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Introduction to The Life and Thought of Karl Wittfogel

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The intellectual and political odyssey of Karl August Wittfogel is as perplexing as it is imposing. During the Weimar Republic he was a prolific Marxist theorist and the German Communist Party's leading authority on China. Transplanted in the United States after Hitler's rise to power, he eventually became a "renegade of Marxism" and an ardent opponent of Communism. His life and his work are one; his admirers and critics many. Any introduction to Wittfogel cannot be separated from the controversies that surround him. The geographical dimension of his work unfolded within the particular intellectual and political contexts and controversies of his time.*

The Notorious Communist

Karl August Wittfogel, born in 1896, was the son of a Hanoverian school teacher with interests in history and geography.[1] As a young man, Wittfogel joined the *Wandervogel*, part of a romantic movement among a doomed generation of German youth, which heightened his interest in nature. A reading of Nietzsche challenged his naive religious and political ideas. At Leipzig University he read Marx as part of a course in history given by Karl Lamprecht; in Munich he studied aesthetics and at Berlin University, Hegel; and at Rostock, Geography and Geology, deepening these interests by studying under Wilhelm Penck during the First World War. As student and soldier he became a political activist, joining the Independent Social Democratic Party in 1918 and, following a party split, the German Communist Party (KPD) in 1920, where he became the party's leading authority on China. He taught with Karl Korsch at a proletarian Volkshochschule in Thuringia. In 1925 he became a member of the newly formed Frankfurt Institute for Social Research. In the late 1920s he was active in a number of international congresses of the communist League Against Imperialism. But in 1931 his analysis of the Asiatic Mode of Production was criticized at the Leningrad "Discussion on the Asiatic Mode of Production," where the mode was denounced by some participants as a politically harmful perversion of Marxism. In turn Wittfogel became increasingly critical of the Soviet Union even while taking a prominent role in the German communist reaction to the rise of national socialism. His analysis of the German feurer as historical response to a search for a leader by the petit bourgeoisie (which intersected with Hitler's own, personal history of bitter experiences) led to his detention as a "notorious Communist" for eight months in 1933. He used the occasion of his release, obtained in part by interventions by the international leftist fraternity, to quickly follow his contemporaries Lukacs, Korsch and Brecht in flight. In 1934 he rejoined the (now International) Institute of Social Research (IISR) in New York and began an association with the Institute of Pacific Relations.

Wittfogel's critical stance on the Soviet Union was heightened by the Soviet trials and assassinations of the period 1935–1937. On his return from field work in China (where he met Owen Lattimore), he argued at an IISR seminar that the masses no longer controlled the centers of Soviet power and that a second revolution was necessary. However, while his "theory of oriental society" had matured by this time, he did not yet apply it to Russia, nor use it to criticize the Soviet Union. Finally, the Nazi–Soviet Pact of 1939 caused Wittfogel to sever his remaining ties with the Communist party. He also became a critic of Marx and Marxism.

Theoretical and Empirical Work, 1920s and 1930s

In the early 1920s Wittfogel wrote on methodological issues and was interested in aesthetics and criticism.[2] However, he soon took up the theme of the natural factor in the

*Most of this special issue of *Antipode* is devoted to a translation of Wittfogel's seminal article, "Geopolitik, Geographischer Materialismus und Marxismus," from *Unter dem Banner des Marxismus* 1929. An early translation was made by Martin Koeppl and Helga Lyons, with the final translation by G. L. Ulmen. This introduction is mainly intended as a summary of Wittfogel's ideas, with emphasis on the environmental and spatial aspects. A brief assessment is made at the conclusion, and an appendix added on the crucial category of the Asiatic Mode of Production.

process of production, basing himself on Marx's conception (in *Capital*, volume 1) of labor as the active process mediating between humans and nature. For Wittfogel, the naturally conditioned powers of production were as important, sometimes more important, than those socially conditioned. The relation between humans and nature was the key to historical materialism and to the modes of production. In 1926, with his *Awakening China*, the concept of an Asiatic mode of production (see Appendix for an introduction to this category), founded on the natural conditions peculiar to China, was spelled out in detail.[3] The fundamental characteristics of this mode were irrigation and a powerful hydraulic bureaucracy. The managers of the irrigation apparatus became a ruling class controlling the means of production and exploiting the peasantry through a system of state taxation.

In more detailed research on Chinese economic history, he developed the idea of changes within the Asiatic mode. These changes had natural and social causes, or natural causes socially mediated: when the government was confronted simultaneously by a natural catastrophe, and a war with an external enemy, civil war and the collapse of the dynasty became possible. The spatial relations between China and conflicting social orders developed on the Inner Asian steppe (the pacifist ethic of the hydraulic state compared with the warrior ethic of the steppe) were particularly significant.

In the late 1920s Wittfogel returned to the natural factor in an article for the journal *Unter dem Banner des Marxismus*.[4] A second long article extending this analysis was later rejected by this journal, and published instead in the *Archiv für Sozialwissenschaft und Sozialpolitik* in 1932.[5] Wittfogel approached the exposition of a Marxist analysis via critiques of "geographical materialism" and "geopolitics," as expounded by Richthofen, Ratzel, Kjellén, Haushofer, and the British socialist geographer J. F. Horrabin. He traced the origins of Marx's ideas on nature to Herder, Montesquieu, Hegel and Ritter. While neither the geographical materialists nor the classical economists had been able to solve the question of the role and significance of nature in the historical process of life, by emphasizing material production Marx achieved a scientific understanding of this process.

Wittfogel argued that the role of the natural element in the historical process of life could only be understood via the dialectical-materialist method in its societal form as historical materialism. Instead of an approach which arbitrarily connects the separate spheres of life one with another, and all with their natural foundation, this conception sees these processes as moments of an historical unity. The Marxist position does not even recognize a contrast between humans and nature; rather the human is a part of nature. Human labor transforms natural substances into forms adapted to people's needs: the need to transform nature in this way is an eternal condition of human existence. Time and again, he said, Marx directs us to the relationship between humans and earth, the twin sources of all material wealth. The earth provides the general objective conditions of human activity—location, source of food, natural container of primary work objects. From this relation we can derive the formula of the labor process in the most abstract, general way.

The basic elements of the labor process, purposeful human activity and the objects and means of labor, change during the course of historical development. The means of labor evolve. The labor process lengthens so much that objects emerge which no longer immediately exhibit natural features. Does this mean that the natural element comes to play an unimportant role? No, Wittfogel answers, it only shifts emphasis, so that its fundamental importance is continuously reformulated. This is one of the most significant, but misunderstood, characteristics of the Marxist conception of history. Wittfogel attempts to show that it has found expression in the whole of the life works of Marx.

Wittfogel argued that Marx had believed in the specific characteristics of human races existing in different natural conditions. These characteristics were changed as humans acted on the external world. But even later, as the world became socialized by a single mode of production, the original qualities remained, just as the original fertility remains with soil improved by human labor. When he focused on the labor process, by which humans alter themselves and remake nature, Wittfogel seized on the natural origin of the *means* of production. As the societal production process matures, the significance of nature also grows. As opposed to Lukacs, who emphasized society's domination of nature, he agreed with Marx, Engels, Plekhanov and Lenin in emphasizing the persistence of natural influences on human life.

According to Marx, humans and nature are the two ultimate and inevitable factors in the development of societal production in all its historical forms. The natural element does not retreat, let alone vanish, with historical development. Which element ultimately determines historical development, the societal or the natural? People make their own history, said Marx, but under circumstances not of their own choosing—rather under already existing circumstances. An active materialism, emphasizing human activity, has also to emphasize the objective conditions under which this activity can be effective. As well as the societal conditions of productive activity, there are natural conditions without which the creation of real wealth is impossible. The objective structure of nature indicates a quite determined course for productive activity to follow. Activity can only be organized in such a way as the accessible natural objects and means of labor allow. Which natural elements are tapped depends on the social productive forces. However, the direction and possibility of change of the labor process depends on the naturally conditioned productive forces useable at a given time. Only by an increasingly profound adaptation to nature does progressive human development occur.

Thus, because social organisms found different means

of production and subsistence in their natural environments, their modes of production and living were different. From the different naturally-conditioned structures of productive forces came differential development of the original primitive communal life. Subsequently agricultural development depended on the different natural endowments. Thus the development paths of the Eastern and Western continents were different. Feudal agriculture remained at a relatively low level, for the only natural machine used was soil fertility. By comparison, a constellation of naturally-given elements propelled the higher development of the Asiatic form; of these, irrigation water necessitated by climate and soil conditions, formed a second, immensely effective, natural productive force.

In these early societies, the naturally-conditioned productive forces were crucial for the direction of development. With the development of large-scale industry the second kind of natural wealth in means of production (waterfalls, navigable rivers, wood, metal and coal) decided the matter. The locations of these means explain variations in the development of industrial capitalism—compare France, where industrial development was stifled by natural factors, with industrialized England. Likewise England developed more slowly in the recent past in part because of the depletion of its natural wealth. Only the generation of new productive forces, as part of a societal revolution, could compensate for geographical disadvantages. Hence the natural element would remain important in the socialist future.

The breakthrough to socialism involved a release of the productive forces in a new organization of production. This implied a fundamentally changed attitude towards nature. Parts of nature unexploitable before could now be used, while already-exploited ones could be used in a new way. The realm of freedom had the realm of necessity as its basis.

In a concrete, regional study, *Economy and Society in China* (1931)[6], Wittfogel interpreted Marx as arguing that the relation between man and nature is the core of the science of history: "The writing of history must always set out from these natural bases (the actual physical nature of man . . . the natural conditions in which man finds himself—geological, oro-hydrographical, climatic and so on) and their modification in the course of history through the action of men."[7] Wittfogel therefore began his regional-historical study of the structure of Chinese society with a survey of the natural setting. This formed the physical basis of specific types of primary economic activities and made necessary large-scale cooperation and organization for the development of the forces of agricultural production. Irrigation was to Chinese (Asiatic) agrarian society what coal and iron production were to English (capitalist) industrial society. Yet the function of irrigation was different under unlike ecological conditions, producing a regionally diverse agricultural space. This space was dominated by an economic-political core-area, which shifted from the small river valleys of Northwest China, to the Great Plain of the Northeast, to the large river valleys of Central and South China, the shifts coinciding with transitional stages in Chinese history. In each core/stage, hydraulic techniques were transferred and further developed, along with the amount and extent of bureaucratically controlled social cooperation. By the end of the Chou dynasty what had been a feudal mode was transformed into a full-fledged Asiatic mode of the kind described by Marx. In it, the state participated actively in the process of production (thus there is no absolute dichotomy between economic foundation and political superstructure),* including industrial development, while also the power of traders was restrained.

The existing relations of production, the mode of production as a whole, including its political and legal expressions, moved with identifiable regularity. As long as the Asiatic mode of production, with its powerful state, remained dominant in China, capitalism could not develop. However, China's Asiatic society was no "solid crystal." Crisis came internally from both the mode of production (Marx) and the bureaucratic power structure (Weber). This internal change was articulated with external influences. In particular, China's Asiatic society decomposed under the impact of Western imperialism:

> The remnant of Old 'Asiatic' China is like a blockhouse eaten away by termites. The next great storm will cause everything to collapse. Yet numerous forms, however worm-eaten, decayed and reduced, still stand up more or less amid the elements of a modern mode of production.[8]

The subsequent growth of Asiatic capitalism was seen as the synthetic result of certain indigenous movements directed by the superstructure, and "external" effects from Western capitalism, which had already reached the middle and late stages of its development as it destroyed ancient Chinese society.

The middle 1930s brought research on family authority in China. Family authority structure, Wittfogel argued, reflected the type and allocation of labor. The change from matrilineal to patrilineal family was a consequence of the development of the forces of production. The particular mechanism stressed by Wittfogel was the need for an intensification of male labor with the use of improved agricultural means of production, such as artificial irrigation works. This also transformed collective means of production, herds and land, into small units which became private property. Class stratification occurred and the

*In the sketchy first drafts of a second volume, Wittfogel fol lowed Marx and Engels in tracing the origin of the state to the origin of classes and the class struggle which emerged once the forces of production had attained a certain level of development. This 'endogenous' root was opposed to an 'exogenous' root, a conquest theory of the state. While both might determine the shaping of the emerging state, it was the endogenous root which was most often decisive (Ulmen, pp. 127-128).

political state formed. The intensity of Chinese agriculture was conducive to small-scale units of production and thus the prevalence of small, rather than extended, families, although these existed within the remains of earlier clan relations. The extraordinary power of the head of the Chinese family had its origin in the production skills residing in old men and the delegation of power by a bureaucratic state controlling agro-hydraulic production tasks. Wittfogel compared this structure with the Western family, which he found more volatile than that of the East.

