been impossible to progress from Kepler to Einstein without Newton*.

This is no mystery to those already familiar with the ABCs of so-called physical science. What has been conventionally termed physical science is by no means a comprehensive physical science. What we have called physical science has never represented, in fact, an effort to comprehensively define the laws of the physical universe. So-called physical science has been restricted in practice to an exploration of those types of observations and experiments which were susceptible of significant interpretation with the aid of the crude Aristotelean tools represented by mathematical analysis. Major classes of physical phenomena, such as those of living processes — i.e., life as such — have been deliberately excluded from the realm of reductionist mathematical analysis by all sane, competent investigators.

The scientific outlook of the High Renaissance, especially its neo-Platonic currents, set forth to establish a comprehensive body of rational knowledge commonly subsuming living and non-living processes. That undertaking, although ultimately feasible, was an impossible practical task for the immediately following period. Once certain axiomatic preliminary steps had been accomplished — as the case of Kepler exemplifies best for this purpose — the practical work of applied science had to be restricted within the actual competence of the existing society. Accordingly, physical science as we have known it has developed in reference to those limited kinds of technological advances in the productive process which were within the capability of the existing society. The continued exploration of more fundamental questions of scientific knowledge was relegated to a separate domain of metaphysics.

The conceit that the Newtonian outlook superseded the neo-Platonic or Keplerian outlook on merit is sheer conceit, rampant only among those who know nothing of the actual history of scientific development during the past five centuries. The neo-Platonic outlook remained supremely authoritative in fact, while the cruder, reductionist so-called physical science undertook the restricted task of assisting the development of the productive forces up to the point of readiness to resume inquiry into physical processes from the axiomatic basis exemplified by the neo-Platonics.

Kant

That is the precise significance of Immanuel Kant. It is Kant who separates the great advances of the 19th century from the reductionist banalities of the 17th and 18th centuries' Hobbes, Rosseau, Euler, Lagrange, et al. The kernel of Kant's achievement (and failures) is summed up in his *Critique of Practical Reason*.[1]

Kant's first achievement is to recognize that the Newtonian physics of Euler and Lagrange suffers from the *reductio ad absurdum* otherwise expressed by the *ontological paradox*. If the physical universe is governed by fixed universal laws, then that universe is implicitly necessarily susceptible of omniscient foresight such that God and man — including Lagrange — are absolutely impotent in intellectual power and will. *(If Lagrange's physics is sound, then Lagrange never existed.)*

His second achievement was to base himself — like Ficino, Pico, Descartes, Leibniz — on the empirical evidence that the human creative (synthetic) processes actually exist and demonstrate their reality through wilful practice which actually alters the order of events in the physical world. This is the Kantian notion of *Praxis*, and is the only sense of that term used by Kant, Hegel, and Marx.

However, Kant presumes that Lagrangian physics corresponds to the only perceptible form of laws of the physical universe, the highest form of *Understanding* of which human knowledge of the physical world is capable. Yet, since Kant has shown that this understanding is necessarily false to the fundamental nature of the actual universe, he can not declare Lagrangian physics to be valid without also insisting — as he does — that the actual physical universe is unknowable to mortal man. This is the key to Kant's major errors.

Nonetheless, having adopted erroneous presumptions, Kant develops them rigorously and brilliantly. He recognizes that the intrinsic fallacies of the Lagrangian physics are expressed by the presumption of *a priori* qualities for both the Euclidean space and time categories and the principles of a formal logic. In the attempt to resolve the problem he has so defined for himself, he resorts to the same fundamental error of conclusion earlier presented by Ficino in the *Five Questions*. Kant arbitrarily assumes an outer limit to simple infinity, and thus presumes that at those limits there exists a state of being free of Euclidean categories, at which the actual efficiency of the human creative will is in direct correspondence to immediate physical reality as known to the actor. Mathematically, Kant's paralogical infinity is identical with the infinity of rest posited by Ficino.

This fallacy of Kant's is directly attacked by Riemann in an effort which is the direct foundation for the development of General Relativity and the further development of scientific knowledge beyond the fallacies of General Relativity. Cantor's development of his notion of the *transfinite*, under the direct influence of both Riemann and Hegel, implicitly solves the formal mathematical problem of infinity. Riemann, in particular, recognizes the explicit return of mathematical physics to the neo-Platonic standpoint through his own achievements, and Cantor recognizes the same result (up to the point that the much-persecuted Cantor's courage fails him, and he attempts to debase himself before his persecutors — e.g., Kronecker, et al. — in the hope of at last securing the university chair viciously denied him).

The final irony of Newton is that the contributions of the Newtonian and successor reductionist physics are comprehensively subsumed under the dialectical axiomatic outlook — self-developing extension as primary. It is the elaboration of new elements by a negentropic manifold which represents exactly the precondition for evolutionary transformation of a universe from one set of laws to a successor set. Furthermore, no matter how emphatically, even hysterically, leading reductionists may have attempted to exclude the axiomatic standpoint of self-developing continuity from physics, it was nothing but that axiomatic principle, as expressed by their creative mental processes, which is directly responsible for all the conceptual achievements of reductionist physics.

The Fact of Life

The effort to separate the evidence of creative mental processes from physical processes is indefensible. If the human mind exists, then one must either insist that the human soul exists as a purely metaphysical being or one must attribute the invariant negentropic feature of creative thought to the associated physiological processes. In turn, either one must attribute life — and its characteristic negentropy — to a metaphysical *elan vital*, or the invariant characteristic of mental processes — and hence of associated physiological processes — must be the fundamental laws of inorganic matter.

If mental processes are efficient with respect to human social practice on the physical world, the apparent metaphysical alternative does not exist, since the apparent metaphysical world both acts on the physical world and is efficiently acted upon by the same physical world. Hence, whatever invariant — e.g., negentropic — qualities are shown for human creative mental processes are therefore compre-

hensively demonstrated — uniquely and sufficiently — to be invariant for the universe as a whole.

Thus, the falseness of religious belief and the complementary falseness of mathematical physics are essentially the falseness of what Spinoza terms *fictitious* knowledge, the falseness of alienation of reality into two arbitrarily distinguished aspects. The falseness of religious belief and mathematical physics under capitalism is a specific ideological feature of capitalist development.

We must also conclude that it was necessary for science to develop in the form of theology. As long as man lacked appropriate means to adduce relevant empirical knowledge from physical processes per se, the only firm empirical basis he possessed for the study of knowledge was the empirical evidence of the existence and efficient reality of creative mental processes *as seen distinctly only in the greatest thinkers and artists*.

The creative thinker occupied with such inquiry into fundamental scientific knowledge could not ignore the essential identity between what he perceived in himself as the empirical actuality of the creative moment and in the broader masses as the empirical quality of the evangelical religious experience. Furthermore, the fact that the wilful creative mental life immediately expresses the greatest passion of which man is capable was itself the actualized apotheosis of that state of mind which the ordinary person's evangelical religious experience aspired to become. The need for the religious experience both by the creative thinker and artist and by the masses is located in the fact that the empirical actuality of the religious experience is that creative process of human thought which uniquely distinguishes man from the lower beasts.

Until man could found so-called physical scientific knowledge on the axiomatic basis required by the invariant features of creative mental processes, the most fundamental form of scientific knowledge would be the science of metaphysics and the celebration of that science's neo-Platonic theology.

V Beyond Metaphysics

The Sleep of Reason — *Goya*

It is the combined achievement and failing of Hegel's writing that they typify the highest development which could be contributed to fundamental scientific knowledge from the standpoint of the neo-Platonic current of theology. Since Hegelian philosophy was already far more advanced in its understanding of material processes than either French materialism or English rationalism and empiricism, it was practically impossible that any solution to the failings of Hegel's philosophy could be discovered except by the most gifted geniuses among the ranks of Hegelians. That is precisely the significance of the successive efforts of Ludwig Feuerbach and Karl Marx.

Only an ignorant person could argue sincerely that there could be any benefits from attempting to correct Hegel with French or English materialism. Kant and Hegel had successively developed their enriched understanding of material processes by fully assimilating the fundamentals of the mathematical physics of Euler and Lagrange. To suggest that either Kant or Hegel had inadequate comprehension of the achievements of French or English materialism is to prove conclusively that the person making such a silly proposal is simply ignorant of both critical philosophy and the state of materialism during the period preceding and following the great French Revolution. In fact, as we have already shown, the continuing common fallacy of both Kant and Hegel was their refusal to break free of a vestigial awe for Lagrangian mathematical physics.

The Issue of Gauss

The only superficially credible popular basis for imagining that the progress of scientific knowledge during and following the early 19th century has not *directly* depended upon Kant and Hegel is a casual reading of Gauss, who was admittedly an anti-Hegelian gossip. Although Gauss was an unquestionable principal seminal influence, together with Fourier, for the development of 19th century mathematical physics, the immediately contradictory evidence more profoundly conclusively vindicates Kant and Hegel.

First, as concerns German mathematical physics generally and as Felix Klein emphasizes toward the end of the 19th century, it was largely due to the personal influence of Hegel's *Science of Logic* that the

Prussian-ruled and -influenced urban centers of Germany developed the relatively broad-based program of instruction in the calculus and notions of functions on which German mathematical science generally was based. Second, the principal currents of development of 19th century mathematical physics are typified by Karl Weierstrass, G. Riemann, G. Cantor, and Felix Klein.

Riemann was not only an Herbartian Kantian, but his entirely revolutionary contribution to mathematical physics was self-consciously and actually premised on an effort to redefine the conception of physical process-functions as an original solution to the Kantian statement of the problem of the Understanding.

Cantor, whose principal contributions are directly premised on Riemannian manifolds (the problem of continuity for the underlying determination of an aggregate of points) was a student of Weierstrass. His youthful career, not accidentally, centered on one of the bitterest controversies in the modern history of mathematical physics — against the reductionist misconceptions of Kronecker, et al. Cantor's approach was self-consciously and professedly informed by Hegel's writings, especially concerning the problem of "infinity" on which Cantor's own great contributions center.

The widespread ignorance of Riemann's and Cantor's actual achievements even among leading mathematicians of today need be accounted for only briefly. A vulgar approximation of Cantor's work on aggregates was popularized by Frege. Frege's simplistic, misconception of the problem was taken up and popularized by Bertrand Russell. Even Kurt Gödel, whose early 1930's discoveries devastatingly swept away much of von Neumann's misconceptions of physics, treated Russell as the informed approach to the related problem of manifolds. The continued popularity of the Russell formulation of "types" and the utter banality of the recent decades' academic discussion of "universals," to which banality Russell himself explicitly contributed, shows how badly educated most leading mathematical physicists actually have been concerning the crucial achievements of Riemann, Cantor, and Klein.

Klein, who achieved a limited synthesis of the principal discoveries of Weierstrass, Riemann, and Cantor, and who anticipated the mathematics for General Relativity before Einstein, was not only an informed Hegelian, but the internal features of his historical conception of mathematical physics show a powerful Hegelian influence.

More broadly, the work of Maxwell, which is still the basis for modern applied physics, resumes — as unavoidable for the physical evidence — the effort to situate the domain of discrete physical phenomena within the setting of continuity. Although Maxwell's work is specifically impaired by its included axiomatically Euclidean misconception of continuity, the empirical vindication of Maxwell's physics for a century of contemporary practice suffices to demonstrate the inability of physics to extricate itself from precisely the central antinomy treated by Kant and Hegel.

Gauss himself, as a personality, represents a not-uncommon problem among leading thinkers. In one part of their nature, they are creative thinkers, whose sense of identity is located to that extent in what Ficino, Pico, et al., would identify as their soul. Yet, the human sense of self-identity associated with their creative work co-exists in the same flesh with a paranoid, infantile self. The late Dr. Lawrence Kubie noted, in connection with his own psychoanalytical studies of creative personalities, that it is typical to find the creative potentials of great minds undermined repeatedly by the erosive influence of neurotic tendencies. Sometimes, as Kubie noted, the result is the case of the youthful creative thinker of great promise, who seems to "go dry" during his late twenties or middle age. This common pathology has a specific reflection in the case of Gauss, notable in the abortion of certain of his most fertile initial discoveries.

The history of the development of non-Euclidean mathematical physics has specific relevance to the case of Gauss on the point of neurotic impairment of the creative powers of an extraordinarily gifted person. The fact that Gauss had already discovered the germ of non-Euclidean physics prior to Lobatchevsky, Bolyai and Riemann is frequently noted in the relevant textbooks and lectures, but the significance of that cited point is overlooked.

To get at the critical point involved, it is essential to underline the connection and distinction between non-Euclidean geometry and a non-Euclean physics. As *abstract geometry,* non-Euclidean formal systems are merely a passive reflection of non-Euclidean physics. This is pointed up by the initial immediate experimental project with which Gauss' approach to that subject is associated. Gauss proposed to explore the possibility of determining the actual geometry of the physical universe generally by perfecting a geodesic surveying technique, in which the geometry of the earth's surface was to be adduced by a refined mathematical analysis of the surveyed distance among points over a relatively large area. This illustration typifies the point that what appear to be abstract schema, such as those of non-Euclidean geometry, are relatively passive reflections of a deeper intellectual ferment whose concern is physical processes. Riemann's, Cantor's, and Klein's writings reflect explicit self-consciousness of that fact. Riemann was self-conscious that his non-Euclidean geometry

was not an abstract geometry, but a non-Euclidean *physics*.