Wittfogel's "Theory of Oriental Society"[9] closed this period of obviously Marxist work and pointed the way towards his later work, *Oriental Despotism*, published in 1957. Wittfogel outlined a version of "critical theory" which emphasized the necessity of placing phenomena in their full historical and spatial contexts. The structural principle of all social formations and conflicts was the antagonistic patterns and movements of, and the concrete forms taken by, the realm of work. Oriental society, he argued, had progressed through a series of forms. The simple, early form of Oriental society was the clan, with communally regulated agriculture and the surplus going to support a state which controlled labor. This early form was destroyed by the growth of the forces of production, yielding a developed form characterized by private property, greater class stratification, and the development of merchant capitalism. This more complex social form was prone to crisis, arising from natural events or catastrophies, and from internal conflicts between central and dispersed powerholders, and between these and the peasantry. The complex form interacted unevenly with neighboring nomadic societies, which had cycles of development distinct from the dynastic cycle of Oriental society. Inner crisis mechanisms either directly effected, or opened the way for, externally imposed changes in a dynasty. Such a process of change was different from Marx's formulation of the crisis mechanism of bourgeois society in that it was economic-political rather than purely economic-structural. In Oriental society, moreover, change took the form of a vicious circle: "the socio-economic system reproduces itself instead of developing itself."[10] Whereas the decentralized feudal order of the West permitted the growth of new forces of (capitalist) production, oriental agriculture required a coordinating force, an hydraulic state, which in turn prevented the growth of commercial and industrial capitalism. Oriental society was self-perpetuating.

Changing Politics

In the early 1940s, Wittfogel and his wife, anthropologist Esther Goldfrank, began spending their summers with ex-Communists at a farm in Pennsylvania.* During the 1940s he became increasingly active in anti-Communist groups like the Union for Democratic Action, the Committee for Cultural Freedom, and the Friends of German Labor. In 1949, he wrote a memorandum for a State Department sponsored conference of Far Eastern specialists. Wittfogel's remarks were dedicated to reversing the advance of communism, suggesting that U.S. public opinion on the Far East had been misled by Stalinist interpretations propagated by American academics and journalists. By this time he had also broken his long friendship with Owen Lattimore who, in a rival paper for the State Department, advocated the immediate recognition of communist China and U.S. openness to establishing relations with communist countries. In 1950, Senator J. McCarthy named Lattimore as the "top Russian agent in the United States," a man who had influenced State Department policy-making, an accusation subsequently called "a fraud and a hoax" by the Tydings Committee. The issue was investigated by the McCarren Committee later in the same year. Wittfogel was subpoenaed to appear before the House Committee on Un-American Activities in executive session, and was further subpoenaed (as an involuntary witness) to appear in open session when the McCarren Committee began its investigation into Lattimore and the Institute of Pacific Relations in 1951. In his testimony, Wittfogel stated that while he had not known him to be a communist, Lattimore's political inclinations had assumed a consistently pro-Soviet pattern, that he had argued in 1944 that the best solution for Korea would be for the Soviet Union to take it over. This was immediately denied by Lattimore.

At this time Wittfogel also began to criticize Marx. While Marx had recognized the Oriental state as a power controlling the decisive means of oriental production (irrigation works), he had avoided designating the state bureaucracy as a ruling class, thus also avoiding, Wittfogel believed, the lessons that could be learned from this historical example of state ownership.

During the early 1950s Wittfogel became isolated from his previous political and academic associates (Karl Korsch, for example). He found few students registered for his courses. However, a new constellation of interest in his ideas began to form around Julian H. Steward and American anthropologists committed to the multilinear evolution of human societies. Also cultural geographers came to know his work via his participation in the 1956 Symposium on Man's Role in Changing the Face of the Earth.[11] In 1957 Wittfogel's major work, *Oriental Despotism*, was published.[12]

Theoretical Developments

In the early 1940s Wittfogel's conception of the structure of society moved away from the question of deter-

*In 1947 Wittfogel was appointed Professor of Chinese History at the University of Washington in Seattle. He continued, however, to direct the Chinese History Project, begun in 1938 under the sponsorship of the IISR and IPR, but now sponsored by Columbia University.

mination by ecological and economic conditions and towards an emphasis on social and political frameworks. During a 1947 reading of the 1906 Plekhanov–Lenin debates, Wittfogel was impressed by Lenin's arguments on Russia's Asiatic past and the possibility of an Asiatic restoration. In the late 1940s he worked on a socio-historical evaluation of Russia, whose institutional development Wittfogel interpreted in terms of the coexistence of Eastern and Western elements. For two hundred and fifty years, Russia had been a marginal, then sub-marginal, part of an Oriental empire, during which time it had incorporated features from the Oriental core which decisively influenced its subsequent development. Thus Kievan Russia was a "marginal Western society diverted and modified by Oriental influences";[13] the Mongol invasion in the twelfth century intensified the process of Orientalization; despotic government and an Oriental pattern of land tenure then fully developed in post-Mongol tsarist Russia, ending in a period of state-directed industrialization using (until the late nineteenth century) unfree forced labor. As opposed to the "developmental" revolutions characteristic of the West, the Orient produced revolutions of a regenerative and cathartic nature. The 1917 Revolution in Russia contained both these (developmental and regenerative) possibilities. By the late 1920s and the 1930s, however, the state bureaucracy had achieved a power over the economy unparalleled even in Oriental society, a rise which Wittfogel correlates with the fall from favor of Marx's Asiatic concept among the Soviets and their followers.

These themes are most fully developed in Wittfogel's major work, *Oriental Despotism*. This summarized the end results of several decades of an evolving set of ideas. He began with a reformulation of the dialectic between humans and an ever-changing nature:

> Man never stops affecting his natural environment. He constantly *transforms* it; and he *actualizes* new forces whenever his efforts carry him to a new level of operation. Whether a new level can be attained at all, or once attained, where it will lead, depends first on the institutional order and second on the ultimate target of man's activity: the physical, chemical and biological world accessible to him. Institutional conditions being equal, it is the difference in the natural setting that suggests and permits—or precludes—the development of new forms of technology, subsistence, and social control (*Oriental Despotism*, p. 11).

In a footnote, Wittfogel said that this differs from his earlier conception in terms of its emphasis on the primary importance of institutional and cultural factors. From this premise followed "man's freedom to make a genuine choice in historically open situations." This position enabled him to criticize certain ideas of Marx which he had previously accepted. Apart from this idea of freedom of movement in cultural evolution, however, he maintained that his perspective of the early 1930s had not fundamentally changed.*

At a more detailed level, Wittfogel argued that the agricultural potential of dry but fertile lands could only be actualized when humans had learned to utilize the reproductive processes of plant life. This task, imposed by the natural environment, stimulated the development of hydraulic methods. While temperature and surface conditions continued to limit human action, water (like vegetation and soil) proved manipulable and manageable, as it automatically followed the law of gravity. Yet water was also bulky. Its large scale use was a technical task solved by mass labor or not at all. This venture, involving great effort, and fraught with problematic institutional consequences, has been entered by numerous groups of humans, but has not been entered into by others—tribal gatherers, hunters, fishermen and pastoralists. In other words, the situation was open, and the hydro-agricultural course only one of several possible choices. However, the frequency with which the choice was made in diverse areas suggested regularity in human evaluation and procedure. The basis for this regularity of choice Wittfogel specified as follows:

> Man pursues recognized advantage. Whenever internal or external causes suggest a change in technology, material production, or social relations he compares the merits of the existing situation with the advantages—and disadvantages—that may accrue from the contemplated change. . . . When the sum total of the accruing benefits clearly and convincingly exceeds the required sacrifices, man is willing to make the change. . . . [In this decision] the material factor weighs heavily, but its relative importance can be reasonably defined only when full recognition is given to such other values as personal safety, absence of oppression, and time-honored patterns of thought and action (*Oriental Despotism*, p. 16).

*In the late 1960s at a conference at the University of Washington on agrarian problems in communist countries, Wittfogel returned to his conception of the relation between nature and society:

> My attempt to identify diversities in hydrological con ditions as a means of distinguishing patterns of farming suggests that the ecological factor is significant. But a differentiating analysis of its effects warns us against confusing causal and deterministic relations. Causal relations between natural conditions and human responses are general; deterministic relations are not. Contrary to the claims of the geographical determinists, a given natural foundation does not necessarily lead to a single type of human action. . . . a given ecological condition is not necessarily compelling; it does not necessarily have only one institutional correlation. In most cases, the natural foundation is either permissive (offering the possibility of several types of human action) or suggestive (favoring one type of human action more than others, but without precluding them). Rarely is it com patible with only one type of human action. . . . Thus the deterministic variant of ecological causality is more the exception than the rule.[14]

Thus agriculture, which profoundly affected the material conditions of mankind, was not initially or even subsequently adopted by many primitive groups. This showed the attractiveness of non-material values when increased material security could be attained only at the expense of political, economic and cultural submission. History thus offered a genuine choice, and humans proceeded not as passive instruments of an irresistible, unilinear developmental force but as a discriminating, active beings, shaping their futures.

Hydraulic agriculture, developed in the semi-arid and arid East, involved a specific division of labor, with an emphasis on preparatory and protective operations which had to occur on a large scale when large quantities of water had to be manipulated. The key organizational devices were widespread cooperation, planned integration (even complex organizational planning), organizers, disciplinarians, and leaders. Hydraulic agriculture, characterized by heavy water works, developed the peculiarities of hydraulic society as in, for example, the huge spatial scale of the management of operations. Other types of large scale construction, like aqueducts and reservoirs, navigation canals, defense structures, roads, palaces, tombs, temples and capital cities achieved a distinctive monumental style because of centralized control over extensive labor powers. By comparison, the scattered operations of rainfall farming in the West did not involve extensive cooperation, and society took the form more of a decentralized feudal system, the only regional and territorial authority being religion—the church combined feudal with "quasihydraulic" patterns of organization and acquisition (*Oriental Despotism*, p. 45).

In the oriental system, the state occupied a position of unrivaled operational leadership and organizational control, the labor force of a wide space being coerced by a state which had a monopoly on large preparatory and protective activities. As manager of large constructions, the hydraulic state prevented the crystallization of non-governmental forces into institutional bodies strong enough to counterbalance its power—thus the state restricted the development of private property by prescribing disintegrative laws by which property was periodically divided between heirs. Likewise, the dominant religion did not achieve independent authority, but was attached to the hydraulic state by convergence at the center of all mystical power.* Hence the theocratic nature of the hydraulic state.

At this point, immediately after his discussion of the economic-managerial function of the state, Wittfogel outlined its central characteristic—despotic power, total and not benevolent. Total power developed in the absence of effective societal or cultural checks, and was limited only by the law of diminishing administrative returns to the extension of state authority into all spheres of life. The state kept the agrarian economy going. It could not increase the corvée and taxes beyond the point where peasant production was discouraged. Also it could not permit strife to disrupt the life of the people. These were the regime's "rationality minimum." But once the hydraulic economy was established, the state could intensify its acquisitive operations guided by the pursuit of the rulers' "managerial optimum" expressed as maximal consumption of goods with maximal conspicuousness ("splendor"), and the exertion of a maximum of influence on the country's laws. The result was to corrupt absolutely those "who bask in the sun of total power" (*Oriental Despotism*, p. 133). While agro-managerial despots may have presented their regimes as benevolent, even under the most favorable circumstances they strove for their own, not their people's, rationality optimum, planning their hydraulic enterprises according to "what benefits their might and wealth" (*Oriental Despotism*, p. 136). Because the "urge to act independently is an essential attribute of *homo sapiens*" however, military coercion, concentrated in the absolutist rulers, had to be exercised to terrorize the subjects. The members of the hydraulic community adjusted their behavior accordingly—"obedience becomes the basis of good citizenship" (*Oriental Despotism*, p. 149). The mass individual's condition was thus described as total alienation, utter isolation.