It may be the case that lecturers, writers of textbooks and their credulous students are satisfied to treat the issue of differing *curvatures of space* as a self-evident speculative question of formal geometric systematizing. No serious thinker would tolerate such a glib passing-over of a crucial issue. Only a naive, thoughtless mathematician could proceed complacently to abstract topologies and their delightful singularities without asking: What kind of a *physical* universe, composed of what sort of primitive, universal substance, demands those phenomena we adduce as a specific curvature of *elementary extension*?"

"Straight" and "curved" are in themselves mere abstractions which, in their ordinary interpretation, depend upon the habituated Euclidean axiomatic standpoint as their point of conceptual reference. What is the meaning of the concepts "straight" or "curved" without the reference standpoint of Euclidean or similar axiomatic assumptions? If we discard the Euclidean and analogous axiomatic reference systems, is the distinction between "straight" and "curved" simply meaningless, an empty distinction in terms? What could we mean, in experimental physical terms, by such a distinction? Are there physical phenomena which require a distinction in meaning for which such terminological distinctions have at least some heuristic validity?

There is only one such physical distinction. By "straight" we mean *unchanging modes of extension*; by "curved" we mean *a self-changing quality of extension*. Otherwise, elementary curvature would never appear to be anything but straightness to the most sophisticated experiment.

In economic phenomena, "straight" corresponds to *simple reproduction*, while "curved" generically includes *extended reproduction*. The notion of invariant as it arises in analysis of transformations in "economic space" is inevitably an appropriate heurism for understanding the general physical implication of the notions of "straight," "curved," and non-Euclidean physics.

In the case of simple reproduction, all transformations in economic space are abstractly satisfied by a constant value for the social-reproductive characteristic ratio, $S'/(C+V)$. (However, if S' is not equal to 0, then simple reproduction models break down quickly in real economic space.) In all other transformations in economic space, every transformation is subsumed by exponential functions of increase of a tendency $S'/(C+V)$. In the first case, economic space is "straight"; in the second case, it is "curved."

We say properly that the economic space of real extended reproduction is characterized by the tendency expression, exponential impulse-values for rising ratios of $S'/(C+V)$ as an invariant. This economic space is fundamentally different than Einstein's space; the *constant* velocity of light corresponds to a fixed order of universal manifold, whereas increasing values of the invariant for economic space represent a *negentropic world line* subsuming a succession of universal manifolds of higher orders.

This same consideration is implicit in Riemannian theory and is made explicit in Riemann's philosophical reflections on that theory's implications. Riemann emphasizes, albeit in extremely metaphysical language, that the underlying connections of physical relationships are noetic, e.g., negentropic, as might be adduced, he emphasizes, from both creative thought and biological development.

Relative to the case of Gauss, the point to be adduced is this. Specific ideas are properly understood as the footprints of the process which leave such manifestations in its wake. The analysis of ideas demands that the footprints discovered not be simply compared with other footprints, but that the differences among different kinds of such footprints be treated approximately in the way a qualified archeologist or paleontologist would judge the specific residues of the cultures or species encountered. The question is: "What sort of being could produce this specific sort of idea? What specific sort of mental processes are needed to originate such an idea under the conditions which existed at the point of its invention?" The question, relative to non-Euclidean geometry and physics, takes the form: "What kinds of physical process-distinctions underlie the effort to contemplate a universe in which the characteristic elementary displacement is somehow curved rather than straight? What kind of mental processes are brought to the fore in the effort to assimilate the concept of such a distinction? What kinds of specific formal ideas would these mental processes project into the domain of communicable formal ideas prevailing at that time?" That is the science of *epistemology*.

The concept which Gauss was confronting in his own abortive efforts to elaborate a formal reflection of a non-Euclidean physics demands a conception of the physical universe as primary only in its entirety and immediately characterized in all its primitive aspects, whole or particular, by negentropic *self-moving self-development*. It can not be accidental that the useful elaboration of formal non-Euclidean physics should have been principally, successively elaborated by Riemann and Cantor — that Gauss's brilliant Kantian student, Riemann, should have accomplished what Gauss himself recognized only in a bare, aborted germ-form. Gauss's rejection of the neo-Platonic outlook of Ficino, Pico, Descartes, Spinoza and Hegel

could not be consistently maintained in respect to what he considered essential for public representation of his social identity, unless he experienced the most agonized difficulties in the effort to develop and publicize such neo-Platonic conceptions as negentropy and non-Euclidean physical conceptions generally.

Feuerbach's Task

The question of the fallacy embedded in the Hegelian philosophy had to be approached from the fact that the neo-Platonic current of scientific thought culminating in Hegelian philosophy had demonstrated its qualitative superiority to all preceding and competing approaches to science. It was therefore a practical impossibility to supersede Hegel without premising that achievement upon a demonstration of the qualitative superiority of neo-Platonic theology to Aristotelean and nominalist currents as exemplified by French and British materialism and empiricism.

Feuerbach's initial achievement in undertaking that task was to recognize that Hegel was generically a neo-Platonic theologian. On that premise, Feuerbach attacked Hegel in the only terms of reference in which Hegel could be competently criticized. Hegel could not be criticized without first demonstrating the material necessity for religious belief as a positive mediation of specific general human progress. Hegel could be superseded only by demonstrating, within the terms already achieved by his theology, the imperative basis on which religious belief must supersede itself.

In this Feuerbach almost totally succeeded up to the same point at which Hegel himself had failed. Feuerbach, like Kant and Hegel before him, could not find the courage and related intellectual power to recognize the elementary fallacy of French materialism, of Lagrangian physics. On this account, the case of Ludwig Feuerbach represents one of the most fascinating and fruitful clinical studies in epistemology.

In formal terms, Feuerbach's *Essence of Christianity* begins with two interconnected points which constitute the entirety of his *fundamental* achievements. The first of these two points is his correctly locating the fundamental common empirical fact of both religious belief and scientific knowledge: that the essential human quality of mankind is that universalizing quality of emotion which directly produces creative human knowledge. So Feuerbach properly establishes the essential feature of neo-Platonic theology from Ficino and Pico, through Descartes, Spinoza, and Hegel. The second, interconnected point is that *the human soul is created by social relations.*

It must be emphasized that every modern effort, including Karl Löwith, the Frankfurt School, and others, to define Feuerbach as an existentialist in the genre of Kierkegaard, Heidegger, Sartre, et al., is wild, baseless nonsense. The existentialists are a peculiar offshoot of *nominalism* for whom only the self-evident individual is real and lawful social relationships to one degree or another an absurdity. The fundamental distinction of Feuerbach is to locate primary reality in the universal, the totality, and to locate the origin of individual human nature as a determined product of social relations.

In opposition to the simple mechanists and also to the Kantians, Feuerbach defines individual human nature as a product of *extra-uterine gestation*: the human soul is created by the processes of nurture of the biological individual beginning after the new individual's emergence from the womb.

For Feuerbach, because the essential social nature of individual man is given to him as a reflected product of social practical relations, beginning with emphasis on his immediate relationship to the parents, the individual can find his own nature only through emphasizing that *universal social* origin of himself *as a soul* in forms of social relationships which most immediately express the social universality of his individual nature. Hence, for Feuerbach the universalizing mode of expression *of love* is the characteristic feature of human behavior.

In this approach, Feuerbach absolutely rejects the Kantian negation-of-the-negation and the Hegelian negation-of-the-negation as well. Not accidentally, this is one of the principal issues on which well-meaning pseudo-Marxists find Marx's 1843-1845 writings a major source of embarrassment. Since the essential human self, the soul, *is a product of social relations*, positive, loving behavior toward mankind as a universality is the primary, *positive* quality of the individual nature. Furthermore, this love, expressed through the same social realization through material objects which produces the soul, reflects a *self-subsisting positive principle* which is fundamental and universal. In the concluding section of the 1844 *Paris Manuscripts*, Marx emphasizes that Feuerbach is correct on this point; Marx himself develops the same principle *on a different basis of universal reality* as integral aspect of his own, permanent, fundamental world outlook.

Otherwise, Feuerbach's view is not Marx's.

There are two elementary errors in Feuerbach. The first error is Feuerbach's continuing of Kant's and Hegel's acceptance of French materialist physics. ("Backwards, I go with the materialists," Feuerbach proclaims, as Engels emphasizes that fact.) Second, Feuerbach's *Essence of Christianity* as a whole is premised upon two absolutely irreconcilable interpretations of the psychology of religious belief. The latter feature has been extensively documented and explored in our *The Case of Ludwig Feuerbach*.

The first error is of the most direct fundamental sig-

nificance concerning Marx's revolutionary achievements. By making the actuality of realization through material objects the essential content of human practice, Feuerbach appears to fully correct Hegel by setting out to eliminate the dualism of Hegel's efforts to accomodate the self-developing Logos to the same universe in which Lagrangian physics also appears. As we have repeatedly emphasized, the solution to the dualism can not be realized unless the Lagrangian physics is absolutely overthrown. If the form of the Logos is real, then the effective ultimate outcome of creatively directed wilful human practice must be to change the laws of the material universe. As long as matter is conceived in Lagrangian terms, this is impossible. Consequently, *the possibility of creativity ends for Feuerbach with the extra-uterine gestation of each new human soul*.

Marx emphasizes correctly on just this issue. Feuerbach's efforts to unify Hegel's dialectic with the material universe of French materialism results in the degradation of Feuerbach's universal man to a mere "dumb generality." By accepting a Lagrangian material universe, Feuerbach's effort to describe creative innovations as acting upon the material processes, and being acted upon by their outcome for material processes, precludes the possibility that creative innovation can act upon itself through such a mediating material realization. If physical laws, by their presumed intrinsic permanently fixed quality, refuse to tolerate wilful practice incorporating revolutionary changes in such lawful ordering, then material processes selectively prevent creative innovation from becoming the materialized revolutionary practical stimulus for further creative innovations.

As we have described this predicament before, the effect of Feuerbach's following Kant and Hegel respecting the material domain is to pin Prometheus, with firm fetters, against a fixed Tarpeian Rock of French materialism. Until the fetters are struck or the Rock shattered, Feuerbach's Prometheus can merely howl; he can not move.

This is the central criticism Marx makes against Feuerbach in the first two of his "Theses On Feuerbach." Feuerbach's reversion to the fixed object of French materialism has degraded the possibility of science to mere contemplation. Second, the issue of the lawful effects of human knowledge is entirely a matter of the effectiveness of realized knowledge as social practice. With that second thesis, situated in the conception of evolutionary social reproduction in the "Feuerbach" section of *The German Ideology*, Karl Marx founds his dialectical world outlook absolutely upon the basis of the *implicit* overthrow of Lagrangian physics.

This aspect of the Feuerbach problem is consistent with Feuerbach's second principal error in *The Essence of Christianity*. In the "Introduction,", the opening chapter, Feuerbach founds everything upon the neo-Platonist empirical evidence of a fundamental, universalizing creative-thought-producing emotion: *the self-moving, self-developing principle of universal extension*. Subsequently, however, he curiously replaces the Christian Trinity of Father, Son, and Holy Spirit by the Holy Family trinity of Father, Son, and Mother. He connects this astonishing presumption to the thesis of his first chapter by inverting the canonical ontological paradox during the intervening chapters, emulating the model of Kant's unknowable universe-in-itself to accomplish that result.

As we have conceded to Feuerbach in our *The Case of Ludwig Feuerbach*, the attempt to reconcile syncretically the doctrines of the apostolic and episcopal church is not original to Feuerbach. Moreover, religious man generally is *sometimes* ennobled by the evangelical religious experience — the Logos-experience — and *more often* caught in the paranoid surrogate for such a religious experience — the banal desire of the infantile person for the warmth of mother's arms. The Catholic Church, most notably, has based its efforts in search of profitable secular universality on the effort to frame its doctrine so that the same terms are made to mean either a Logos-experience (Holy Spirit) or infantile dementia, as the prospective tithing communicant may choose. In the Church's unguarded moments, the secret of this duplicity is made plain enough in the same general terms used by Feuerbach, as some careless canon permits the Holy Family to be substituted for the Trinity.

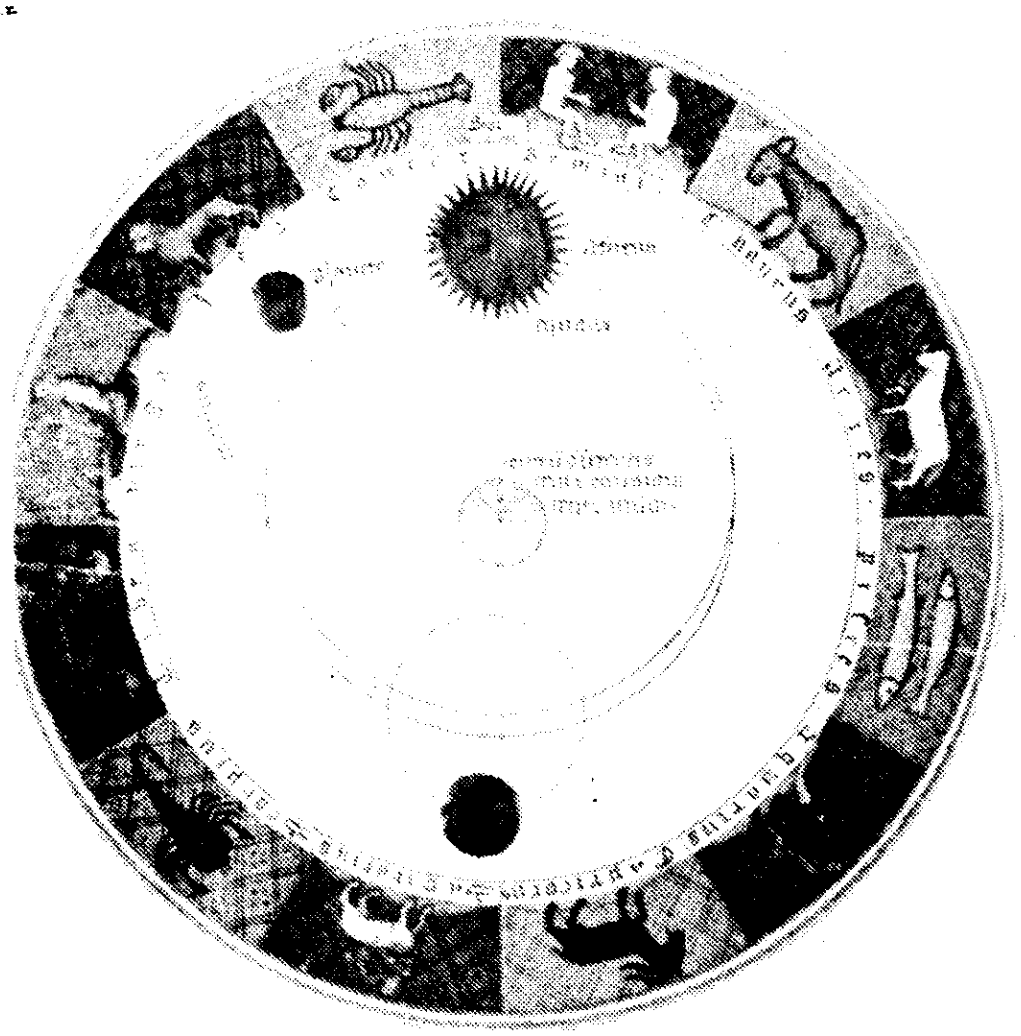
This is no mere religious doctrinal issue. The irony, from the standpoint of Christian theological doctrine, is that the duality of human nature, the conflict between the saintly self and the wicked other self, is nothing but a psychoanalytically valid way of representing the positive role of religious belief. The positive role of religious belief is to celebrate and realize those qualities of self which absolutely differentiate man from lower beasts. This positive role of religious belief is uniquely comprehended and developed by neo-Platonic Augustinian theology. To acomplish this, religious belief must induce man to struggle against those aspects of his nature which cause him to degrade himself into bestiality. The spokesman for the former is Ficino's apostolic church of neo-Platonic belief; the spokesman for the bestial side of man's nature is the episcopal Mother Church of the Counter-Reformation, the church of propitiatory fetishes, indulgences and other objects and rituals appropriate to the belief of the infantile person, that his oppressed mother *is a witch*.

National chauvinism, "polycentrism," anarcho-syndicalism, homocidal psychosis, and French materialism and English empiricism, are representative natural secretions of the infantile state corresponding to the substitution of the Holy Family for the Trinity. It is of most immediate relevance to the point at hand that the infantile or paranoid world outlook corresponds to the alienated state of mind in which man is likened to a lower beast in a world of fixed material objects of possession.

In its magnificent achievements and its faults as well, Feuerbach's *The Essence of Christianity* is one of the most profound and important books ever written. Feuerbach can not simply make errors. Feuerbach is not like one of our contemporary academic intellectuals, who can drop in one reckless assertion of nonsense after another without the slightest sensibility of the utter lack of coherence among the various such pathetic assertions of which their papers and lectures are eclectically composed. Feuerbach shows by caring not a whit for anyone's mere "authoritative opinion," that he — unlike our typical contemporary academic figure — is no mere chattering parrot, but a thorough thinker who profoundly considers the connection of any one thing he proposes to everything else he proposes. The modern academic intellectual has a mind like the public cesspool of a large city; it contains whatever pieces of refuse anyone has chosen to set floating there. Such a pseudo-intellectual dutifully acknowledges as an independent fact any particular piece of opinion floating in the academic environment. In general, Feuerbach permits almost nothing to be included unless it has proven its coherent necessary connection to everything else.

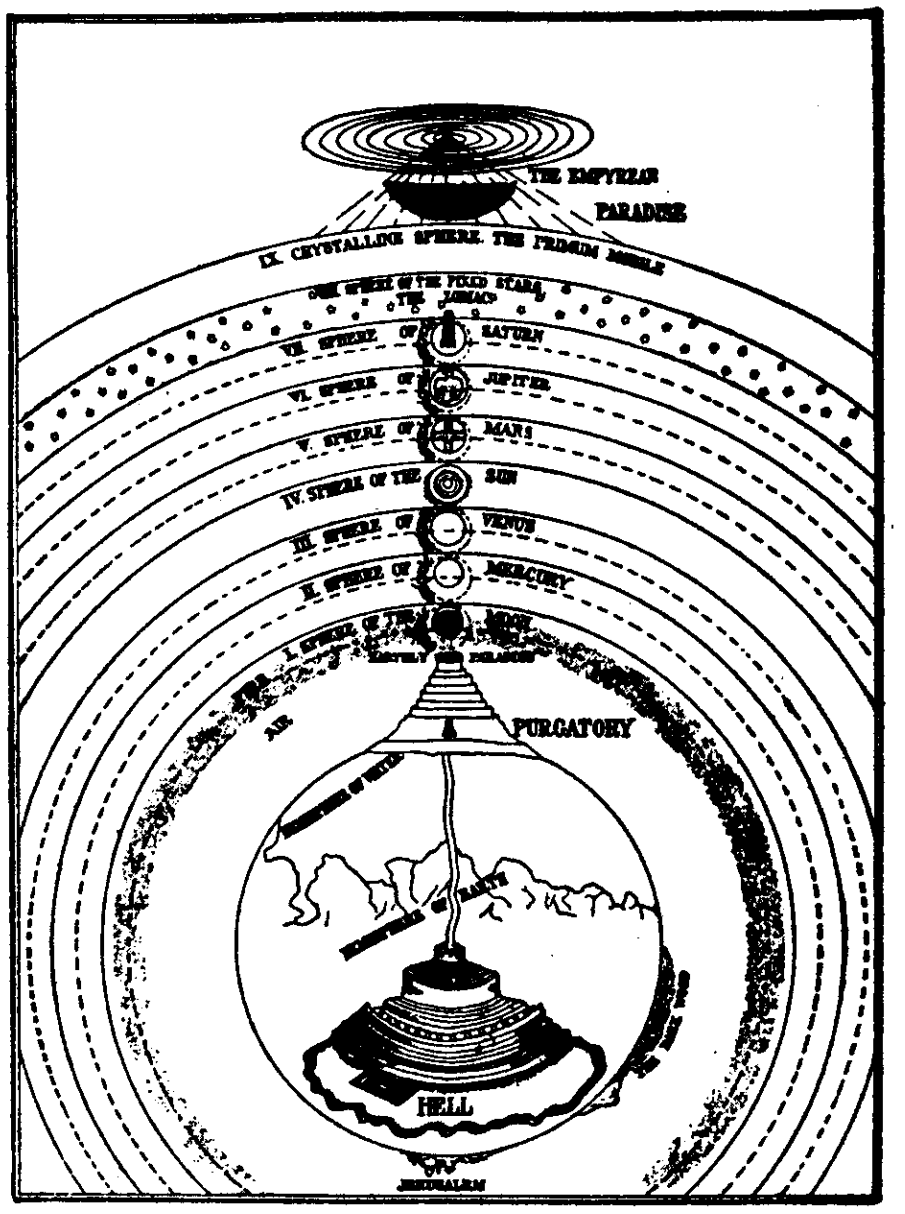
In introducing the Lagrangian material domain into his philosophy, Feuerbach must locate and elaborate a pervasive empirical psychological reality of religious belief which fully coheres with the doctrine of French materialism; he finds that basis in the paranoid world outlook of the Mother Church's Holy Family. In this respect, his error is fully coherent epistemologically with every other error he commits. Such serious thinkers are enormously important, even in their errors, because the correction of a single important error in their efforts suffices to transform their entire effort into a valuable positive contribution.

The general achievement of Feuerbach, presuming that his error is corrected as we have indicated, is that he provides the basis for accomplishing what he actually set out to achieve. *He supercedes religious belief by making it a subject of anthropology, and making anthropology the only universal form of human scientific knowledge*.

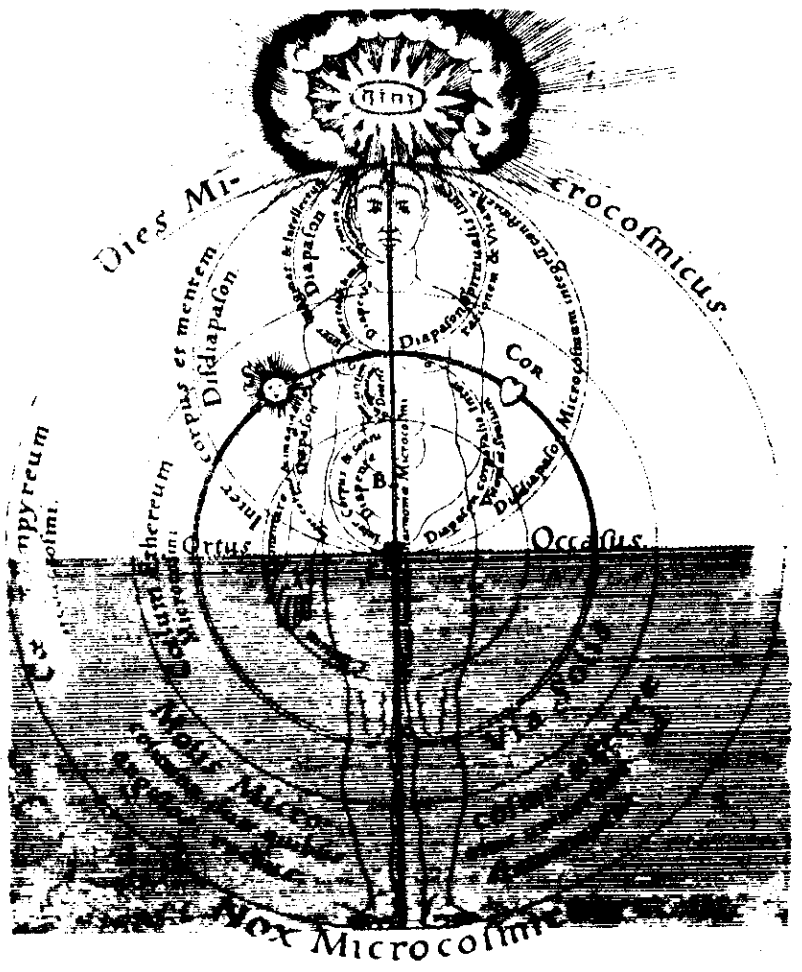


Pre-Copernican Cosmology

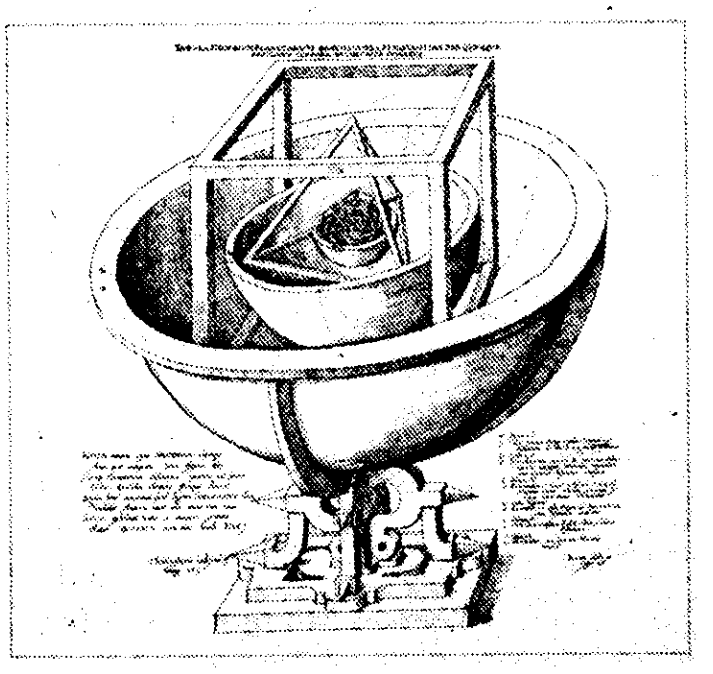
Dante's Scheme of the Universe
from the Divine Comedy.



Man as a microcosm of the universe.



Kepler's model of the Solar System.



VI Do Physical Laws Change?