Wittfogel regarded his conception of a specifically oriental society as countering the "fiction of a unilinear and irresistible development," which he traced to nineteenth century overgeneralizations from the European experience (by Hegel, Fourier, Comte, Spencer) and, more importantly, "contemporary Marxism–Leninism, which combines ideological and political means to liquidate both the theory of Oriental society and the concept of a multilinear development" (*Oriental Despotism*, p. 369). By comparison, he thought, Marx and Engels accepted the Asiatic concept, while Lenin continued to uphold the idea of a special Asiatic system over three decades.

But Marx mystified the class character of the Asiatic mode by designating a single person, the ruler, or an abstraction, the state, as the ruling class, even though he was clearly aware that members of the ruler's household and government functionaries shared in the surplus. Engels in *The Origin of the Family, Private Property, and the State* discussed the origin of the state as though he had never heard of the socio-administrative state or Oriental despotism. Wittfogel ascribed this "sin against Science" to a recognition of the embarrassing similarities between Oriental despotism and the total managerial and dictatorial socialist state which Marx and Engels wished to establish. Marx and Engels' distortions eventually produced increasingly retrogressive results in the case of Lenin who avoided crucial realities in traditional Asia, neglected essential state-managerial features of the Tsarist regime in Russia, and equivocated in designating Russia's ruling class, most frequently describing it as dominated by noble land-

*In hydraulic economies timekeeping and calendar making were essential aspects of state leadership and planning. "Wrapped in a cloak of magic and astrology and hedged with profound secrecy, these mathematical and astronomical operations became the means both for improving hydraulic production and bulwarking the superior power of the hydraulic leadership" (*Oriental Despotism*, p. 30).

owners. In the debates at the 1906 Stockholm Congress of the Russian Social Democratic party, Plekhanov questioned Lenin's plan for the nationalization of land as leaving "untouched this survival of an old semi-Asiatic order." Lenin's revolutionary perspective was challenged, Wittfogel claims, by the very Asiatic interpretation of Russian society that had previously been a Marxist axiom. Immediately after the Congress Lenin began to minimize Russia's Asiatic heritage, using terms like "medieval," "patriarchal," "pre-capitalist" and, increasingly, "feudalism" when referring to the Russia past. In his *State and Revolution* (1917) Lenin referred only to the private-property based state, completely neglecting the functional state in general, and Russia's Oriental despotism in particular. However, in the 1920s Lenin again began to refer to the antisocialist dangers inherent in the new Soviet bureaucracy whose roots lay in the fragmented and dispersed poverty-stricken character of the small producers—Russian society had not yet emerged from its "semi-Asiatic" lack of culture. The Soviet state apparatus, Lenin concluded just before his death, was to a large extent the survival of the old, with its surface repainted.

Wittfogel found a resurgence of Soviet interest in the concept of the Asiatic mode of production in the late 1920s. But then Stalin interpreted China's agrarian order as feudal rather than Asiatic, and discussions held at Leningrad in 1931 rejected as unMarxist the idea that a functional bureaucracy could be a ruling class, strengthened the feudal interpretation of Oriental history, and claimed that the theory of the Asiatic mode imperilled the work of the Communist International in the colonial countries of Asia. Although the conference was inconclusive, it was already clear to the Communist leadership that "the concept of a managerial-bureaucratic 'Asiatic' state ultimately had to wither away" (*Oriental Despotism*, p. 405). During the 1930s Soviet writers tried to establish a feudal explanation for phenomena labeled Asiatic by Marx. Stalin rejected the idea that an unchanging geographical environment could be a "*determining* cause of social development" and, in his *Dialectical and Historical Materialism* (1939), edited Marx's Preface to *A Critique of Political Economy* to exclude the reference to an Asiatic mode. By the end of the Second World War, Marxist–Leninists the world over were ignoring the concept. Thus Owen Lattimore, who in the 1930s had been impressed by Wittfogel's hydraulic-bureaucratic concept, was by the late 1940s characterizing the traditional societies of Asia as feudal (*Oriental Despotism*, p. 410).

In his concluding chapter, Wittfogel argued that recognition of the peculiarity of hydraulic society is crucial in the formulation of a multilinear pattern of societal evolution in the past and for an understanding of changes occurring in the East in the present. This led him to place hydraulic society within a schema of societal types. Among the features that appear in any given society, some were essential for the society's functioning, some specific to that society, and some neither—thus agro-managerial despotism was essential and specific to hydraulic society. Non-specific elements compatible with several types of societies flowed over space, like Chinese script to Japan, demonstrating that there was no necessary relation between all possible aspects of the same social organism. Essential features were few in number and limited in their combinations.

Wittfogel found five types of society intervening historically between primitive tribalism and modern industrial society—pastoral, two types of ancient, feudal, and hydraulic. Diverse patterns of transformation effected by external forces characterized all societies. Hydraulic society was the outstanding case of societal stagnation. Hence the morphology of societal change was complex. Behind problems of form lay problems of value. Three often conflicting relations interlocked in any society—the human's relation to nature, human relations to humans, and the human's relation to his or her own convictions (secular and religious). A limited number of primary processes transformed societies, while secondary changes produced new subtypes or restorations of the original order. Hydraulic society best exemplified restorative development. Transformation, if it occurred, happened only through the direct or indirect effects of the penetration of external forces. But interrelations between the Orient and the West were of different types, while conditions also varied greatly in the hydraulic countries. Hence present-day developments in the hydraulic world would follow no single pattern.

The case of Russia is of particular importance, for it was the first major country in the Oriental world to break with its agrodespotic past and with the West and, after 1917, became the most influential source of anti-Western action in Asia and elsewhere. In 1917 there existed a genuinely open historical situation in which the Soviet leadership, if it had developed the new freedoms in a truly revolutionary way, might have completed Russia's transformation into a multicentered democratic society. But they lacked the experience and resolve—humans act in accordance with their innermost convictions. The way was opened *not* to an Asiatic restoration, as Lenin believed, for the men of the new apparatus were not satisfied with ruling over a world of peasants and craftsmen, but wanted much more: "The industrial despotism of the fully developed and totally managerial apparatus society combines total political power with social and intellectual control. . . . We can truly say that the October revolution, whatever its expressed aims, gave birth to an industry-based system of general (state) slavery" (*Oriental Despotism*, pp. 440-441). Likewise, China moved quickly to establish a new semi-managerial order.

"Whither Asia?" Wittfogel asked. Asian socialists were indifferent to Marx's Asiatic ideas and ignored what he had called "the greatest desideratum of Asian society" private property in land. Influenced by crypto-Communist ideology, it could well be that Asian countries, excepting Japan, would cease resisting the political erosion to which they were exposed, with the consequence of a "spectacular manifestation of a retrogressive societal development"

(*Oriental Despotism*, p. 446). Can the West prevent a development which would extend bureaucratic state slavery to two-thirds of mankind? Close contact with the West has produced the opportunity for a multi-centered and democratic society, but this can be realized only by a West whose attitude is informed and bold. Today that attitude is neither. "We do not give full scope to the anti-totalitarian forces in the Western world. And failing to do this, we did little to strengthen the antitotalitarian forces in the hydraulic societies in transition" (*Oriental Despotism*, p. 448). This can be changed by a new insight, fully perceived, convincingly communicated, daringly applied. Ultimately the readiness to sacrifice depends on the proper evaluation of two simple alternatives: slavery or freedom.

Critiques of Wittfogel

Wittfogel's *Oriental Despotism* provoked a strong response, both positive and negative, from diverse sources. We will concentrate here on the criticisms.

Levin focused on Wittfogel's early view on the relation to nature. We will begin with his critique.[15] Marx and Engels, Lewin argued, thought that geographical conditions only *influenced* the features of social development, and did not determine them as Wittfogel had argued in 1932:

> necessity and outward usefulness determine the character of co-operative labour. From the need grow the activity and the will to evolve ever new productive forces. 'Outward utility,' *the particular characteristic of the natural surroundings present* [Lewin's emphasis], decides the outcome of this activity . . . co-operative activity always moves continuously in a specific direction; but this direction results from the objective or, in the last analysis, the natural basis. . . . (Lewin in Bailey and Llobera, p. 158)

Lewin called this perspective absurd. Whether or not the properties of natural materials were realized and contributed to development depended on the cooperative activity of humans. The manner in which humans acted on nature, whose chemical and physical properties remain the same throughout history, was determined by the development of the productive forces, the relations of production, and their interrelation. The influence of natural conditions was great at the primitive stage of development, but even here the same natural conditions did not lead to similar forms of social organization. Wittfogel, by comparison, argued that the natural environment controls the nature of the human community living in it, a determination which persisted, determining the fate of a people throughout their existence, and continuing to determine capitalist and even socialist society.

In addition, Wittfogel's argument on the relation between industrial revolution and different resource environments could not explain the industrial development of resource-poor Japan, nor the lack of such development in resource-rich China. Wittfogel also neglected spatial differences in the level of the development of social control over nature. While Marx emphasized the effect of human labor on nature, Wittfogel made labor entirely dependent on the originally-existing natural resources. As Wittfogel clung to the idea that natural conditions determined the production system (irrigation works) and the necessary intervention of the despotic government, factors alien to Marxist theory, he never developed a class analysis or a theory of societal evolution. "This inevitably takes him into the antithesis of Marxism" (Lewin in Bailey and Llobera, p. 162).

I. A. Levada in *Sovetskae Kitaevedenie* (1958) emphasized Wittfogel's anti-Soviet political position.[16] Marx's original position on the Asiatic mode had been that the "natural economy of small communities . . . was the foundation of the social structure in the countries of the East." The state was sole proprietor of land. General slavery was characteristic. Discussions in Soviet science (analyses of Eastern societies conducted "in the light of Marx's remarks") had shown that they did not substantiate the existence of a special Asiatic social formation. One should speak only of slaveholding or feudal societies in the East.

Wittfogel, Levada continued, tried to infer the form of the state from peculiarities of the geographical environment. But in *Oriental Despotism* he went further, adding the free will of a people who have a genuine choice, to the list of causal conditions. For Wittfogel, people always valued the concept of the individual with rights, one who weighed the historical consequences of his activities. But as Marx argued, the concept of individual rights had an historical character—i.e., it could only appear when development had broken the primitive unity of man and community. Furthermore, the idea that primitive tribes were able to evaluate the social consequences of irrigation Levada called absurd. This method of "historical voluntarism" led to a subjective interpretation of history. The peoples of the Orient "chose" despotism; those of the West were primordially free.

For Wittfogel the superstructure was the determining force, in that the state was allocated the determining role, property being reduced to a legal form derived from the state. Wittfogel does not see in ownership an objective economic relation, an historical social form of appropriation, and therefore reached the conclusion that property played an unimportant role in the East. The foundation of the state did not lie in a certain form of property, therefore, but in a form of management of the economy. The men of the managerial apparatus were then said to form a ruling class—Wittfogel spoke of a ruling, rather than an exploiting, class for there were no economic classes in the hydraulic society, only groups appearing thanks to the state. Marxism, however, stressed people in systems of economic relations. It did not see the bureaucracy as a special class but as a stratum administering in the interests of the economically exploiting class. The bureaucracy remained in this

position only as long as class-antagonistic society existed: "In socialism, the functions of administration are not a monopoly of any special group but a matter of all the working masses. Consequently, a 'bureaucratic class' never existed in the past and does not exist now" (Levada in Bailey and Llobera, p. 187).

Wittfogel was equally wrong in asserting that oriental land ownership differed completely from European feudalism as a result of its bureaucratic character. And the concept of the extra-economic classes of hydraulic society contradicted the real history of class struggle over economic interests in the East. Having eradicated class struggle as the moving force, Wittfogel found it in the state. The ruler of this state was not societally or naturally limited in his actions. Hence the voluntarism of Wittfogel's method—"he does not try to recognize inevitable and lawful social relationships behind the 'arbitrary' activity of individuals, the sovereigns . . ." (Levada in Bailey and Llobera, p. 189). For, in fact, no despot could destroy the classes on which he depended. Thus, instead of explaining the real conditions and role of the despotic state in the East as "a form of political development, inevitable at a certain stage—which is one of the urgent tasks of science—he concerns himself with the sentimental 'exposure' of the horrors of despotism . . ." (Levada in Bailey and Llobera, p. 189).