Among the more terrifying features of these lectures so far is our repeated assurance that the physical laws of the universe change in an evolving way. "Is this so?" The immediate answer is: That is *doubtless* the case! The reader demands something more: "Where is this proven?" he exclaims in panic. It is time to settle his mind on this matter.

The best and most shocking way of beginning our treatment of this particular point at issue is to announce that, provided we overthrow the Rockefeller faction and get out of the present world capitalist depression, we shall begin to change the laws of the universe during this present century. (Good pedagogy is always necessarily shocking; as long as the process of education is a peacefully orderly process, as long as education satisfies the sensibilities of the formalist, one may be certain that the students are learning nothing of any fundamental importance. It is only when comfortable habits of thought are threatened in the most agonizing or even terrifying terms, that anything of fundamental scientific importance is communicated. If I have failed to infuriate you, I have taught you nothing of importance.)

"Ah," the skeptic sighs in relief, a smug smile growing on his idiot's face, "then, you admit that you have no evidence to support this wild talk about changing the laws of the physical universe." We say "idiot" advisedly. The experience of the past 18 months, especially, will have forewarned all wiser persons that the Labor Committees have sometimes been deceived concerning certain isolated developments, but otherwise the Labor Committees leadership has never submitted a broad statement of characterization on current world developments or theoretical issues which was not initially incredible to most opinion and also later proven absolutely correct in respect of what was asserted to be the case.

(Our only important error occurred during the last half of 1973, in which we adduced from massive evidence that the brainwashing of one of our European members had been done by the Warsaw Pact agencies with the benign consent of CIA and other NATO intelligence agencies. We later discovered, through the deprogramming of another brainwashed member, that both cases were entirely the work of the CIA and NATO intelligence agencies designed to simulate a KGB-directed assault even to the point of use of an East Berlin cover to manufacture false evidence against the KGB. By discovering the extent to which the CIA and related agencies had gone to create such a deception, we were able to unravel all the principal features of the Rockefeller faction's international plot, a discovery which has been validated absolutely by the main features of world history since we first announced this during January, 1974. Today, only credulous petit-bourgeois radicals and other idiots permit themselves to doubt the "credibility" of the Labor Committees. The United States' National Security Council and its NATO intelligence and social-democratic puppets may, indeed, attempt to deride the Labor Committees' influence and conceptions as irrelevant, but they are spending tens of millions of dollars, and deploying principal figures of the social democracy and major capitalist press conduits to attempt to convince dupes of such "irrelevance.")

Contrary to an idiot's consoling opinion on this matter, we have *conclusive evidence* that we are on the verge of beginning to alter the laws of the universe. For the moment it is sufficient to indicate that this alteration will occur through the synthesis of new elements and processes which have not previously occurred in nature. What we know already is that the organization of the physical universe is of the form that wilful creative human practice must intrinsically *tend* ultimately to alter the laws of that universe. That is firmly, conclusively established on the basis of crucial experimental evidence already firmly in hand. At the same time, from a negative standpoint, we also already know conclusively that any contrary account of the existence of our universe is a self-discredited absurdity. Further, we know in advance the general nature of the circumstances of human practice in which alteration of the laws of the universe begins to become a moot issue of experimental hypothesis.

We have already identified the essential proof required. It is merely essential to elaborate those points for pedagogical purposes.

The crucial evidence which essentially proves our case is established by Marxian economics as we have elaborated it in our textbook, *Dialectical Economics*. The evidence developed for economics is corroborated by holistic biology, with emphasis on the current founded by the influence of A.I. Oparin *(Origin of Life)* and the influence of Soviet Academician Vernadsky.

Unless one is hysterically obsessed with the determination to introduce the dualism of a metaphysical *elan vital* to the universe as a whole, then whatever fundamental, universal laws are demonstrated to exist for living processes inclusive of human creative activities are thereby proven for the universe as a whole. Since an *elan vital* which acted efficiently

on the inorganic universe, and acted upon by its effective results on the inorganic, is necessarily coherent with the inorganic universe and thus integral to it, even the *elan vital* ruse would provide no effective exception to the conclusion we reach.

The history of human social evolution is itself conclusive empirical evidence of the nested sequence of manifolds connected by a world-line invariant. A comparison of that social evolution with a general holistic theory of the biosphere enlarges the overview of the kind of processes which represent the positive crucial evidence for our argument.

The biosphere as a whole is essentially a "thermodynamic system" of the form heuristically given by an exponential tendency for rise in the value of the social-reproductive ratio S'/(C+V) Up to the emergence of fusion technology, the biosphere as a whole is delimited by the net usable solar radiation throughput of the earth. The biomass as a whole may increase or decrease the retained portion of that throughput by the earth as a whole. Otherwise, the biomass is defined by the following broad terms of successive approximation.

The fundamental feature of living processes is, in first approximation, enlarged reproduction of the total population of all species *in caloric terms*. Of the total energy consumed by the biomass as a whole, the following principal divisions of application exist. The first consumption is the perpetuation of the biomass itself, the analog of simple reproduction. The second consumption is represented by work done on the inorganic environment to maintain the preconditions of existence of the biomass. The third portion is relatively free energy, which is consumed in first approximation, by the enlargement of the biomass as a whole.

For any given mode of existence of the biosphere, there are relative (not absolute) limits. To extend the inorganic preconditions for growth of biomass, a higher ratio of expended energy per calorie of existing biomass is required — the equivalent of increasing per capita *C* in social reproduction. This intersects the principled limitation of any mode, the amount and rate of solar throughput captured: the total amount of the throughput for the biomass as a whole (whatever the caloric content of the existing biomass) and the rate of capture per calorie of existing biomass.

The "invention" of chlorophyll by the biosphere has such obvious relevance that we need only cite that fact.

For any given mode of the biosphere's development, there is an overall characteristic negentropy of the form analogous to S'/(C+V) This is expressed through the mediation of cooperating distinct species of biomass, each of which has a characteristic negentropic function as a species. The momentary negentropy of the biosphere as a whole at any epoch is *apparently* the result of the cooperative effort of all the included species taken together as an indivisible organism.

The emergence of any new species poses the following problem. The primary issue is whether or not this new species characteristic activity increases the negentropy of the biosphere *as a whole*, or approximates that ultimate effect by increasing the negentropy of the immediate ecology *as a whole*. If the effect is to decrease the negentropy of the biosphere or immediate ecology as a whole, then the lowering of the negentropy typically erases the preconditions on which the emergence of the species depends. The same applies to the population of the species as well as its existence as an included type. Does the increase in population beyond a certain point, relative to other species, increase or decrease the negentropy of the biosphere or immediate ecology as a whole?

If such evolutionary emergence of such species does not occur, then the expansion or mere duration of the biosphere in a fixed mode results in holocaust. Since the constituent species are characterized by negentropic rates, every state of the biosphere, by converging upon the thermodynamic limits of expansion of biomass for that mode, converges upon the condition that species can continue to exist only by cannibalizing existing biomass with the effect of entropy upon the biomass as a whole. (Yes, entropy is a special case of *directed* negentropy!) The negentropy of the biomass as a whole declines, eradicating the thermodynamical preconditions for continued existence of whole ranges of higher species, etc. Hence, without continual evolution of new species which increase the negentropy of the biosphere as a whole, the biosphere must autocannibalistically degenerate toward self-extinction.

Indeed, exploring further in this same vein, we see that reproduction per se is not the essential quality of living processes. *Evolution* is.

In a more thorough exploration of the biosphere in this way, we show that the "concentric universal manifolds" heurism is characteristic of both social evolution and of the biosphere generally. The biological evolution occurring within the biosphere and the creative wilful practice of social evolution are but different degrees of advance along a common world line.

The Future

If we then apply the advanced Riemannian schema so established to man's practice on the universe more generally, it is shown that at the point man begins to introduce new kinds of "inorganic" processes and elements into the universe, these changes in the existing manifold must tend to produce shifts in the charac-

teristic laws of the existing universe in a manner analogous to evolutionary development of the biosphere and human society.

No doubt, this sort of development has already occurred prior to man's existence. The development of the biosphere with its negentropic invariant could not have occurred unless such development were a universal emergent quality of "inorganic" processes. Since the universe has evolved, that evolution must have been accompanied by changes in the characteristics of the successive manifolds thus represented. *No doubt*, these things are true. Any contrary argument is easily shown to be a self-discrediting absurdity.

Anything we might discover, to that effect, as from appropriate astrophysical studies, would be of indisputable relevance and merit. However, such inquiries are not, in general, our principle concern at this juncture.

Our practical concern, insofar as the dialectical world view bears upon biological and "inorganic" processes, is to eradicate axiomatic fallacies which either prevent or inhibit progress. We know that there are problems of biology of urgent importance to mankind; we know that existing biology is encumbered with reductionist misconceptions which preclude any possibility of rational insight into the physiological basis of mentation and the fundamental questions of "genetics." At some point, that axiomatic inadequacy of existing biological practice must be a menace to mankind. In plasma physics and related inquiries we are already in many instances past the point at which intrinsically fallacious axiomatic physical conceptions provide reliable insight. We must not permit such dangers to remain uncorrected, lest progress in physics be aborted at some point progress becomes urgent for mankind.

Beyond such immediate practical concerns, we know — by virtue of the nature of the kinds of problems under attack by science today — that these involve the kinds of investigations bringing man up to the point of wilfully introducing new kinds of processes into our manifold. We know that that is the next great frontier of human pioneering toward which we are rapidly moving.

We also know that the axiomatic scalar notion of energy used in contemporary physics is intrinsically false. Since the universe has been shown to be characterized by negentropy, the characteristic primitive form of thermodynamic action in the universe must be negentropic. We know that physics can not progress much further without developing an approximate solution to the unified field problem through the axiomatic premise of negentropy.

The Pre-History

Any given state of the biosphere or of social evolution corresponds to a phase of the universe with special local laws. Those special laws act within such a phase as if they were universal laws. A biological age or a specific phase of human history is such a phase of the universe.

In pre-history and history to date, the negentropic shift in the constant relative invariant of biospherical and social "space" has been demonstrated to have occurred repeatedly within such phases. Marx's principle of *historical specificity* is precisely of that significance. In that sense, the process of successive transformations in the laws characteristic of subuniverses is already an empirical fact.

From that standpoint, we can firmly predict the preconditions at which the same negentropic tendency of human creative wilful practice must begin to produce discernible modifications in what would ordinarily be regarded as the laws of the universe. We know that this precondition could not be reached until man met the condition of introducing *new kinds of physical processes into the universe*.

Hence, to deny that man's creative wilful practice changes the laws of the universe — merely because man has not yet produced discernible such changes in physical laws — is to imitate the wisdom of the canoeist approaching the rim of a major cataract, who says smugly: "I'll believe there are falls ahead if and when we reach them." Only those who mistake the skeptic's stupidity for prudence could argue in face of the existing evidence that creative wilful practice does not alter the laws of the universe.

VII

Dialectics of Labor Power

Leonardo Da Vinci's drawings for the Last Supper. It is the wilful intervention of man's creative insight into productive practice which provides the necessary solution.

Doubtless, some readers of the preceding lectures are persuaded that our excursions into such topics as neo-Platonic theology and the epistemology of mathematical physics could not be indispensable to mastering practical questions of political economy. We shall now demonstrate the reasons why any approach overlooking such topics must be incompetent to treat the most basic problems of the current world capitalist depression.

Among those who profess to be informed on the subject of Marx's *Capital*, it is frequently asserted that Marx defined the value of commodities as *determined by* the average number of labor hours consumed in the production of such types of commodities. This is a crude blunder on their part; the fact that, on a certain morning, veal is selling at a certain price per pound at a particular butcher's shop, and that the purchaser's wage is given at an hourly price does not explain how either that price of veal or that hourly price of productive labor came into being. There is a connection between prices and average hourly wages embodied in production *at any given moment*, but that in itself has nothing to do with the *changing* relationship from moment to moment.

All such after-the-fact observations are more or less obvious, and represent useful calculations for a limited variety of circumstances and purposes. However, as soon as we shift our attention from mercantilist theories of petit-bourgeois shopkeeping to the relationship between production and consumption over longer periods, the attempt to continue further with the petit-bourgeois butcher's bookkeeping methods butchers political economy.

We now summarize the proof that *value* can not be

determined by the average number of labor hours, and then show how the value of production is actually determined as the value of *labor power*. We concede that the average number of productive labor hours does appear at a certain phase of development of *Capital*. To be exact, it is used as a pedagogical device in connection with an initial attempt to describe capitalist political economy as that economy would appear from the standpoint of what is termed *simple reproduction*. However, since Marx's conception of capitalist political economy is not simple reproduction, but *extended reproduction*, the proponent of the "Marxist" average necessary labor time explanation of things is obviously a person who has "dropped out of" the study of *Capital* at an early stage, but thereafter shamelessly sets himself up as an expert in that text.

The Form and Content of Labor Power

For reasons already identified within these lectures, the condition, $k = S'/(C+V)$ for which *k is a constant number,* defines *a purely hypothetical* state termed *simple reproduction.* We emphasize: no form of political economy ever existed in a state of simple reproduction, nor could such a state of political economy ever exist. However, for classroom use, this hypothesis performs a useful teaching role at a certain, preliminary phase of formal education. The chief objective of that classroom use is to demonstrate that a state called simple reproduction could not exist, thus forcing the student to search for concepts beyond those in agreement with ordinary opinion.

For that hypothetical state called simple reproduction, all transformations in (hypothetical) economic space are measured in terms of constant values for the social ratio, $k = S'/(C+V)$. In classroom instruction, we usually begin examination of this hypothetical state with the condition for which $k=0$ is assumed.

The assumption, $k=0$, is associated with the condition in which *S'* is reduced to zero by increasing *D* (capitalists' consumption or the equivalent) to equal *S*. $(S\text{-}D) = S'$; then, if $D=S$, $S'=0$, $k=0$. This assumption is made to avoid the alternative, $S/(C+V) = 0$, a condition which never exists in a capitalist economy except under conditions of general breakdown. By assuming whatever value of $S/(C+V)$ may be determined by existing technology, and then merely increasing *D* to absorb all the social surplus as capitalists' consumption or the equivalent, one has described the hypothetical state in a capitalist economy in any stage of technological advancement which avoids expansion by gobbling up all the produced surplus in a non-productive way.

This $k = 0$ state is chosen in order to isolate the momentary relations within such a hypothetical economy from the problems of analysis arising from expansion of the economy in scale.

This simple reproduction schema is essentially a model of a Ricardian political economy. The special case, $k = 0$, is properly termed a *Malthusian* or "Zero Growth" form of a Ricardian model of political economy. Malthus proposed to solve the problems arising from expansion of capitalist economy by increasing consumption by social parasites to absorb the social surplus. In a modern version, "Zero Growth" Malthusians propose the same solution for a reversed definition of the problem. The modern "Zero Growth" Malthusians proposed to limit industrial expansion to labor-intensive (technologically backward) forms of employment, in order to squeeze out capital (*S'*) to meet debt-service obligations to the Rockefeller financier faction. Malthus proposed to increase the number of parasites to solve the problem of "excess" surplus; "Zero Growthers" propose to stop the capital intensive development of the economy to ensure that all available social surplus is concentrated for meeting the appetites of the existing excess of parasites (e.g., the Rockefellers).

For all cases, from negative, through null, into positive values of *k*, the hypothetical model of simple reproduction assumes the equivalent of a Euclidean economic space, in which extension in scale does not alter the characteristic internal relations of production as a whole. In the simplest version, it is implicitly assumed that technology is constant, that the fecundity and extent of primary resources is constant, and that the productivity and consumption of the households of productive labor are constant. This simple model may be modified to assume the addition of new elements expressing higher productivity through technology per se, but such additions are assumed to make no reflexive transformation of the whole to which they are added. To the extent changes in technology are so introduced, it is assumed that the new particular mode is traded-off against some discontinued particular mode.

All conceptions which attribute the determination of values to average labor hours at a prevailing modal hourly price of labor are premised, at least implicitly, on such a linear model of economic space. This model has obvious "hereditary" connections to the included intrinsic fallacies of the Physiocratic theories. Although Adam Smith and David Ricardo, in particular, extended the definition of "productive" and production of absolute profit from the agricultural and extractive domain to include manufacturing, and although Ricardo emphasized the essential driving

force of technological development, Smith's and Ricardo's models are essentially enlargements of the axiomatically linear, mechanistic schemas of the Physiocrats.

We can readily illustrate the proof that all such forms of classical political economy and their modern linear derivatives are intrinsically fallacious — and hence incompetent. We accomplish this by demonstrating that no real industrial economy can continue to exist in a mode of simple reproduction. That proof automatically sweeps away the ignorant conceit that average labor hours at a prevailing hourly price of productive labor could determine value.

The kernel of the proof is this: any actual *momentary* value, k, of the ratio $S'/(C+V)$ represents a state which can not be replicated by extension into the future. Economic space is not "straight," but is "curved."

Only in the imagination is it possible to project a Euclidean economic space on the basis of such an existing, momentary social-reproductive ratio. Where such a projection is schematically imagined, such a ratio corresponds to a fixed mode of productive technology as a whole. Such a fixed technology, in turn, defines a finite array of kinds of man-altered natural preconditions for production, including primary resources. Those primary resources, as so defined by a specific, fixed mode of productive technology, are *relatively finite* in quality and extent. Consequently, any continued production in that fixed mode, even on a substantially reduced scale, decreases the potential primary resources available. This decrease increases the per capita cost of C, which increases the per capita cost of V. Those increased primary costs of production, combined, reduce S, and thus doubly lower the value of the ratio, $S'/(C+V)$ *with each successive moment of production*.

This is true for all values of k, including negative values. *Simple reproduction does not exist in reality*. Economic transformations of real economic space are not linear; economic space is, in reality, "curved" for all programs and extensions.

The next pedagogical step is to consider *the special case* in which the social-reproductive ratio, $S'/(C+V)$ *apparently* remains constant in value for successive epochs.

For the reasons just previously considered, such an apparent result could not occur unless there had been intervening technological advances. Since primary resources, as defined by a fixed specific technology, have been depleted by continuing production, there must have been either a rise in general social productivity, or a change in technology. A rise in general social productivity would tend to compensate for costs resulting from depletion of resources. A rise in technology would cause a rise in general social productivity, but it would also shift the definition of primary resources, such that former apparent limits had been superseded.

It is not necessary that a general basic advance in scientific discoveries actually be achieved during the short run. At any moment, the world economy is a mixture of relatively more backward and relatively more advanced expressions of existing technology. In the short run, a mere increase in the proportionate application of the relatively more modern, *capital-intensive*, form of production in the entire economy would tend to produce effects similar to those of innovative general technological advance.

However, in the longer run, there is a limit to such improved technological composition of capital within the terms of an existing prevailing level of scientific advancement. A viable political economy is one in which two principal kinds of development are occurring simultaneously. Day-to-day development emphasizes proportional increases in advanced forms of existing technological applications to production at the expense of more backward forms. At the same time, qualitative innovations are being introduced, often on a limited scale; these innovations then become part of the existing more advanced productive practice and are spread in that way. In addition, less frequently, there occur general scientific breakthroughs which tend to revolutionize productive practice "catastrophically." The introduction of fusion technology, during the 1980s, will be the most revolutionary of such changes in human history to that date.

These combined technological advances increase the general negentropy of production as a whole, as measured in the social terms of the ratio, $S/(C+V)$ Provided that D increases, per capita, more slowly than S and that S increases at the same rate, per capita, as $(C+V)$ the apparent result would be a constant value for the social ratio $S'/(C+V)$.

Several further basic observations must be made on this.

First, if the after-the-fact apparent social ratio, $S'/(C+V)$ is to remain constant, the technological progress which permits this result must express a rising value for $S'/(C+V)$ in terms of the Constant Capital and Variable Capital per capita costs of the preceding epoch. This increase of the ratio $S'/(C+V)$ is absorbed by increases in C, V, and D, so that the combined effect is a constant value for $S'/(C+V)$ over the successive epochs. However, the rising value of $S'/(C+V)$ in terms of the relations of the preceding epoch is nonetheless a real magnitude. We term this heuristic representation the *impulse tendency* value for $S'/(C+V)'$, or the *virtual* increase in $S'/(C+V)$ *required* to maintain a constant after-the-fact value of the social ratio $S'/(C+V)$.

Second, historically, the throughput per capita of energy for production and household consumption has risen relatively exponentially with respect to the social ratio. This characteristic rise in per capita energy throughputs correlates directly with the necessarily exponential value of the impulse-tendency, S'/(C+V).This also correlates with the fact that the per capita caloric equivalent of the values of Constant and Variable Capitals also rises in the same general way.

Third, the special case in which after-the-fact social ratios, S'/(C+V) are apparently constant for successive epochs is merely a special case which we chose to emphasize for pedagogical purposes here. The necessary, secular tendency of industrial society is for rises in the value of the effective basic social-reproductive ratio S'/(C+V) and thus a tendency for an effective rise in the ratio S'/(C+V)

Fourth, all of these points indicate that the value for the *impulse-tendency* is what is heuristically *primary* for extension in economic space.

Consequently, the real correlative of the impulse-tendency for exponential increase in the social-reproductive ratio, S'/(C+V), is the *primary, characteristic value* of the economic space defined by an industrial economy.

By this, we define value as Karl Marx did, as *self-expanding value (Theories of Surplus Value*, Moscow, Vol. I). That is, as the value for *self-expansion* of the economy represented *potentially* by current productive output.

This characteristic, or invariant of "curved" economic space, impulse-tendencies for exponential increases in the social-reproductive ratio, S'/(C+V) is the heuristic expression for the *primary form* of *value*. However, it is only the *form* of primary value; it is not in itself the *content*, or substance of that value.

The content, or substance of this primary value is more readily identified as the *creative mental activity* of *synthesizing* new technologies. It is less obvious, but not less rigorously demonstrated, that the possibility of *realizing*, making actual, new inventions depends upon advances in the *conceptual powers* of the productive population, the power to assimilate new conceptions for productive practice. This combined aspect of the content of value is termed by Karl Marx *universal labor*.

Universal labor is approximately distinguished from *cooperative labor*. *Cooperative labor* is represented by the worldwide totality of interconnected, interdependent productive labor. Cooperative labor apparently exists even from the standpoint of simple reproduction. Cooperative labor is the "here" and "now" aspect of worldwide interconnected productive labor, the totality of interconnected labor in its present form of practice. At such an *abstracted* moment of that totality in the "here" and "now," the form of productive labor's practice appears as if fixed, as in the sense implicit in the hypothetical state of simple reproduction. *Universal labor* expresses the *wilful transformation* of that totality of worldwide interdependent productive labor from one moment to the next through advances in the technology of productive practice.

In sum, the possibility that an economy can progress through successive epochs of production with a resulting rise in the social-reproductive ratio, S'/(C+V) can be attributed to nothing but the unification of science and productive labor in terms of a common quality, or substance, which is *creative human thought*. This outcome of science can occur only as cooperative labor assimilates scientific knowledge. Hence the actual progress of the economy is located in *the creative conceptual powers of human productive labor*. That is the significance of the term *labor power*. Hence, all transformations in real economic space are the result of *labor power*, which is the *self-expanding value* of the economy.

Labor power is the *content*, the *substance* of value. The form of that value is heuristically given by the form of the characteristic impulse-tendency, exponential increases in the social-reproductive ratio S'/(C+V). Every transformation in real economic space is of the form determined by that characteristic or invariant, and that invariant is at each moment the measure of the "curvature" of economic space.

The Self-Reproduction of Value

It is easily demonstrated, as by extended classroom discussion of the interconnection of bills of consumption, bills of materials, and process sheets on a world scale for industry, extraction, and agriculture, that every technological advance introduced to any part of the worldwide network increases the value of the social-reproductive ratio impulse-tendency for the interconnected whole.

However, the moment we examine the problem of continuing progress of this kind more critically, we see that we have something of fundamental importance yet to settle here on that account. If we grant that each valid innovation in the technology of productive progress represents an advance in the value of the impulse-tendency, we have yet to account for the reason such a particular innovation must be superseded by a new innovation representing a further advance in that same impulse-tendency.

We have elaborated on this point in *Dialectical Economics*, and in several other principal published

locations. It is necessary to repeat that argument, at least in summary form, here again.

Gestalt psychologist Wolfgang Köhler correctly posed the issue of creative thought, or concept-synthesizing processes, in his famous experiments with chimpanzees. The chimpanzee was confronted with a task and with the elements which, if synthesized for practice appropriately, represented the solution to that task. The fact that the apes arrived at the appropriate notion of the synthesis conceptually, and not by "random," hit-and-miss methods, demonstrated the existence of the quality of synthesis in even the minds of such higher apes.

It is only behaviorists and allied academic imbeciles who have misdefined "cognition" as the capacity for learning "names" and "procedures" in an associative fashion. It is only a behaviorist who would make such a confusion between human beings and performing circus animals. It is only a petit-bourgeois imbecile of a student who could imagine a degree from an animal-training institution (e.g., a university) to represent in itself a measure of any human intellectual accomplishment. The Italian university student who passes his examinations has merely so proven his ability to imitate a performing circus animal, and nothing more. (It is not for nothing that petit-bourgeois intellectuals in Italy are called *papagalli*.)

Actual *cognition* identifies that general *human* quality which Ficino and others recognized as the characteristic activity of the *soul* — that which differentiates man absolutely from performing circus animals, barnyard creatures and household pets. It is that quality which is expressed in the most concentrated way by creative geniuses in science and art, but is also the *power to synthesize new conceptions* which is waiting to be more richly developed in every sane human being.

Köhler's stroke of brilliance in developing his experimental approach was no accident. Originally an engineering student, Köhler had been won over to psychology and the influence of Christian Ehrenfels. Ehrenfels' conception of *Gestalts* was derived from Riemannian geometry and the associated notions of *invariants*. This notion of *Gestalts* and associated conceptions of the unique (or, "crucial") experiment, first rigorously distinguished by Riemann, were the guiding influence behind Köhler's excellent achievements.