A false concept of the managerial state is then used against the socialist system. The socialist state differs fundamentally from earlier ones which were exploitative and not simply managerial. The management of the publicly-owned economy is directed towards serving the interests of the whole society. A centralized economy gives birth to centralized coercion only when imposed on a petty, dispersed economy, as in China and Egypt, where large scale cooperation depended on coercion and the actions of the despotic state. In socialism, by comparison, cooperation becomes a conscious and free form of social relations.

Wittfogel constructs a false schema of hydraulic society in a multilinear theory of history in order to reject the idea of the inevitability of the transition to communism. Wittfogel believes the East to be incapable of independent development. Only with the help of the capitalist West can it be liberated from hydraulic despotism. However, in reality while capitalism did play a positive role in undermining the foundations of natural economy, imperialist domination has long been a brake on economic development in dependent countries. "Escape from the imperialist yoke is essential for the East" (Levada in Bailey and Llobera, p. 191). A state economy provides a way of achieving independent development. The Soviet Union and China confirm that a true emancipation of the individual is possible only on the basis of a progressing socialist economy.

Arnold Toynbee also found Wittfogel's a political book stalking the Russian communists beneath its load of authentic learning.[17] (Toynbee would have preferred a frontal attack to one via the roundabout route of agro-managerial despotism.) Wittfogel did humankind a disservice in trying to resuscitate the propaganda myth, invented by the Greeks, of an antithesis between a good Europe and a bad Asia. He flew in the face of the considered opinion of his colleagues in trying to apply "the Marxian thesis that the means of production rigidly determine all other elements of social life" to the "magically vicious soil of Asia" (Toynbee in Bailey and Llobera, p. 165). The idea that large scale artificial water control produced a uniform type of agromanagerial despotism was contradicted in Lombardy and the Netherlands. The differences between Asiatic irrigation societies are greater than their similarities. And Wittfogel is "barking up the wrong tree," for even a cursory comparative study of total power finds it more frequently in rainfall-agriculture societies (such as National Socialist Germany, and Russia where Wittfogel's idea of a Tartar connection with China is a "very far-fetched piece of speculation"). There was nothing more to Wittfogel's thesis than the "obvious truth that large-scale enterprises cannot be carried out without a unified and effective high command" (Toynbee in Bailey and Llobera, p. 167).

In his reply to Toynbee (there have been no direct replies to the left critiques) Wittfogel claimed that Toynbee confuses authoritarian leadership with total power.[18] Worse, Toynbee mistook Wittfogel's actual statements on "the dependence of the economic on the ecological factor, and the dependence of the latter on cultural conditions which in open historical situations offer a variety of choices" for Marxian economic determinism; indeed other reviewers commented that he had refuted Marxian economic determinism. Far from depicting oriental despotism as uniform, he gave much attention to its multiformity. He presented, in his book, substantial confirmed evidence of Asiatic influences on Russia. A menace he might be, but only to the worst form of total power.

A large amount of work was subsequently inspired, at least in part, by Wittfogel's ideas. Wittfogel's biographer Ulmen lists some of the research supporting the theory of hydraulic society: work on the agrarian question in Egypt; the early formation of Vietnamese social institutions; property, revenue and government structures in Tibet; Africa's monarchical absolutisms and hydraulic tribes; research on China; Ceylon's land tenure and kinship systems; Melanesia; irrigation villages in Tanganyika; and work on Benin.[19] For a "balanced assessment" of Wittfogel's influence on anthropological research we can look at J. H. Steward's 1977 summary of the Wittfogel hydraulic thesis and its results.[20] Wittfogel's hypothesis, as understood by Steward, is outlined as follows:

> He developed the hypothesis that the early civilized states of both the eastern and western hemispheres were integrated by the managerial controls required to construct and maintain the irrigation—and more broadly hydraulic—systems. As water was brought to arid lands, food production and population increased and became the basis for class-structured

states and the achievement of civilization. While historians of culture were emphasizing differences between civilizations, Wittfogel was postulating a single basic factor that brought all of the civilizations into being (Steward in Bailey and Llobera, pp. 195-196).

The thirty years since Wittfogel's first important publications had produced research which throws doubt on the universal applicability of the irrigation hypothesis, Steward said. In many instances the importance of irrigation was overemphasized, while in others its development results from, rather than causes, the growth of states. It is clear that managerial control of irrigation and hydraulic works was not everywhere the principal factor underlying the growth of early civilizations. A strong religious factor was evident, hence state integration around theocratic controls, while other forms of control, and later militaristic authority, were also important. But it was also certain that irrigation increased food productivity and required coordination and cooperative activity, making necessary some form of managerial control. "In short," Steward concluded, "instead of 'throwing out the baby with the irrigation water,' the need is to recognize the particular combinations of factors, *including the kind of irrigation*, which operated in each case. Wittfogel's hypothesis challenges the disbelievers to produce alternative explanations which are more than accounts of the uniqueness of individual cases" (Steward in Bailey and Llobera, p. 205).

Critique of Revolutionary Anarchism

Since the late 1960s Wittfogel has been writing a book on Marxism and Anarchism, a treatise on the morality of revolution. A brief survey of his more recent political ideas provides a fitting conclusion to this survey.

Wittfogel considers the anarchist philosopher William Godwin to have understood the crucial institutional differences between West and East. Godwin finally rejected the validity of revolutionary anarchism for the West, where it threatened to destroy centuries of progress, but upheld its relevance for the East, where it would play a progressive role in a more equitable form of government by destroying despotism. Wittfogel calls Godwin's a reformist anarchism, dedicated to methods like civil disobedience and non violent change. This is counterposed to revolutionary anarchism, a strategy for total destruction initiated by Bakunin, modified by Kropotkin, and resurrected in the 1960s by a revolutionary New Left. In studying the history of this movement, Wittfogel finds it "necessary to place Bakunin's and Kropotkin's development within the framework of a conflict-ridden Russian society in which conflict-sensitive young men could easily envisage an increasingly dissatisfied peasantry as the potential storm-center in a growing societal crisis."[21] Bakunin, he argues, placed his trust in the profound common sense of the peasantry, distrusting abstract and bookish sciences. Wittfogel correlates this with the rejection of science by the New Left. A concept of revolution based on Russian conditions was applied by the New Left in the 1960s to conditions found in the West. Revolutionary forces are bent on the total destruction of society, its institutions, value system, and spirit. He pleads for a realistic understanding of Western institutions and a revitalization of a value system which, more than any other, has assured freedom of thought and action. Wittfogel believes in "democracy with teeth."[22]

Summary and Assessment

Wittfogel was born into an intellectual milieu saturated with Marx's political ideas which interacted with his personal interest in rural geography and society derived from his family background. A fascination with the natural factor in history was the logical outcome of this interaction. Wittfogel's ideas were remarkably similar to those of Plekhanov who, in answering the question what determines the development of the productive forces at the disposal of a society, had proposed: "In this, its final form, it is solved first and foremost by reference to the nature of the geographic environment . . . [whose properties] . . . determine the character both of the natural products that serve to satisfy man's wants, and of those objects ***he himself produces*** with the same purpose."[23] Wittfogel's formulation, however, was more complex, in terms of the relation between environment and production, more complete, in terms of its extension into the political superstructure, and more empirically exemplified, in terms of his massive knowledge of Asiatic society. In Wittfogel's Marxian period, "mode of production" was interpreted as based on the unity of the natural and the social forces of production. For him, the direction taken by the labor process depended not on arbitrary human choice but on the environment of natural means of production effective at any historical moment. In particular, the natural factor played a determining role in the formation of the Asiatic mode of production. Specifically, in China, the physical environment necessitated wide social cooperation in large-scale hydraulic works which, in turn, were the basis for the bureaucratic state and other institutional forms, such as the strongly patriarchal family. The overwhelmingly powerful political superstructure then reacted on the economic base restricting the development of new forces of production under the control of potentially antagonistic classes. Hence the "lateral" form of development and lack of the growth of capitalism in the East.

During the later 1930s and in the 1940s Wittfogel's conception of society changed along with his political inclinations. He sees this as a progression, in which much of the essential structure of his ideas remained intact. We think differently. Wittfogel had a long dispute with the Soviets on theoretical grounds (the Asiatic mode of production) and related political issues (centralization of

power in the Soviet Union). He had a series of profound personal experiences in the 1930s, especially his imprisonment by the Nazi S.A. and S.S. Then there was the McCarthy period, a time when many a social democrat turned into anti-socialist "freedom fighter." Yet Wittfogel had been a dedicated communist, immersed in Marxian culture, contemptuous of those who did not profoundly appreciate Marx's ideas. Thus, for this reviewer, Wittfogel's dramatic shift in point of view remains enigmatic.

Yet it *was* a transformation, even though certain elements of his earlier ideas are indeed transposed into the present. In *Oriental Despotism* we find the natural environment suggesting hydraulic society as one possible human response in an historically open situation. Compare this possibilism with his earlier natural-deterministic stance! We find in the later Wittfogel an inordinate stress on the despotic character of the bureaucratic state as basis for an all-out attack on totalitarian regimes of a "socialist" but not a fascist type. And finally much of Wittfogel's later work is a polemic against Marx, to whom he had previously dedicated his finest thoughts. This is profound evidence of a transformation in philosophy, methodology, purpose, and (in such a dedicated, political man) personality.

Even so, Wittfogel's ideas even in this later period are hardly devoid of insights useful even to the Marxists he attacks. His analysis of the spatial order of the Asiatic mode of production builds on his earlier interest in the dialectics of space. His idea of different densities of (hydraulic) institutions distinguishing the core, margin, and submargin of the Asiatic mode of production points the way toward a sophisticated materialist analysis of space in pre-capitalist and capitalist societies. Correspondence between geographic shifts in core regions and phases of the historical development of a given society, and the relations between internal and external sources of change, are similarly pregnant with possibilities for a more profound (radical) geographic analysis. Some of his anti-Soviet polemics, like his explanation for the embarrassing equivocation on the issue of the Asiatic mode, reverberate with the ring of truth. Wittfogel has frequently been dismissed as a renegade. Instead he deserves attention as a great geographical thinker.

Karl Wittfogel remains director of the Chinese History Project and lives in New York City. 1986 will mark his ninetieth birthday.

Appendix

Notes on the Asiatic Mode of Production

Origins of the Concept of 'Oriental Despotism'

From the Renaissance onwards, European political thought attempted to conceptualize an Ottoman State which remained for five hundred years as a separate socio-economic entity in the southeastern part of the continent. Machiavelli noted that the entire Turkish empire was ruled by one master who appointed local administrators. Bodin said that the King of the Turks was complete master of the persons and property of his realm. Bacon remarked on the absence of a hereditary aristocracy. This evolving conception of an eastern society was extended to Mughal India by Bernier, and was elaborated, by such enlightenment thinkers as Montesquieu, into a full scale theory of Oriental Despotism, counterposed to European feudalism, and explained by the determining influences of climate and terrain:

> Asia has always been the home of the great empires; they have never subsisted in Europe. For the Asia of which we know has vaster plains than Europe; it is broken up into greater masses by the surrounding seas; and as it is further south, its springs run more easily dry, its mountains are not so covered with snow, and its rivers are lower and form lesser barriers. Power therefore must always be despotic in Asia, for if servitude were not extreme, the Continent would suffer a division which the geography of the region forbids.[24]

Although contested by some contemporary writers this view became generally accepted and transmitted to later thinkers. Adam Smith pointed to different types of economy, comparing the manufactures and trade of modern Europe to the agriculture of the East, a form of production which relied on state-provided hydraulic works, both for irrigation and transport. In the nineteenth century, the ideas of Montesquieu on despotic power were followed by Hegel, while those of Smith on political economy were elaborated by James Mill and Richard Jones. For Jones in particular, Asian sovereigns had exclusive title to the soil and the people were universally his tenants—"It is this universal dependence on the throne for the means of supporting life, which is the real foundation of the unbroken despotism of the Eastern World."[25] State ownership of

land originated for Jones in conquest by the Tartar tribes of Central Asia.

Early Ideas of Marx and Engels

These ideas were passed directly to Marx and Engels. In his critique of Hegel, Marx made reference to an Asiatic despotism in which "the political state is nothing but the personal caprice of a single individual."[26] In a letter to Engels on 2 June 1852 Marx endorsed the theme, derived from Bernier, of the absence of private property in land as the key to understanding Eastern societies, an absence explained by Engels in terms of climate and the necessity for state-provided artificial irrigation. Marx agreed with this, but added that the "stationary character" of India was also explained by its division into villages "each of which possessed a completely separate organization and formed a little world in itself. . . . I do not think anyone could imagine a more solid foundation for stagnant Asiatic despotism."[27] Marx continued by attributing the spread of the principle of the absence of property in land to Islamic influence. The theme of the hermetic isolation of eastern villages was repeated in Marx's 1853 essay on China[28] and that of governmental provision of irrigation works in the deserts of a zone stretching from the Sahara through Arabia, Persia, India, and Tartary to the more elevated Asiatic highlands was prominently mentioned in his essays on India.[29] These two circumstances were seen as the basis of an unchanging system of village communities which, in turn, "restrained the human mind within the smallest possible compass, making it the unresisting tool of superstition, enslaving it beneath traditional rules, depriving it of all grandeur and historical energies. . . . We must not forget that these little communities were contaminated by distinctions of caste and by slavery, that they subjugated man to external circumstances instead of elevating man to be the sovereign of circumstances, that they transformed a self-developing social state into never changing natural destiny and thus brought about a brutalizing worship of nature. . . ."[30] Hence, while his remarks on the East were always perfunctory, Marx clearly possessed a conception of an Asiatic mode of production elaborated at the levels of economy, state and consciousness.

This model of Asiatic society was situated in a general historical theory of the comparative evolution of different societies in Marx's *Grundrisse.*

Marx's *Grundisse* and Later Writings

Marx's method in *Grundisse* is not to present an historical sequence of societal forms, with their attendant concrete analytical categories, for its own sake, but to see capitalist society as a particular form of the production process which "points beyond itself to earlier historical modes of production."[31] The central relation of capitalism is that between dead labor, accumulated as capital by the bourgeoisie, and living labor deprived of objective conditions of produciton, that is deprived of independent means of production. As Marx points out, this relation has no natural nor transhistorical basis, but is the "result of a past historical development, the product of many economic revolutions, of the extinction of a whole series of order forms of social production."[32] His discussion of this historical development focuses on the property relation, which he traces from a relation under primitive communism in which the natural conditions of existence were treated as the extended body of the individual, to a capitalist relation in which nature is privately owned, indeed where the original relation to nature has been forgotten. Property relations thus refer to the transhistorically necessary relation between the producing individual and the nature which is the prime object of production, as historically mediated by society, taking a series of forms within three general types: communal property, communal and private property, and individual property with communal property as complement.[33] Change in the forms of the property relation is generated by the growth of the productive forces — for in the reproduction of their existence, humans necessarily change both the objective conditions provided initially by nature, and themselves as subjects.

Marx assumes nomadic pastoralism, in which nature was used communally, to be the first mode of social existence. As the primitive commune settled down, the property relation became communal ownership of the land and soil:

> The earth is the great workshop, the arsenal which furnishes both means and material of labour, as well as the seat, the *base* of the community. They relate naively to it as the *property of the community,* of the community producing and reproducing itself in living labour. Each individual conducts himself only as a link, as a member of this community as *proprietor* or *possessor.* The *real appropriation* through the labour process happens under these *presuppositions,* which are not themselves the *product* of labour, but appears as its natural or *divine* presuppositions.[34]

Immediately after this, Marx begins his discussion of the Asiatic mode by saying that the primitive communal form of property relation can "realize itself" in different ways, including one in which what he calls the "comprehensive unity," standing above the particular producing and reproducing communities, "appears" as the higher, or sole, proprietor of land, and the real communities appear only as hereditary possessors. The relation of the individual to the natural conditions of labor is here mediated via the community through a "cession of the total unity," a unity realized in the form of a despot, the "father of the many communities." The surplus product automatically belongs to this higher unity in the forms of tribute paid to the despot, and as common labor for the exaltation of the despot and

the "imagined clan-being," the god. The surplus is then spent by the head of state and his satraps (subordinate officials). Hence in oriental despotism, the communal property relation becomes individual propertylessness. The conditons under which this occurs are where aqueducts, means of communication, etc., actually resulting from communal labor, seem to emanate from the despotic regime hovering over the little communes. The geographical structure of the Asiatic property system is one of small communes containing a combination of manufactures and agriculture, which makes them self-sustaining. Cities form only at exceptionally good points for external trade, or where the head of the state resides.[35]

This property relation, in which the centralized state is proprietor of land, and the individual mere possessor, is contrasted with two other early forms of property: classical antiquity and the Germanic mode. In classical antiquity, communal property was separated as state property, *ager publicus,* from a base of individual private property, under conditions which favored family labor yet necessitated a state as their "bond against the outside."[36] In the Germanic mode, the base is isolated independent families owning their own land, the state existing only as a periodic tribal gathering, with communal land as hunting and grazing lands, as a communal accessory to individual land holdings.[37]

In short, Marx uses the term "Asiatic" to cover a diverse array of more particular property forms which have the general characteristic of state property in, and individual possession of, land. This is contrary to other general types in which property is individually owned, and the state takes either a strong form, antithetical to the individual property owners (classical antiquity), or a weak form, in which the state and its property is a complement to a system founded on individual property (Germanic). Of the three, the antithetical relation between state and individual property proves most dynamic, yielding the even-more-volatile feudal mode with its decentralized state; and the Asiatic, the least dynamic, in terms of yielding new modes of production.

Dynamics of Change

The survival of the commune is ensured by the reproduction of its members and their relations to each other. But production "suspends" the original conditions little by little instead of reproducing them, and with that the communal system and its property relation declines and falls. The Roman system is most susceptible to change because of rapidly changing relations between the individual and the commune, whereas the Asiatic form hangs on tenaciously because the individual does not become independent vis-a-vis the commune and because of the self-sustaining circle of production in the localized communes. Hence we find the Roman system changing as a result of conquest and slavery, the concentration of land possession in a few hands, exchange and money, the pursuit of wealth, etc.[38] Exchange is the main means of this process of communal destruction and social individuation, for it makes the clan existence superfluous and breaks the chain between individual and community.[39]

What happens with the development of exchange is that relations of personal dependence in use-value societies, which Marx calls the "first social form, in which human productive capacity develops only to a slight extent and at isolated points," are replaced in a second stage of development by relations of personal independence founded on *objective* dependence (that is, the reciprocal dependence of indifferent individuals in which the social bond is exchange value).[40] The third stage is that of "free individuality, based on the universal development of individuals and on their subordination of their communal, social productivity as their social wealth."[41]

The exchange of surplus use-values between societies thus eventually modifies the social organization of production, which changes its orientation from the reproduction of the members of the commune, to the pursuit of exchange value. But Marx warns that this process is complex so that "the degree to which this movement towards the establishment of exchange value then attacks the whole of production depends partly on the intensity of this external influence [exchange], and partly on the degree of development attained by the elements of domestic production, division of labours, etc."[42] Or, as he says elsewhere, trade reacts back on its originating communities to varying degrees, substituting exchange-value for use-value, and dissolving the social relations founded on use-value — however the "dissolving effect depends very much on the nature of the producing communities between which it operates. For example, [it] hardly shook the old Indian communities and Asiatic relations generally."[43] (Usury, too, has a revolutionary effect in pre-capitalist modes of production "in so far as it destroys and dissolves those forms of property on whose solid foundation and continual reproduction in the same form the political organization is based. Under Asian forms [however], usury can continue a long time, without producing anything more than economic decay and political corruption."[44]) To put the matter explicitly yet generally, for Marx:

> Commerce, therefore, has a more or less dissolving influence everywhere on the production organization, which it finds at hand and whose different forms are mainly carried on with a view to use-value. To what extent it brings about a dissolution of the old mode of production depends on its solidity and internal structure. And whither this process of dissolution will lead, in other words, what new mode of production will replace the old, does not depend on commerce, but on the character of the old mode of production itself.[45]

Hence while the revolution in commerce of the sixteenth and seventeenth centuries was a principal source of the

transition from the feudal to the capitalist modes of production, in its first manufacturing period capitalism developed only where the right conditions had evolved during the Middle Ages. And as the new capitalist mode of production expanded it encountered an obstacle to the "corrosive influence of its commerce" in the "internal solidity and organization" of the modes of production in India and China:

> The broad basis of production here is formed by the unity of small-scale agriculture and home industry, to which in India we should add the form of village communities built upon the common ownership of land, which incidentally was the original form in China as well. In India the English lost no time in exercising their direct political and economic power, as rulers and landlords, to disrupt these small economic comunities. English commerce [too] exerted a revolutionary influence on these communities and tore them apart only in so far as the low prices of its goods served to destroy the spinning and weaving industries, which were an ancient integrating element of this unity of industrial and agricultural production. And even so this work of dissolution proceeds very gradually. And still more slowly in China, where it is not reinforced by direct political power. The substantial economy and saving in time afforded by the association of agriculture with manufacture put up a stubborn resistance to the products of the big industries. . . .[46]

Hence Marx's view of economic basis of Asiatic society, with its "simplicity of productive organism" in the form of "self sufficing communities which constantly reproduce themselves in the same form" in contrast to the "constant dissolution and refounding of Asiatic states, and their never-ceasing changes of dynasty."[47] This model of a relatively static society (only the ruling dynasty changing) was counterposed to a more dynamic European feudalism, whose extension to India Marx, in his comments on the work of Kovalevsky, specifically rejected.[48]

Soviet Debates on The Asiatic Mode

Marxist theory is "regarded by its adherents as being at once a *scientific* tool, which, if correctly applied, enables the scholar to predict the course of future events, and a *political* tool enabling the political activist (once again provided that it is correctly applied) to influence this course. This dual nature — cognitive and directive, scientific and political — renders the theory subject to certain internal stresses and shifts of character, as now one aspect and then the other is emphasized."[49] Such "internal stress and shifts of character" caused the Asiatic mode of production to be declared non-existent during the Soviet debates of the period 1929-1934. During the 1920's a debate occurred between proponents of an Asiatic, and a fuedalist, interpretation of the nature of Chinese society. The debate was of immediate importance for guiding the direction taken by the revolutionary effort in general, and Comintern policy in particular, specifically whether Soviet policy should favor an alliance between the Kuomintang and the Chinese Communists. The Sinologist L. I. Mad'iar in 1928 and 1930 argues that Marx was moved to a recognition of a distinct society through a study of the Orient, that he never changed his views on the Orient, and that "certain comrades [who] consider Marx was mistaken, that the Asiatic mode of production, as a separate social formation did not exist. . . [who] are ready to condescendingly forgive poor Marx this 'mistake' in view of the fact that he knew little about the Orient. . . Such a formulation of the problem strikes us as highly comical. . ."[50] Nevertheless at two conferences in Leningrad in 1930 and 1931, M. S. Godes rejected the idea of the Asiatic mode ("our contemporary ideas on the historical development of the countries of the East do not confirm the existence of a specific social order such as the Asiatic mode of production"), claiming Marx's remarks on the topic were made before he had read L. J. Morgan's writings on ancient society, and that the later works of Marx and Engels do not mention the Asiatic mode.[51] E. S. Iolk made a somewhat different argument. He claimed that when, in the preface to a *Critique of Political Economy,* Marx referred to the Asiatic, classical, feudal, and modern bourgeois modes of production as progressive epochs in the economic development of society, he was using the term "mode of production" not in its broad sense, as a definite class structure, but in the special sense he often used, as in "craft mode of production" or "small scale peasant" mode. As Marx had never asked the question of the relationship between labor and the means of production in Asia, he could not have asserted the existence there of a special social order.[52] Similar, if more defensible, arguments were made that Lenin also had never accepted the idea of an Asiatic mode.