One should not be troubled so much by the failure of Gestalt psychology, as a current, to achieve success in any other way. The reasons for that failure should be obvious. However, in the kernel of Köhler's and Wertheimer's achievements in exploring the phenomena of creative (synthetic) concept formation itself, Köhler is essentially correct, despite his failure to situate this particular accomplishment in the way needed to develop a scientific psychology or therapeutic practice in general. (Cf., Lyn Marcus, *Beyond Psychoanalysis, The Sexual Impotence of the PSP, The Case of Ludwig Feuerbach.)*

The essential feature of the Köhler experiments with chimpanzees is his isolation of the synthetic-creative aspect of mentation in terms of both a task and the setting in which the elements for synthesizing a practical solution to the task are both existent. The implication of such an experimental approach, and the repeatable success of chimpanzee performance, is that the creative aspect of mental processes is *wilful*. That is, discovery is not a matter of accidental "inspiration," but is the product of adequate mental capacities which clearly indicate the requirement for such activity. Köhler *forced* the chimpanzees to exercise "insight," by establishing conditions in which nothing but insight could provide a solution.

Historical and related evidence establishes the qualitative distinction between the "insight" of apes and human mental processes. Apes have no cultural history; they are not capable of self-developing social processes of mental and practical-social development. Yet, we must not be surprised, unless we are perfervid metaphysicians, that lower animal species' physiological-mental processes manifest rudimentary tendencies which correspond to qualitatively developed powers of mental activity among human beings. Even Maoist *papagalli* perhaps have some rudimentary expressions of the same broad tendency.

Man confronts himself constantly with a circumstance analogous to that arranged by Köhler for his apes. Man's characteristic problem we have already defined. Each extension of his productive existence in any specific mode depletes the basis for continued existence in that same fixed mode. *This is the task constantly confronting our species*. At the same time, *production provides us with the elements from which we may synthesize new techniques to overcome the depletion implicit in a fixed mode of technology of production*. At each moment, *it is the wilful intervention of man's creative insight into productive practice which provides the necessary solution* — or, otherwise, society degenerates or man might even become extinct by reason of failure to exercise creative insight and carry such insight forward into advances in social practice.

This advancement depends not only upon the existence of the material elements to be synthesized into a new technology. A New Guinea highlander could not solve any of the problems of modern society even with all the elements available. The mental development of man, both the scientist and the "ordinary workers," is needed for the scientist to invent, the

engineer to elaborate, and the worker to use in production. What is the apparently mysterious quality of cultural development?

First, it is the intellectual development of the young. It is expressed by increasing the number of years of life alloted to developing the new individual culturally. A society in which a 14-year-old school-leaving age predominates is backward relative to a society in which an 18-year or 20-year school-leaving age predominates. This increase in the number of years of maturation is made possible by increasing the lifespan of the average individual — obviously, a society with an average life-expectancy of 35 years of age could not sustain a 20-year term of development of new individuals. This is made possible by hygienic services, by medical services, and so forth. Hence, education, hygienic, medical, and related social services are absolutely essential to the productivity and continued survival of the human species. Anyone who proposes to drastically reduce social services of this type *is the enemy of all humanity*.

Second, it is the increase in the leisure of the population. As technology advances, a premium is placed ed on the proportion of effort and time devoted to developing mental activities generally. The proportion of time given to physical labor must yield before increasing time alloted to mental activities as such.

The number of hours of labor of the father of the household is of extreme importance. For the child's mental development, it is essential that there be a shift from predominant association with the mother at a fairly young age, and that the father's role become of increasing importance in the child's life. This is especially critical in capitalist society, in which the father is associated with the "outside" world and the relatively oppressed mother associated with a narrow household and neighborhood outlook, or the *relatively paranoid outlook*. This paranoid, mother-dominated tendency is not only the characteristic circumstance of male homosexuality, but, more important and more generally, is frequently associated with an inability to think scientifically or rationally, an inability to perform much above the level of muscle labor for reasons of difficulty in accepting the idea of non-magical order in the *outer world* generally. In households in which the male parent is overworked, exhausted, and has little leisure, the emotional and psychological development of the child suffers.

We are not suggesting that attendance at a university is evidence against paranoid disorders, nor does a facility in mathematical procedures itself conclusively indicate a lack of paranoid tendencies. In general, of course, the paranoid prefers "liberal arts" professions to science, but the mathematical formalist, like the perfervid advocate of "pure" "logical grammar," by abstracting the formalities of abstract schemas from the reality of social practice, is making of abstract mathematics a kind of *mother's magic*. The misguided painters, musicians, and other existentialists who believe in "art for art's sake" are prima facie raving paranoids.

What we are emphasizing here is the relative problem of a worker's life. The bourgeois *patria potestas* degrades his wife and children, notoriously, into objects of his "conspicuous" "vicarious consumption." Despite his wealth and means for leisure, he uses that wealth and leisure as powers to create the most pathological, paranoia-inducing circumstances for his wife and children. The petit-bourgeois professional is forced to emulate the bourgeois ideal of family relations. This is not the case with the Italian worker, in particular. That worker, characteristically, wants real culture for himself and his family — but there is never enough time nor money to provide even those forms of culture which he knows to exist. He would like to think, to study, to master this or that; there is no time, and he is too tired after a day's or week's labor. The bourgeois and petit-bourgeois may deprive themselves of humanity; the worker is denied the opportunity to make such a choice.

To have leisure in the household, there must be opportunity for privacy. Each child must have his or her own private area to develop prolonged attention-span in private play and studies. The "noises" of one part of the house must not intrude upon the concentration being attempted in another. The house can not be a place of drudgery. "Labor-saving" household devices to simplify cleaning, cooking, and so forth, are essential to develop the leisure of the Italian working class.

The objects which are the means of leisure, automobiles, household mechanical contrivances, modern technology as expressed in children's toys, and so forth, are much more than objects to be consumed. The use of these objects is the principal means by which the household becomes familiar with the technology of production by which those objects are produced. Every object so used is simultaneously used as an object and is a mediation of intellectual nourishment. Similarly, new technology in public transportation, museums, zoos, special exhibits, and other means for conceptualizing the world more broadly, are essential to the development of the population's conceptual powers.

It is generally acknowledged that school education, insofar as it makes children familiar with the concepts of their technology, is essential to the productive capacities of the future generation. This is correct, but is too narrow. The school, properly understood, is merely a concentrated expression of the potentiality for edu-

cability which the child obtains from the conditions of household life, his neighborhood and from family leisure and play activities generally.

What we loosely describe as an improved standard. of working-class consumption and leisure is the essential advancement in the conditions of life, without which the working class' labor power, its mental power to assimilate new technologies, is aborted. Unless the working class, through familiarity with the full range of the kinds of production of its society and through leisure development of its mental powers, assimilates the process of advancing technology, it becomes impotent in the same general way as a New Guinea highland savage confronted with a modern factory.

These foregoing remarks have merely illustrated the principles involved in readily comprehensible terms. We now sum this point up in a broader, more profound way.

When basic scientific discoveries are made, the wilful application of the technologies derived from such discoveries to the organization of production and social services is a qualitative advance in the objective circumstances of that society. The objective circumstances, one by one, are ordinarily recognized to be just that. What is ordinarily overlooked is the fact that the elaboration of a basic scientific advance in this way is no mere collection of objective improvements. The elaboration, as a whole, is a transformation of general social-reproductive practice in a form which, *as a whole*, expresses just that scientific advancement.

This is the real significance of Cantor's discovery of the *transfinite*, when that discovery is situated in Riemannian *physics*. Therefore, follow the next few — perhaps difficult — paragraphs closely; they are crucial.

What we have so far demonstrated in the most conclusive terms possible for scientific knowledge, is that "underneath" the surface phenomena of discrete occurrences, there exists a primary reality which is not discrete in itself, but *continuous*. The traditional difficulty in the efforts to conceptualize such a continuity have been the result of attempting to interpret continuity from the standpoint of an at least implicitly embedded Euclidean linear misconception of continuity, extension. (We have already noted that this is the embedded fallacy of Herman Weyl's *Space, Time, Matter*.) Yet, as we have demonstrated the Ficino and Descartes notion of empirical proof of self-perfection in several crucial empirical ways, such a continuity as primary exists.

The complementary difficulty of ordinary approaches, actually of the same epistemological content as the Euclidean fallacy, is the employment of an arbitrary assumption borrowed from naive, ignorant faith in the existence of an axiomatically discrete reality. This is the assumption that whatever is most fundamental in the universe must also be a scalar magnitude, must be something which corresponds to the simplest notion of cardinal number.

There are several ways of approaching such mistaken, traditional views. One way is to show, as Cantor and others have, that the notion of cardinal number is by no means simple, self-evident. This demonstration, once properly further explored, leads to a more fundamental observation that the fallacy of ordinary views is the failure to recognize that nothing but the entire universe can be primary, axiomatically self-evident, and that relative to that primary reality everything particular must be conceptually derivative, complex. Hence, what must appear to some to be the most rudimentary, self-evident particles must necessarily be the "most derivative," most complex phenomena to be considered by science, and not simple, scalar magnitudes of some self-evidently primitive substance.

However, epistemologically speaking, it is impossible to conceptualize an entire universe as a static simple whole. Nor, in fact, does such a universe exist. This pertains to the common basic error of Ficino and Kant. If one wittingly, or even only implicitly, conceives of an entire universe as a totality, as a self-evident fixed totality, then the fallacy of conceiving of infinity paradoxically as the final state of rest of a developing process must follow. The ontological paradox, including the more advanced form in which Ficino posed it, is actually a consequence of such a misconception of the universe as a whole.

The universe itself can exist and be conceptualized as a whole only if it is characterized by a single principle of self-development. We have already underlined in these lectures the conclusive evidence that the characteristic of the entire universe is negentropy. In such a universe a quantum of energy as a self-evident scalar magnitude does not exist except as an experimental phenomenon of a misdirected experiment which looks for the wrong results. Mathematically speaking, the reality of simple energy is to be observed "at right angles" to all the degrees of freedom in which energy as a scalar is observed.

The immediately relevant point to be made is that the conception of a self-reflexive characteristic principle of negentropy, as we have defined it for political economy and holistic ecology, is consistent with the necessary fundamental laws of the universe. That is, a succession of nested universes, "connected" by a principle of self-development, a world line of the form of the impulse-tendency, not only represents the reality of the social-reproductive process as a general law of evolutionary social reproduction and evolution of the biosphere, but necessarily corresponds to the minimal

conceptual approach to defining a coherent overview of the universe generally. *There is no basis for reasonable doubt of that fact*.

We have already indicated the equivalence of thaf *form* to the *substance* of creative human thought. The significance of Cantor's notion of the *transfinite* is that his demonstration of the feasibility of human beings' successful conceptualization of the transfinite verifies Hegel's revolutionary, successful repudiation of the Kantian conception of the "unknowability" of the real universe, and demonstrates that the creative, concept-forming process of the human mind does indeed conceptualize from aggregations in the way indicated by Cantor's conception of the transfinite.

In practice, what we are driving at is this. That the elaboration of particular technologies from a creative scientific discovery is in fact the mediating form of communication of that scientific discovery to the creative concept-forming processes in general of the minds who experience those particular technologies in a general way.

The elaboration of a general scientific discovery in the form of various innovations of social-productive practice thus contains, *as a transfinite implication* of the aggregated particular changes, the characteristic feature of the concept which generates those changes. This, in fact, we can approximately measure by the very means we have indicated. Our approximate measurements of the virtual impulse-tendency associated with successive epochs of productive development is *a Cartesian approach* to the continuous quality of self-perfection expressed by the creative mental processes responsible for generating that process.

In sum, the creative mental processes act in the form of wilful advances in the technology of social-productive practice to communicate the reality of the resulting changes in the order of the universe to the creative processes of the members of that culture. Thus, exactly as Karl Marx insists, creative mentation, wilfully acting through the mediation of negentropic advances in social-reproductive material practice, acts upon the creative mental processes to positively generate a further conceptual advance for wilful revolutionary practice.