S. I. Kovalev, a leading "Aziatchiki," then made a theoretical defense of the Asiatic mode. Kovalev quoted Marx that the specific form of the exploitative relation, between owners of the conditions of production and the direct producers, distinguishes the various economic epochs of social structure. He argued that the relation between direct producers and means of production was quite similar in several pre-capitalist modes (Asiatic, feudal, perhaps even the classical) in that the producer is allotted land on a *de facto* basis. But if the form of exploitation is examined concretely, or historically, as he believes Marx intended, we obtain three pre-capitalist social orders after primitive communal society — Asiatic, classical (called slaveholding in the Soviet Union) and feudal. To abandon the Asiatic mode would be a fundamental revision of the Marxian interpretation of the historical process, for all precapitalist social formations would have to be united in a single formation. This position appears to

have won that particular debate.[53] But for reasons difficult to decipher, the discussion came to an abrupt halt in 1933, and Asian societies were therefore referred to as "slaveholding."[54] In 1938 Stalin listed primitive communism, slavery, feudalism, capitalism and socialism as the five main historical types of relations of production.

In 1952, slaveholding social orders were differentiated into a partiarchal type, in which the oriental form was included, and a fully developed type directed toward the production of commodities, as in classical antiquity. But during the 1950's a large volume of material appeared which undermined the slaveholding interpretation of ancient Eastern society, setting the stage for a revival of the concept of the Asiatic mode. A paper by D'iakonov in 1963 pointed to the limited importance of slavery, in the strict sense of the word, in the Fertile Crescent and Pharaonic Egypt. Then at the 1964 Seventh International Congress of Anthropoligical and Ethnographic Sciences papers by the French Marxists Suret-Canale and Godelier referring specifically to the Asiatic mode were circulated, together with a reply by V. V. Struve, who had been a Soviet participant in the 1930's discussion, which objected to revisionist implications in the French papers but not the concept of an Asiatic mode. Subsequently in the later 1960's and early 1970's a voluminous, if somewhat unproductive and limited, discussion occurred on the Asiatic mode. It was admitted that Marx had hypothesized a special Asiatic mode on the basis of biased accounts by travelers and administrators. But this hypothesis was not characteristic of mature Marxian thought. It was gradually abandoned by Marx, and is not found in Engels' major works. However, a "new-Aziatchiki" position also emerged which recognized the existence of a social order similar to that described in several of Marx's works.[55] The current state of opinion in the Soviet Union seems to be that what Marx described as the Asiatic mode was a special form of primitive communal society, and that Oriental societies subsequently passed through a slave phase and then experienced feudalism.[56]

Aspects of The Contemporary Western Debate

The concept of an Asiatic mode of production has been the object of a (mostly favorable) discussion at the Centre d'Études et de Recherches Marxistes (CERM) in France, as part of a renewed interest in Marx's characterizations of pre-capitalist societies. The Hungarian sinologist Ferenc Tokei, who visited CERM in the late 1950's, interpreted the Asiatic mode as a transitional form of society situated between primitive communism (non-class society) and ancient society (class society), in which patriarchal exploitation occurred based on tribal rather than private property. This rudimentary, contradictory form quickly gave way to other forms of exploitation based in private property.[57] M. Godelier argued that the Asiatic mode was a form of social organization characterized by a contradictory combination of community structures and the embryo of an exploiting class, a form specific to the transition from classless to class society and a form which contains the contradiction of that very transition. It is this classtransitional position which explains why the concept is referred to in such widespread societies as ancient Europe, Black Africa and pre-Columbian America.[58]

The idea that feudalism was a world-wide socio-economic formation was attacked as "both alien to Marx and contrary to historical facts" by Maxime Rodinson in his *Islam and Capitalism.*[59] Rodinson characterizes Muslim society in the Middle Ages as an articulation of several modes of production varying over time and space, with the countryside under a system quite close to the Asiatic mode of production.[60]

The strongest defense, and indeed elaboration, of the concept of the Asiatic mode is made by Umberto Melotti as part of a multilinear, as opposed to a unilinear, conception of historical development.[61] For him, as for Marx and Engels, the essential structure of the Asiatic mode was formed out of the necessity for an extensive intercommunal cooperation in the labor effort needed to construct and maintain large hydraulic engineering, defense, and religious works. Hence the development of a state, personified as the despot, which asserts ownership of the soil. The exploiting class comes to consist of state officials, mandarins, bureaucrats, and the military, who appropriate surplus in the form of tribute. In contrast to classical antiquity in the slave period, where rent was extracted via the ownership of land to which labor was tied as its accessory, exploitation in the Asiatic mode was based on the appropriation of a public function. The despot is seen as creating the conditions under which the production of life is possible—hence in Egypt "He, more than the Nile rich in waters, makes the land green," a function which assumes mythic and cosmic dimensions in that the despot presents himself as the intermediary between people and god, or even *as* god, inasmuch as he is "trustee of life or death, the guarantor of the fertility of the world."[62] Religion and politics fuse together, so that the exercise of state power is at one with the functioning of the cosmos; total power is not only accepted, but is sanctified as guardian of a natural and social order which expresses the will of the gods. This was the particular form of those political and religious illusions which, Marx claims, always veil exploitation in precapitalist modes of production. It served, Melotti argues, to maintain collective property, the prevalence of organic groups over individuals, and the idea of a natural collectivity in which everyone has a specific place and function, by comparison with Europe, where private ownership of the means of production resulted in increasingly individualistic values.[63]

The concept of the Asiatic mode has been extended, originally by Marx and Engels, and by subsequent writers, backwards in time to include, for example, European civilizations of pre-classical antiquity, and in space to various

tribal organizations in Polynesia, Africa and the Americas. As Anderson says, a ubiquitous Asiatism represents no improvement on a universal feudalism: in fact, it is even less rigorous as a term.[64] Anderson argues that this extension was made possible by a shift in Marx's emphasis away from the state and toward communal-tribal property in isolated egalitarian villages. Hence many societies with this economic base came to be called "Asiatic." Anderson points out that there is no historical evidence for communal property or cultivation in common, nor village egalitarianism, nor self-sufficiency or detachment of the village from the state in India. Such a village structure would, in any case, be incompatible with the social differentiation inevitably connected with a strong centralized state. The weakness of Anderson's critique here is that he emphasizes certain later writings of Marx, such as the drafts of his letter to Sassoulitch on the Russian rural commune,[65] which do not accurately represent his views on the *Asiatic* mode over the long stretch, or even in Marx's later life.

The more telling critique made by Anderson refers to the relation between the absence of private property in land and the presence of public hydraulic works. The empirical evidence available today, Anderson argues, does not confirm this hypothesis—rather it points to the two as alternative, rather than conjoint, principles of development. Early modern Turkey, Persia and India, characterized by an absence of property in land, never possessed public irrigation works of importance, while China, which did have major irrigation systems, also had private property in land. Russia, which Marx and Engels referred to as an example of Asiatic despotism, knew neither major irrigation systems nor an absence of private property in land.[66] Anderson further attacks both the tendency to reduce diverse Asiatic societies to an identical single type, and what he calls the illusion of their stationary character. He concludes by asking that we give the concept of the Asiatic mode of production "the decent burial that it deserves."[67]

A Personal Perspective on the "Asiatic Mode"

As pointed out by Mandel, the function of the Asiatic mode for Marx is to explain the *special* development of eastern societies in comparison to those of Europe: that is, the peculiarities of the historical development of India, China, Egypt, and the Islamic world, as compared with a disintegrating Western European feudalism.[68] This is in opposition to Blaut's thesis that "there was no significant evolutionary difference between Europe and the other major regions of the Old World prior to 1492. Feudalism existed almost everywhere, and almost everywhere was crumbling."[69] My own argument is that Marx intended a multilinear conception of societal development, thus making improbable the simultaneous achievement of a universal feudalism, and the concept of an Asiatic mode, flawed though it may be, is indeed his attempt to conceptualize the separate development of eastern societies. In particular, it is his way of explaining why, despite the presence of widespread trade and the growth of mercantile cities, eastern societies did not evolve toward capitalism. They did not contain the necessary relation between capital and labor deprived of access to land and forced to work for a wage.

To further our understanding both of the original historical development of capitalism, and its articulation with non-capitalist societies, we need an adequate conception of the several forms of organization of peasant societies. By peasant societies, I mean those based on the production of agricultural use-values by individual family labor groups. The outstanding characteristic of such societies is the property relation, which falls into three main types: peasant ownership of the main means of production, as in early classical antiquity and the Germanic mode; noble ownership, with peasant possession, as in the feudal mode; and central state ownership or effective control, with peasant possession—this is what Marx called the "Asiatic" mode. Each of these forms of property relation is, of course, subject to many variations. And any actually existing social formation must have been made up of several modes articulated together under the dominance of one. But these qualifications should not make us see, in each society, a distinct mode of production: to do that would make the term "mode of production" useless. Rather, there is a need to rigorously define the category mode of production, examine the relations between its major components, such as between property relations and the state, and conduct empirical, historical research on the actual nature of those relations.[70] This endeavor was begun by Marx and Engels, under the limitations imposed by an intellectual tradition and a supply of empirical information which they could hardly be expected to totally escape. It has recently been continued by Althusser, Godelier, Hindess and Hirst, etc. The reaction against this line of thought, represented most prominently by E.P. Thompson, should be regarded as a healthy, if overstated, criticism. The effect of this criticism should not be to abandon a structural mode of production analysis, but to conduct it in a more realistic, understandable, and policitally useful way. Specifically, the concept of the Asiatic mode should not be precipitously abandoned, but should be carefully reconstructed and exemplified as a category for a peasant society in which the property relation takes the form of state ownership or control of the main means of production. It should go without saying that we would hardly expect all of the East in all pre-capitalist time to be characterized by this mode, nor should we rule out the discovery of a limited number of new modes of production in the history of Third World societies.