(Socialism, as Marx, this writer, and other leading socialists define it, is nothing but man making the human power to advance social-reproductive practice the immediate subject of human practice...*that advance in human power which is its own end.*)

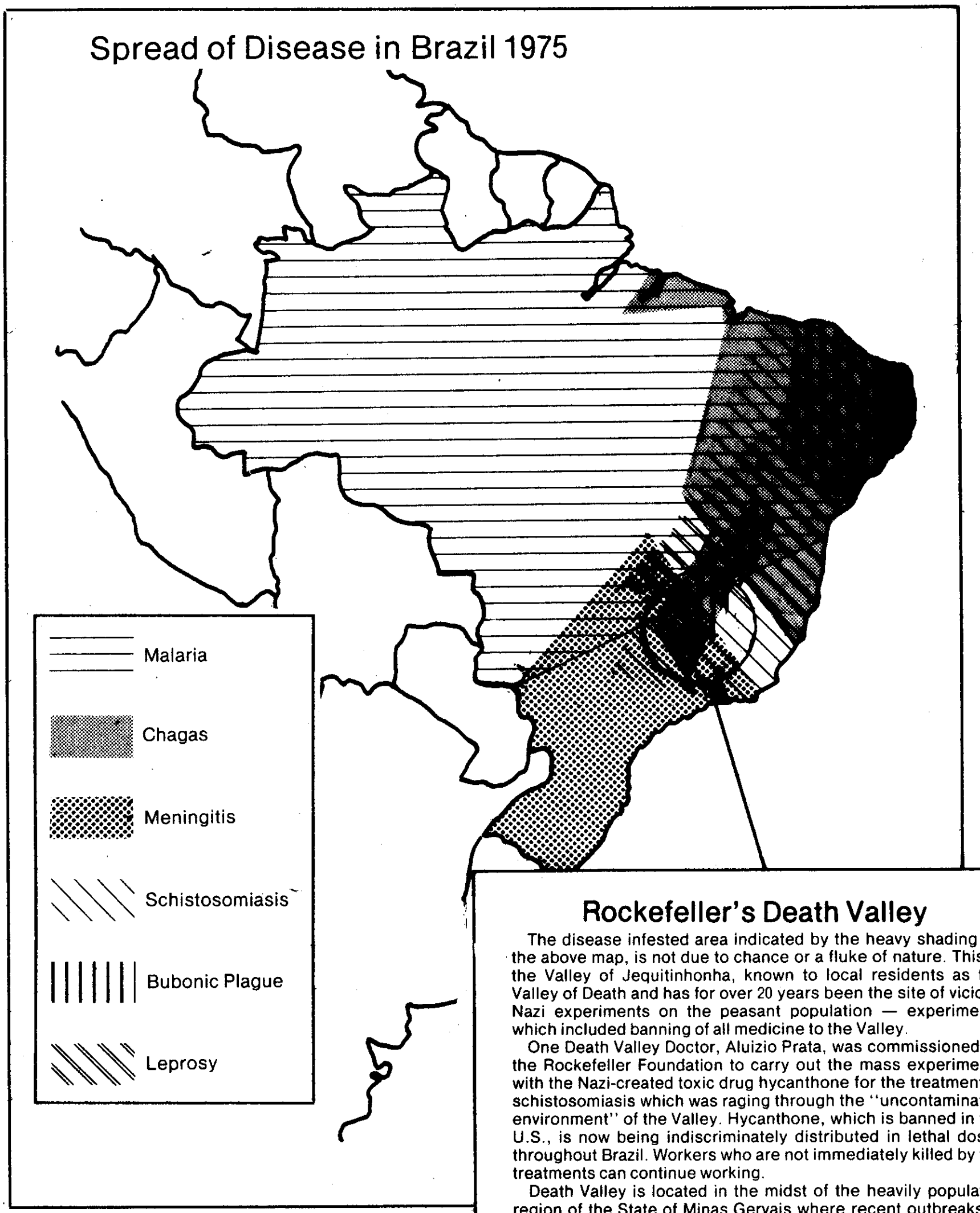
In order for this communication to occur, it is essential that the form of human consumption, labor, and leisure available to the individual producer and his household be in characteristic agreement with the transfinite content of the new advances. If this does not occur, then the consequences of a creative advance are not the circumstances for individual productive labor, and the development of the productive forces consequently tends to halt at that point.

In addition to such advances in the quality of consumption, labor, and leisure for the workers' households, the fullest realization of this potential can occur only when the individual worker is politically organized in a way which confronts him immediately with the problems of further development of the world's productive forces as a whole. Only when the development of the world's productive forces becomes the immediate reality for the worker in that way, and when he is thus compelled to conceptualize solutions in those terms of reference, does the worker directly and broadly confront the transfinite potentiality embedded in existing advances.

However, in capitalist society, it is the first aspect which is the foremost practical question. If the capitalist class resorts to labor-intensive forms of labor, it degrades the mental powers of labor and thus destroys labor power. If the capitalist class slashes social services, it drives workers to that degree toward approximations of the laboring capacities of lower beasts. If consumption is driven down, if leisure is curtailed, the mental and physiological effects on the working class destroy labor power and plunge society to that extent backwards, toward the threat of extinction through general ecological holocaust.

At the moment, we confront both the threat to destroy the human race even by capitalist standards of competent practice, and also the urgent need and opportunity to organize the working class politically as an international class, in which the full potentiality of labor power's self-development for the present level of technology can be realized.

Acknowledging that such distinctions exist for the moment, the general fact concerning the nature of labor power remains. Creative conceptions, mediated through advances in the social-productive forces, become the material basis for further creative conceptual advances. Thus, as Ficino, Pico, Descartes attempted to show, the essential quality of mankind and fundamental principle of the universe is a self-moving process of self-development. *Labor power acting through development of the productive forces, advances the quality of labor power in a self-developing way*. That is the kernel and outcome of the Marxian dialectical method and the only meaning of the term *labor power*. Labor power is not the productivity of labor in capitalist terms. However, the productivity of labor in capitalist terms depends upon the self-development of labor power, which is the only real determinant of value.



Rockefeller's Death Valley

The disease infested area indicated by the heavy shading on the above map, is not due to chance or a fluke of nature. This is the Valley of Jequitinhonha, known to local residents as the Valley of Death and has for over 20 years been the site of vicious Nazi experiments on the peasant population — experiments which included banning of all medicine to the Valley.

One Death Valley Doctor, Aluizio Prata, was commissioned by the Rockefeller Foundation to carry out the mass experiments with the Nazi-created toxic drug hycanthone for the treatment of schistosomiasis which was raging through the "uncontaminated environment" of the Valley. Hycanthone, which is banned in the U.S., is now being indiscriminately distributed in lethal doses throughout Brazil. Workers who are not immediately killed by the treatments can continue working.

Death Valley is located in the midst of the heavily populated region of the State of Minas Gervais where recent outbreaks of bubonic plague have been reported in the cities of Medina and Pedra Azul. The area is strategically located along major heavily trafficked through transport routes creating perfect conditions for the rapid spread of any epidemic disease.

U.S. Labor Party Presidential White Paper:

Holocaust in Brazil: Rockefeller's Economic Miracle

The population of present day Brazil, a nation of 100 million, is being destroyed. Starvation, murderous speedup, and 17th century living conditions have reduced a work force of 33 million to a slave-labor pool of near-psychotics, and their children to lumpen bandits and diseased starvelings. Two generations of Brazilians, the labor power vital to the development of the entire Latin American continent, are being entirely consumed by Rockefeller's debt enforcement apparatus.

Although it would be difficult to find in recent history a comparable scale of destruction to that which threatens the Brazilian and neighboring Latin American populations today, the economic and social policies handed down to the Brazilian junta by Rockefeller economists such as Abba Lerner are the same policies now applied in the advanced sector. Vicious in-plant speedup and health conditions, slashes in real income and the gutting of city services are destroying the North American and Western European working class in the same fashion as Brazilian workers have been destroyed. Until working class political organization in the advanced sector forces the implementation of worldwide moratoria against dollar-denominated debt and the establishment of the International Development Bank, all of humanity is threatened by the holocaust which has engulfed the working class and peasantry of Brazil.

Brazil's Story: Resistance Destroyed

In April of 1964, the CIA, working out of the American Embassy in Rio de Janiero, organized the overthrow of Brazil's civilian government and replaced it with a military junta. The establishment of a police state regime in Brazil, capable of enforcing the austerity and speedup programs at the core of Rockefeller's Brazilian Economic Miracle, was the first step on the Rockefeller International Monetary Fund agenda. The second was to destroy any and all resistance on the part of Brazilian workers and peasants to the policies that would eventually turn the country into one huge workcamp.

Beginning in 1964 all working class resistance to austerity was systematically destroyed, in tandem with the introduction and intensification of wage and cost-cutting measures. Strikes were broken by the Army and the Military Police, worker and student organizations were disrupted and destroyed through mass arrests and torture. Thousands of people at a time were herded into Brazilian prisons and tortured. Since 1968, the local gestapo units known as Death Squads, organized by the CIA and the notorious Agency for International Development (AID), have terrorized the population in every Brazilian town and city and have carried out a successful extermination operation against the Brazilian left.

By 1969 virtually all working class resistance to the new wage freeze laws, rent hikes, and budget cuts that were implemented during the first five years of the junta was crushed. In that year, "moderate" junta leader General Costa e Silva and his cabinet were replaced by a new administration of hardliners more suited to the enforcing of Brazil's spiralling debt payments.

From that point, the Rockefeller program has been carried out without any significant disruption until the present day. In 1968 Brazil owed its foreign creditors little more than $4 billion; by 1970 the amount was $5 billion; the next year it jumped another $2 billion and by 1972 reached a startling $10 billion. In 1973 the debt expanded by 52 per cent. By the end of 1974 total foreign debt to be serviced annually had reached over $17 billion. This enormous mass of paper is expected to expand to over $22 billion by the end of 1975, demanding $3 billion in Brazilian foreign currency reserves to pay off the country's creditors this year.

In order to meet these astronomically increasing debt-service payments, anything found or produced within Brazilian frontiers (or anything accessible outside of them, such as Brazilian gas fields and cattle ranches within the national borders of Paraguay, Uraguay and Bolivia), anything that yields a price on the world market, has — for years — been shipped out of the country as fast as possible. This has been done merely in an attempt to maintain the foreign exchange reserves at a high enough level to keep up with debt payments and maintain "a good credit rating" among foreign creditors, hopefully to gain new loans and refinancing for old ones.

The debt payments demanded by Rockefeller have necessitated the reduction of all social costs to an absolute minimum. City budgets for education, health, sewage and water systems were slashed. Similarly,

ever accelerated speedup was imposed on the industrial workforce to increase the profit margin of exported goods by slashing the living standards of the workers manufacturing them.

Recycling Takes Root

Two government decrees were invoked to achieve maximum cost cutting and speedup of the labor force: the Guaranteed Fund Statutes which was made law in 1966 and implemented when the working class had been thoroughly broken beginning in 1970, and a new decree issued in 1970, the Plan for National Integration (PIN), devised to bring recycling to the countryside.

The end result of the Guaranteed Fund has been that over 80 per cent of the workers in Brazil presently are defacto legally unable to hold a job at the same factory for more than a year. At the end of that period, after unbearable speedup and intolerable physical labor, the worker is replaced like a worn-out part by a new worker from the vast reserve army of unemployed who inhabit the shanty towns or who drift down from the drought-ridden Brazilian Northeast.

Workers are usually fired en masse on the very eve of legally required salary increases, so that replacement workers can be substituted at lower wages. The recycled worker then goes back on the unemployment rolls or he himself functions as a replacement for some other worker at a still lower salary. According to the Guaranteed Fund Statutes, a worker may be fired at the discretion of his employer, provided that a fixed amount previously deducted from the worker's salary and entrusted to an endowment fund is then returned to the worker. The sum, which is equal to one month's salary for each year of service, is supposed to be given to him as severance pay. If the worker, unable to endure vicious speedup conditions any longer, leaves on his own account, then he receives not one penny of the amount deducted from his salary. The employer, of course is always ready to fire a worker as soon as he shows any sign of fatigue since that worker will be paid back only minimal amounts of severance pay and can be easily replaced.

In order to render the worker 100 per cent defenseless against this recycling program, a special "Just Clause" was included in the Guaranteed Fund decree, which allows the employer to fire a worker and give none of his severance pay if the worker is accused of, among other charges, "dishonesty, bad conduct, criminal conviction, lack of effort (!), habitual drunkenness, or insubordination." There also exists a gentlemen's agreement in Brazil that workers over 35 years of age will not be hired.

Thus, not only do the Guaranteed Fund Statutes serve to constantly recycle the workforce from the slums to the factories and back again, but they maintain the worker under constant pressure to perform the inhuman speedup and intolerably long hours demanded by his boss, lest the meager means of support he secures for his family in the factories be snatched away. Since the institution of the Statutes, speedup and overtime have reached murderous proportions throughout the industrialized areas of the country.

Murderous health conditions in all plants have resulted from the inability of debt-strapped capitalists to invest in proper maintainence of machinery and in protective devices. In sectors of the economy with extremely hazardous conditions, such as the petrochemical industry, the policy is to fire workers after three months on the job in sections with a high degree of health hazard. In other factories, where fatal accidents and health hazards are less frequent, protective clothing is sometimes provided, the cost of which is deducted from the worker's paycheck. Workers often forego the purchase of protective clothing rather than spend money that is needed to buy food for their children.

In many cases, however, the worker has no choice concerning deduction from his paycheck. In the construction industry, for example, workers are obligated to accept food, housing and tools from the employer — the cost of which are deducted from his salary. This type of procedure, coupled with deductions for the Guaranteed Fund and other central government deductions, has in many industries reduced the Brazilian workers paycheck to an average of 15 per cent of total salary earned.

What this means is that the Brazilian worker's real salary is little more than a pittance, hardly enough to maintain himself with enough caloric intake to keep from dropping dead on the job. Therefore, in order to attempt to feed his wife and family he is forced to work long hours of overtime when he can get the extra work.

Even with overtime, since the 1964 coup, real disposable income for the working class had declined 55 per cent throughout the country. In a 1975 study DIESSE, an independent research group for the trade unions, calculated that an average Brazilian family of six needed an income of at least $235.05 per month for bare subsistence. The minimum disposable wage for a Brazilian industrial worker is $62 a month, and only 50 per cent of the industrial work force — those lucky enough to work steadily full-time — are salaried at that level. The rural peasant workforce of over 14.5 million earns far less than the minimum industrial wage.