NOTES

1. This introduction draws heavily on G.L. Ulmen's *The Science of Society: For an Understanding of the Life and Work of Karl Auguse Wittfogel.* The Hague: Mouton Publishers, 1978. Unless otherwise noted most of the details on personal events and published writings are taken from Ulmen. But the selection and interpretation of this material are mine. Specifically, where Ulmen sees a continuity in Wittfogel's development from his Marxist to his Anti-Communist writings, I see a break.
2. K. Wittfogel, *Die Wissenshaft der bürgerlichen Gesellschaft: Eine Marxistische Untersuchung,* Berlin: Malik Verlag, 1922.
3. K. Wittfogel, *Das erwachende China.* Vienna: Agis Verlag, 1926.
4. K. Wittfogel, "Geopolitik, geographischer Materialismus und Marxismus" *Unter den Banner des Marxismus,* Vol. 3 (1929), nos. 1, 4, 5.
5. K. Wittfogel, "Die natürlichen Ursachen der Wirtschafts geschichte," *Archive für Sozialwissenschaft und Sozialpolitik,* Vol. 67 (1932), nos. 4–6.
6. K. Wittfogel, *Wirtschaft und Gesellschaft Chinas,* Vol. 1. Leipzig: C.L. Hirschfeld Verlag, 1931.
7. The origianl quotation is given in K. Marx and F. Engels, "The German Ideology" in Marx and Engels, *Collected Works.* New York: International Publishers, 1976, Vol. 5, p. 31—"The first premise of all human history is, of course, the existence of living human individuals. Thus the first fact to be established is the physical organisation of these individuals and their consequent relation to the rest of nature. Of course, we cannot here go either into the actual physical nature of man, or into the natural conditions in which man finds himself: geological, oro-hydrographical, climatic and so on. All historical writing must set out from these natural bases and their modification in the course of history through the action of men."
8. Ulmen, op. cit., p. 111.
9. K. Wittfogel, "Die Theorie der orientalischen Gesellschaft," *Zeitschrift für Sozialforschung,* Vol. 7 (1938), nos. 1–2, pp. 90–122.
10. Ulmen, op. cit., p. 217.
11. K. Wittfogel, "Hydraulic Civilizations" in W.L. Thomas (ed.), *Man's Role in Changing the Face of the Earth.* Chicago: University of Chicago Press, 1956.
12. K. Wittfogel, *Oriental Despotism: A Comparative Study of Total Power.* New Haven: Yale University Press, 1957.
13. Ulmen, op. cit., p. 252.
14. Ibid., pp. 447–448.
15. Gunter Lewin, "Wittfogel on the Asiatic Mode of Production" reprinted in A.M. Bailey and J.R. Llobera (eds.), *The Asiatic Mode of Production.* London: Routledge and Kegan Paul, 1981, pp. 158–163.
16. I.A. Levada, "Wittfogel's 'Oriental Despotism': A Soviet Review" reprinted in Bailey and Llobera, pp. 182–194. For a further critique see Andrew L. March, *The Idea of China: Myth and Theory in Geographic Thought.* New York: Praeger Publishers, 1974.
17. Arnold Toynbee, "Wittfogel's 'Oriental Despotism' " reprinted in Bailey and Llobera, pp. 164–167.
18. K Wittfogel, "Reply to Arnold Toynbee" reprinted in Bailey and Llobera, pp. 168–172.
19. Ulmen, op. cit., pp. 480–481.
20. Julian H. Steward, "Wittfogel's Irrigation Hypothesis" reprinted in Bailey and Llobera, pp. 195–206.
21. K. Wittfogel, "Marxism, Anarchism, and the New Left." *Modern Age: A Quarterly Review* 14, 2 (Spring, 1970), pp. 114–128.
22. Ulmen, op. cit., pp. 498–501.
23. George V. Plekhanov, *Fundamental Problems of Marxism.* New York: International Publishers, 1969, p. 49.
24. Montesquieu, *De l'Espirit des Lois* I, pp. 291–292 quoted in P. Anderson, *Lineages of the Absolutist State* (London: 1974), p. 465.
25. Richard Jones, *An Essay on the Distribution of Wealth and the Sources of Taxation,* pp. 7–8 quoted in Anderson, op. cit., p. 470.
26. K. Marx, 'From a Contribution to the Critique of Hegel's Philosophy of Law' in Marx and Engels, *Pre-Capitalist Socio-Economic Formations,* p. 29.
27. Marx to Engels, June 14, 1853 in Marx and Engels, *On Colonialism,* p. 314. This letter also refers to controversy over the question of property among English writers on India—hence private property in land existed in certain parts of India—p. 315.
28. K. Marx, 'Revolution in China and in Europe' in *On Colonialism,* pp. 20–21.
29. K. Marx, 'The British Rule in India' in *On Colonialism,* pp. 37–39.
30. Ibid., pp. 40–41.
31. K. Marx, *Grundisse* (Harmondsworth: 1973), p. 460.
32. K. Marx, *Capital* Volume 1 IHarmondsworth: 1976), p. 182; see also Richard Peet, "Historical Forms of the Property Relation: A Reconstruction of Marx's Theory." *Antipode* 13, 1 (1981), pp. 13–25.
33. K. Marx, *Grundrisse,* pp. 485–486.
34. Ibid., p. 472.
35. Ibid., pp. 472–474.
36. Ibid., pp. 474–476.
37. Ibid., pp. 476–485.
38. Ibid., pp. 486–488.
39. Ibid., p. 496.
40. Ibid., pp. 156–158.
41. Ibid., p. 158.
42. Ibid., p. 257.
43. Ibid., pp. 858–859.
44. K. Marx, *Capital* Volume 3, p. 597.
45. Ibid., p. 332.
46. Ibid., pp. 333–334.
47. K. Marx, *Capital* Volume 1, p. 479.
48. Anderson, op. cit., pp. 405–407.
49. S.P. Dunn, *The Fall and Rise of the Asiatic Mode of Production.* London: 1982, p. 3.

50. L.I. Mad'iar, "The Legitimacy of the AMP" in Bailey and Llobera, op. cit., pp. 88–89. See also M.D. Kokin, "The Asiatic Bureaucracy as a Class" in Bailey and Llobera, pp. 95–96 who describes the state bureaucracy as the ruling class controlling the productive apparatus in the Asiatic mode. In this mode the relation of exploitation, was been bureaucrat and commune member. Literacy was a selective mechanism for reproducing the bureaucratic class—"Who could devote years to the study of hieroglyphics except those who lived at the expense of others?" (p. 95).

51. M. Godes, "The Reaffirmation of Unilinearism" in Bailey and Llobera, op. cit., pp. 99–105.

52. E.S. Iolk, "The AMP and the Class Struggle" in Bailey and Llobera, op. cit., pp. 97–98; Dunn, op. cit., p. 12; cf. Marx, *Grundisse,* pp. 472–474.

53. Dunn, op. cit., p. 23.

54. Even though Kovalev had criticized the idea of a quasi-universe slaveholding system as follows:

> The slaveholding social order outside the sphere of classical antiquity could obviously exist only where the historical conditions were more or less close to those existing in classical society—or in other words, where the communal-clan relationships disintegrated very rapidly, in an extremely saturated environment of intensive foreign trade and inter-communal relationships (between tribes, cities, and states), wars and colonization. There and only there could patriarchal slavery grow into a slaveholding system. . . . The more favorable natural and historical environment for this was the islands and shorelines of highly segmented and differentiated (from the point of view of natural productive forces) inland seas, with a system of convenient water and land routes, and the close proximity of cultured societies on the one hand and backward peoples on the other. We find such conditions in full measure only in the Mediterranean area, including certain districts immediately adjacent to it, and in particular Mesopotamia (Dunn, op. cit., p. 53).

55. Dunn, op. cit., pp. 41–124.

56. Umberto Melotti, *Marx and the Third World* (London: 1977), p. 9.

57. F. Tokei, "The Asiatic Mode of Production" in Bailey and Llobera, op. cit., pp. 249–263.

58. M. Godelier, "The Asiatic Mode of Production" in Bailey and Llobera, op. cit., pp. 264–265.

59. Maxime Rodinson, *Islam and Capitalism* (Austin: 1978), p. 60.

60. Ibid., pp. 66–67. "In the countryside we find village communities exploited from outside by individuals or by the state, in accordance with Marx's scheme of the Indian communities, the model for the so-called 'Asiatic mode of production.' "

61. Melotti, op. cit.

62. Ibid., p. 70

63. Ibid., p. 72.

64. Anderson, op. cit., p. 486.

65. K. Marx, "Letter to Vera Sassoulitch" in David McLellan (ed.), Karl Marx: *Selected Writings* (Oxford: 1977), pp. 576–580.

66. Anderson, op. cit., p. 491.

67. Anderson, op. cit., p. 568.

68. Ernest Mandel, *The Formation of the Economic Thought of Karl Marx* (New York: 1971), pp. 128, 136–137.

69. J.M. Blaut, "Where Was Capitalism Born?" in R. Peet (ed.), *Radical Geography* (Chicago: 1977), p. 95. Blaut's argument mentions, but does not elaborate (except for an extended footnote), the idea of the Asiatic mode. Blaut's claim that feudalism was crumbling, and capitalism "equally well developed . . . in the proto capitalist centers of Asia and Africa as in those of Europe" rests essentially on the well-documented growth of trade, port cities, manufacture, and commercialized agriculture over wide areas of the globe. The argument neglects the whole question of the varying impact which these developments may have on different modes of production, because it assumes that "feudalism" was universal.

70. On the geography of the Asiatic mode of production in Thailand see M. Bruneau, "Landscapes, Social Relations of Production and Eco-Geography" *Antipode* 13, 3 (1981), pp. 26–31 and *idem,* "Mode of Production and Spatial Organization in Thailand: Process and Trends" *Antipode* 14, 1 (1982), pp. 1–10. "In this social formation where the 'Asiatic' mode of production predominated, spatial organization consisted of a structure or system of a concentric zonal pattern around the capital" (p. 1).

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Geopolitics, Geographical Materialism and Marxism*

Karl A. Wittfogel
Translated by G. L. Ulmen

I

1. A NEW "FULFILLMENT" OF MARXISM

The "Leftist" Social Democrat Georg Engelbert Graf, known for his writings in economic geography and as head of the School of the German Metalworkers Union in Duerenberg, has for years sought recognition within the German working class of a science called "*Geopolitics*" which, although born during the war, was "conceived" earlier and is today in Germany highly regarded in bourgeois scientific and political circles as the ostensible scientific foundation of a modernized bourgeois statecraft. By propagating this science Graf believes he is making good a sin of omission committed by Marx and Engels in their establishment of historical materialism. He writes: "Karl Marx and many of his students fail in that they put total emphasis on economic and social facts and neglect the primary and given facts of nature."[1] Several years later, desiring to spare Engels the same sharpness of his reproach, he was more specific: "Geographical problems—relations between environment and cultural development—were obviously far removed from Karl Marx." "It did not suit him to see and think as a geographer; he was much more a synthesis of philosopher, political economist and revolutionary politician."[2] But in Graf's view the proletariat has a legitimate "interest in geopolitical thinking and training." Being professionally and practically concerned with the education of the proletariat, Graf contends it must be "an education in democracy [sic!] as well as geopolitical thinking."[3] Let us follow this programmatic

TRANSLATOR'S NOTE: Wittfogel wrote this article in the supreme days of the Communist International, when he was a member in good standing of the German Communist Party (KPD). The German working class was then the largest and best-educated in Europe and the German Communist Party could as well appeal to theory as to practice. But it was also a time when the inherent problems of the Weimar Republic were beginning to show and the German workers were also hearing the appeals of the Fascists and of Hitler's Nazis. These factors help explain the style of Wittfogel's article, which today must appear to new readers as strange and strained. It is self-confidently propagandistic, carping and didactic. But this should not deter the reader from the scientific seriousness of Wittfogel's insights into Marx's concept of nature and its place in the system of historical materialism. Within the limits of his ideological perspective, Wittfogel never loses sight of the scientific demands of his training in geography, economy and Chinese history. His Marxist viewpoint at once illuminates his chosen disciplines, even as they illuminate his understanding of Marx's contribution to geographical thinking.

Another contributing factor to Wittfogel's style is his debt to both Marx and Max Weber. I mean the habit of demonstrating criticism by inserting "sic," exclamation points and question marks inside the quotations of one's opponent; of utilizing quotation marks, italics, etc. to indicate emphasis; of employing dialectical reverses and pointed repetitions of certain key words and phrases. All these inventions belong to the polemical style *par excellence*. However much Weber wanted to separate science and politics, it is as much his style as Marx's and Wittfogel's. All three are polemical writers because each in his own way takes science seriously in a political sense and politics seriously in a scientific sense. When Wittfogel's politics changed, this did not. The style as well as the "substance" of his later writings are already evident in this monograph and its successor, "The Natural Origins of Economic History" ("Die natuerlichen Ursachen der Wirtschaftsgechichte," *Archiv fuer Sozialwissenschaft und Sozialpolitik*, 1932, Vol. 67, nos. 4, 5, 6).

In this English translation I have edited Wittfogel's text to the extent of making his ideas clear to the non-German reader. I have accordingly eliminated some of the excessive wordiness of German sentence structure and divided some of the longer paragraphs, occasionally moving a sentence to focus the argument. Where possible, I have also added the full names of the scholars Wittfogel discusses, since it was (and still is) communist style to use only initials or simply the last name and many might be unfamiliar to American readers. Where I thought further identification was necessary, I provided such at the bottom of the appropriate pages. Where the choice was between style and clarity, I have chosen clarity. I have standardized Wittfogel's notes and given them a form familiar to American readers. In this connection, I have substituted an American for the German form of transliterating Russian names. Finally, I have translated the term *Produktivkraefte* not as "productive forces" or "forces of production," as is often found in translations of Marx's writings, but as "productive powers" or "powers of production," which Marx generally employed when he cited pertinent English phrases or passages from the classical economists. Following Marx, this has always been Wittfogel's preference (see his new Foreword to *Oriental Despotism*, Vintage Books Edition, Random House, New York, 1981, p. xlix, note 32).

G. L. U.

*"Geopolitik, geographischer Materialismus und Marxismus," *Unter dem Banner des Marxismus*, 1929, Vol. III, nos. 1, 4, 5.

declaration of the Kautsky student Graf with an examination of how bourgeois geopoliticians evaluate their own science.