Not surprisingly, worker's wives and children have gone to work in the factories. The latest statistics on the labor force published by Veja magazine indicate that female and child labor (10 to 14 years) is soaring.

Between 1972 and 1973 alone the child labor force increased by 24.1 per cent.

The diet of Brazilian workers and their families consists only of black beans, manioc flour, hard brick sugar and fruit, with an average intake of 1300-1700 calories and 17 grams of protein per day. This substandard intake will fall to emergency low levels this season due to serious frosts which hit Brazil's southern agricultural belt in late July.

To illustrate the conditions under which Brazilian workers must toil we bring up two examples here: taxi and truck drivers. A taxi driver in any one of the major urban centers finds himself forced to work from 12 to 18 hours a day — the bulk of the time to pay his boss for rental on the cab and to pay for gasoline at exorbitant prices, the final few hours for his own income. Truck drivers bringing agricultural goods to Brazilian ports congested with masses of goods to be shipped out of the country, must wait in line from one to four days, in their vehicle, to unload their produce at the harbor.

A Nation of Slum Dwellers

The effects of wretched working conditions are compounded by the living conditions of both Brazil's employed and out-of-work population. The working class in Brazil's urban centers lives in *vilas proletarias*, inner city slum tenements, if they are employed, or the well-known garbage-dump hellhole, the Brazilian *favela* shack towns, if they are part of the unemployed population. The *favela* regions of Sao Paolo, human junkyards for the urban recycling process, have doubled in size over the last ten years. From these *favelas* come the hoards of hungry youth that spread through the city snatching wallets, washing car windshields, trafficking in drugs, selling combs, peanuts, or just plain begging. Following a campaign aimed at clearing the streets of these youth gangs, police have been given orders to pick up all abandoned or delinquent minors found on the streets and put them to work in agricultural work camps.

Naturally, employed workers in the *vilas proletarias* live in constant fear of moving themselves and their families back to the *favela*, while the unemployed *favellado* maintains the hope of being able to get out. The junta has kept the unemployed and the employed workers at each other's throats by playing up antagonism against the *favela* dwellers.

The Holocaust

The effects of these sub-human living and working conditions on the population has become more than clear. Brazil has the highest on-the-job accident rate in the world, with accidents measured at 4,400 in 1973. The large majority of these accidents happen during overtime hours when undernourished workers are too exhausted to pay attention to the dangers of obsolete and run down machinery. Speedup is also a major factor in this inplant slaughter operation. Between 1965 and December of 1972 workers' income was reduced by 40 per cent across Brazil while during the same period the national "productivity index" increased an astonishing 44 per cent.

The Brazilian working class is being murdered in the factories. In 1974 there were over 1.8 million serious industrial accidents and deaths reported.

Without much effort we can see that the preservation of capitalist credit titles is systematically destroying the whole population of Brazil. More horrifying is the consideration that such cannibalism against the present working class is as well destroying labor power for the future through looting education, health and nutrition — areas that vitally affect children.

This is the actual criminal significance of the portion of the Brazilian national budget alloted to health care being dropped by more than 70 per cent over the years 1964-1973. The 70 per cent slash, coupled with speedup and drop in food consumption explains the violent jump in death and disease rates, especially infant mortality rates and predisposition to mental illness among Brazil's children.

Today, 60 per cent of the Brazilian population is infected with one disease or another. Serious parasitic illnesses such as chagas, transmitted by roach-like insects which infest the cities, and schistosomiasis, carried by snails in the country's water systems, inflict 25 million Brazilians and are spreading at an alarming rate. The incidence of schistosomiasis has alarmed even the government public health services which have reacted by establishing programs for the mass distribution of a number of highly toxic drugs such as hycanthone, niridazole and miracil. Hycanthone, in particular, has been indiscriminately administered to large sections of the population in toxic doses. Fifty million people are tuberculosis carriers, and by the government's own, probably extremely conservative statistics over 40,000 die of TB annually.

Meningitis is a raging killer. Virtually unknown in Brazil in 1970, Sao Paulo alone has reported 40,000 cases of meningococo A and C, one of the most deadly varieties, this year. There are four rats for every Brazilian; bubonic plague and virtually every other serious illness known to man is on the rise in the area.

State Deputies of Rio Grande do Sul meeting in Porto Allegre this summer closed the public galleries of the Chamber of Deputies in fear of their lives from contagious disease. In Sao Paulo, schoolchildren wear

surgical masks in the classroom and recently there are indications that the city's schools will close down completely.

Brazil's children are dying, if not from starvation, from diseases which their depleted bodies cannot resist. Over 330,000 under one year of age succumb every year. Moreover, infant mortality in Sao Paulo, the least stricken area of the country, has reached 103 per thousand children born this year.

Recycling in the Countryside

The rural population has been decimated as rapidly as the urban workforce, by forced relocation of hundreds of thousands of peasants to massive workcamps in the Amazon.

The Plan for National Integration (PIN) created by presidential decree in mid-1970 rapidly became the official cannibalization program for those sections of the Brazilian working class which had already been wrung through the factories once, or which could not be immediately fit into the urban industrial recycling program in the Southeast of the country.

According to the PIN schedule established in 1970, the program was to last for four years during which time over two million peasants were to be resettled on Amazon work-camp farms. The program was to establish the infrastructure to loot the entire basin rapidly, and to increase the availability of foreign currency-earning agricultural exports through the construction of an irrigation system for the drought-plagued Northeast, and the production of food for the consumption of Brazil's working class in the basin itself.

PIN was a complete failure except as a mass murder operation. Of the half-million peasants resettled in the Amazon less than half remain. Malaria, endemic to the area has killed thousands and the initial arm of the Amazon highways which were to serve as supply routes to the work camps have been abandoned for lack of construction funds leaving the remaining farmers on the land completely isolated.

Although the original blueprint for the basin was not carried through, the first stage of the operation succeeded in defoliating huge areas of the Amazon as large as Dutch Guiana. These areas have not successfully been replanted by the government and for the most part remain laterite rock deserts, devoid of any topsoil or vegetation.

The government is now planning to send the peasants besieging the cities as they return from PIN projects back to the Amazon area to industrial workcamps projected to provide the labor force for new steel and aluminum refineries in the states of Para and Amazonas.

The Task: Development

This is the present state of the Brazilian economic miracle. In the face of this tragedy workers in the advanced sector must meet two immediate, interrelated tasks.

The working class in Europe and North America must immediately insure that steps be taken to reverse this spreading destruction of the Brazilian population. Emergency shipments of food and medicine to Brazil can halt the spread of disease, minimize its effects, and cure masses of already infected workers and peasants. Medical and health planning personnel must be supplied not only to treat the sick, but to develop adequate sanitation on an emergency basis, crash production of prefabricated housing and other

services. An international emergency effort can — and must — stop ecological disaster in Brazil, reverse the conditions of emiseration on which it feeds and maintain a standard of living for the rest of the continent adequate to forestall further collapse.

The immediate implementation of moratoria on Brazilian and all Third World debt, coupled with the establishment of the International Development Bank must be insured. Free of strangulation by mounds of dollar debt, the Brazilian working class can enter into productive relations with the rest of the world which will allow the rapid development of Latin America's Rio de la Plata River basin, a potentially rich breadbasket for the entire world, largely located in Brazil and Argentina. Within months the Brazilian working class can be transformed from a decimated labor pool unsuitable even for slave labor into the workforce that will implement socialist industrial and agricultural development of the entire region.

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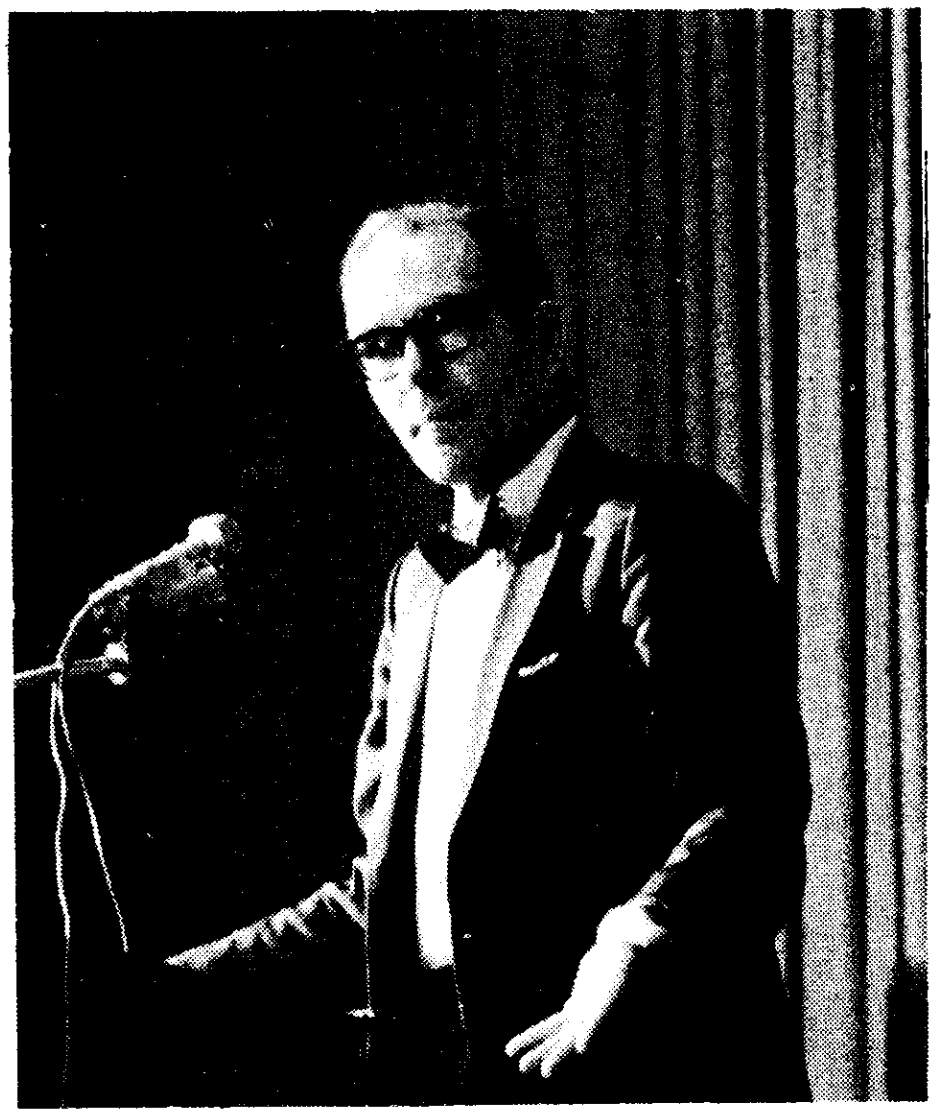

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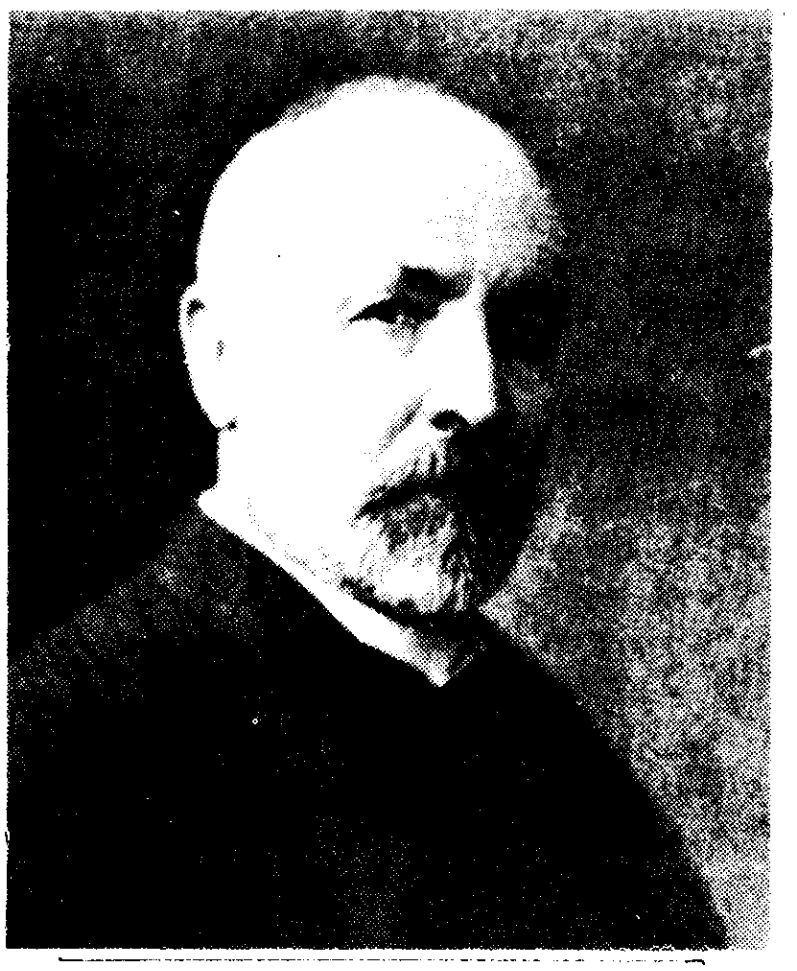

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