According to Karl Haushofer, one of the leaders and one might even say *the* leader of this new tendency, Geopolitics makes possible the understanding of about one-fourth of all historical events (Haushofer discreetly withholds how he came to this figure), namely through consideration of the regularity of the whole complex of historical occurrences determined by "geographical features." It seems to him (and, in case he is right, also to us) that it is certainly worthwhile to explain scientifically this fourth "of an otherwise incalculable complex."[4] Haushofer is entirely convinced of the effectiveness of his method. Geopolitics, "more than any other science [sic!], leads neophytes and masters to an unveiled, magnificent view of evolving destiny. . . ."[5] Its practical significance is thus extraordinary. Rightly understood, Geopolitics becomes "one of the most powerful weapons for the just distribution of the earth's living and breathing space. . . ."[6] It is therefore not surprising that this science, which according to its adherents is so efficient, claims the right to educate the new generation of (bourgeois) political leaders.[7]

The recognition which Geopolitics has garnered in a very short time from numerous bourgeois scientists and politicians calls for closer scrutiny by Marxist-Leninists than only from the standpoint of political prudence. It is necessary to know the weapons of the class enemy, including the theoretical weapons, if one wishes to fight him effectively. But we should be doubly interested in this new science, which is presumably superior to all others, because Social Democrats are attempting under the pretext of a fulfillment of Marxism to force the German proletariat to accept Geopolitics together with Democracy. We will demonstrate that Geopolitics represents an organic, ideological complement to bourgeois-democratic practice.[8]

Finally, a third factor should be mentioned in this context. James Francis Horrabin's *Economic Geography* has sometimes been greeted with uncritical approval by communist readers not only in England but also in Germany and the Soviet Union (where translations of the book are found). This, in many respects *excellent* work, however, is also in many respects methodologically close to the standpoint of Haushofer and Graf. Thus it is unfortunate that in H. Walecki's preface to the German edition he identifies the *political* weaknesses of the work but says nothing about the *methodological* deficiencies underlying these weaknesses. He gives the impression that Marxism-Leninism should welcome the "fulfillment" of historical materialism which Graf proclaims theoretically and Horrabin (although in a different way) also in part practically develops in his writings. A critical contention with the method and achievements (or, if necessary, with the failures) of Geopolitics should simultaneously include the elimination of certain major misconceptions, which in this case can also be found among some otherwise consistent adherents of Marxism-Leninism.[9]

2. THE PROGRAM OF GEOPOLITICS

In order to clearly apprehend our subject, we will exclude consideration of the geopolitical accomplishments of English, French and American writers and confine ourselves essentially to *German* Geopolitics. Nevertheless, *in principle* our analysis will also hit upon specific sources of error in the geographical writings of the bourgeois West.

Marx's teacher, Karl Ritter, cannot, as is often asserted, be called the forerunner of German Geopolitics. Ritter is an *offshoot* of a fundamentally different bourgeois-revolutionary epoch; he is not the initiator of the current phase of geographical thinking. Ferdinand Richthofen, who must be considered in this connection, also set no precedent with his *Geography of Settlement and Communication.*[10] Even so, its analysis of economic and settlement geography in part evidences great boldness and profundity; and this has almost been overlooked by the professional sciences. Friedrich Ratzel's *Political Geography*, first published in 1897,[11] together with the two volumes of his *Anthrogeography,*[12] published respectively in 1882 and 1891, constitute the starting-point of the more recent geographical-political literature. Even before the war, Ratzel found followers in England (Ellen Semple). During the war, the German tendency that had been openly or surreptitiously rejected by academic geography suddenly gained a reputation[13] through the works of Ratzel's Swedish disciple *Rudolf Kjellén.*[14] Finally, after the collapse of the feudal German war machine, when the German bourgeoisie was forced to conclude that the bankruptcy of its political *practice* demonstrated the worthlessness of its old political *theories*, this tendency became the new "realistic" method for training statesmanlike political thinking.[15] Geopolitical writings shot up like mushrooms after a summer rain.[16] Enthusiastic attention turned to study of the political-geographical literature of the West. With the establishment of the *Zeitschrift fuer Geopolitik* on January 1, 1924 the movement created an organ in which it sought to take account of and analyze in essays, reports and book reviews every event of relevant interest in the political world of all five continents as well as the appropriate international literature. In the anthology, *Bausteine zur Geopolitik*, the four editors of the *Zeitschrift fuer Geopolitik* have attempted quite recently to create a kind of programmatic platform. We will begin our presentation with a recapitulation of the theses set forth at the end of the editors' introductory essay. For clarification, we have numbered them as follows:

1. "Geopolitics is the science of the earthbound nature of political events.
2. It is based on the broad foundation of geography, especially political geography, as the science of political-spatial organisms and their structure.
3. The essence of global areas comprehended by

geography is the province of Geopolitics, within which political events must take their course if they are to be successful. Certainly the bearers of political life will occasionally go beyond this province, but sooner or later earthbound nature will always reveal its significance.

4. With this understanding Geopolitics seeks to provide theoretical weapons for political action and to be a guide in political life.
5. Geopolitics thus becomes an ingenious science capable of directing practical politics to the geographical threshold of all political activity. Only in this way will the take-off proceed from knowledge rather than ignorance, at which point it is certainly more extended and dangerous.
6. Geopolitics will and must become the geographical conscience of the state."[17]

Bearing these in mind, we will anticipate the second and part of the third thesis, which serve to distinguish the new science of Geopolitics from the older political geography. Unfortunately, *neither* demonstrates this actual difference with unmistakeable clarity. However, it is possible to *surmise* from remarks made elsewhere and from the given context that political geography in the opinion of geopoliticians "can, but certainly should not be much more satisfied with the activity of mere 'recording' "[18] than Geopolitics, which must draw practical conclusions from material 'recorded' (and processed where?) in political geography. As an "ingenius science" it thus resembles an *applied political geography.*[19] The boundaries are arguable; they are drawn differently by different members of the two sciences. However, since theoretical analysis and its conclusions belong together in Marxist understanding, and since we wish to examine both sides of politically-oriented bourgeois geography, we can here ignore completely the controversy concerning boundaries, which only obtains because of the methodological imprecision and undialectical rigidity of the leading geopoliticians.

The first and third theses are crucially important for an understanding of what we may (or may not) scientifically expect from representatives of both shades of political geography. Political life should accordingly be understood in terms of its "earthbound nature," i.e. in its dependence on the so-called geographical factor. Upon closer examination, this in principle is the program of old, bourgeois-revolutionary geographical materialism, although without its scientific impartiality and with a completely different political meaning. There is no doubt that in the interim pure *geographical* analysis has been refined and countless new *facts* are now being considered. Fundamentally, however, the old geographical-materialist method has made *no notable progress* since the successful appearance of historical materialism because bourgeois scientists now shrink from making certain economic-social statements that earlier geographical materialists freely expressed; it has *regressed.*

Even if one overlooks the inexactness of the theses with which this supposedly new science proclaims it will rescue the bourgeois political world (one need only reflect for a moment on the sharpness, consistency, precision and exactitude with which historical materialism entered upon the stage of history to fully realize the utter shoddiness, flabbiness, and sponginess of this decadent program), even if one overlooks the inexactness with which the said theses are proclaimed, the inherent *structural deficiency* becomes immediately apparent. The geographical factors, whatever their character, do not directly influence but rather mediate the political sphere of life; the "primary and given facts of nature" (Graf) demonstrate their significance either as general natural conditions underlying or as productive powers in the process of production. Even so, their influence is not direct. The social order which grows out of the peculiarity of the respective process of production is the second connecting link through which and only through which the influences of the sphere of nature effect the mode and development of political life. Marx often pointed out that to examine complicated correlations "without a very extensive analysis of the connecting links" results in "a purely arbitrary determination" instead of lucid explanations.[20] Even such a great thinker as David Ricardo failed on sociohistorical grounds in his analysis of the rate of profit and ground rent after the way was blocked by a definition of surplus value and profit that was "crude and lacking in conception"; the rate of profit and ground rent could not be properly explained without clarification of the respective connecting links.[21]

How much more did the modern epigones of the old geographical materialism have to fail, since they began with an *extremely* crude determination of the form of the primary and given facts of nature devoid of any clear concept. Unlike the old geographical materialists or Ricardo, they are not naive but *against their own better judgment* exclude, or at least obscure, the economic and social links which reveal the relevant facts. By allowing the most important representatives of Geopolitics to have their say with characteristic analyses (we include Graf and Horrabin as especially important examples of the practice of the revolutionary labor movement), we will show how the political neglect of the existing links connecting nature and the political sphere ends in crude distortion or in making the results of analysis completely *worthless.*

3. FERDINAND RICHTHOFEN

We must begin with *Richthofen*, although he has influenced the modern geopoliticians less through his theoretical work than through achievements in his professional discipline (the explanation of China's geology and geography). He outranks almost all his successors in scientific importance.[22] The brutal exactness of his concrete observations, which led to disclosure of the geographical features of a vast empire, has until today not been surpassed. Together with Ratzel, he represents a geographical materialism full of naive Marxist elements; like Ratzel, he often reduces the cognitive power of these elements to a minimum, even to

nothing, specifically where he attempts a synthesis and where he seeks to reach historical perspectives and practical political results by means of his anti-Marxist method.

One may attend his basic thesis: "The stimulus to certain forms of life develops out of natural-geographical conditions, under whose influence a particular type is fostered."[23] His practical analysis shows that the most important "forms of life" are those based on the production of material life, although Richthofen never brings this to light in full and fundamental clarity. This uncertainty with respect to the significance of the economic sphere thus leads him to arbitrary determinations, which are unavoidable when the connecting links are disregarded. According to Richthofen, the clear sky of the arid zone led "to observation of the stars, and the origin of astronomy. . . ."[24] In this analysis, the false is characteristically mixed with the true. In fact, astronomy did originate partly in the arid zone, in Egypt and Mesapotamia. However, it was not engendered by the clear sky but by the irrigation culture which arose from economic necessity out of the aridity of the landscape and required exact calculations of the seasons for its precise execution. China and India also very early developed astronomical knowledge and here the issue is not an arid zone but again an irrigation system, which was required for the cultivation of the loess and alluvial areas of North China and for the culture of rice in thirsty Middle and South China as well as India. Richthofen's statement is thus only a half and incidental truth. He had to fail, because he wanted to deduce specific intellectual principles directly from the climate.

Occasionally Richthofen's underestimation of the economic sphere leads from half and incidental truths to complete absurdity. In one place he candidly states: "Nomads themselves do no work."[25] It thus becomes a mystery how cattle breeding, which according to Richthofen is the basis of nomadic subsistence,[26] is carried on without a continuous work effort. Here the sphere of labor and its significance for the structure of social life has shrunk to naught and Richthofen has to grope for an alternative explanation. He finds it in the racial factor and thereupon turns his back on geographical materialism: The "natural environment has not uniformly influenced mankind; its value is usually overestimated. The essential factor remains the mental predisposition of the people. . . ."[27] Richthofen varies these ideas in different ways.[28] But he does not even hold to his racial explanation. How is it possible that a highly-qualified race, as the Chinese are in his view, developmentally stagnates? This had ultimately to become one of the great and fundamental questions for a researcher whose life's work is centered on China; in principle, he had to consider its solution of the highest importance. The practical consequences are of the utmost significance. But precisely here is where the complete *ineffectiveness* of his method is demonstrated—a method which in general subscribes to a crude materialism that does not thoroughly analyze individual elements of form and in case of necessity is accustomed to making the best of a bad situation with the *deus ex machina* of race. When all other means of explanation fail, *ideology* must step into the breach. We read in Richthofen: "I have the firm conviction that the Chinese will remain in their abject circumstances so long as they abide by their old religion. Only conversion to Christianity will raise them out of these circumstances."[29]

When China began to adopt modern principles — without previously undergoing mass Christianization — its development took quite a different course. Richthofen stated (after the fact!) that obviously material motives were still in force and furthermore would continue to be.[30] One must bear in mind that we are not dealing here with any Mr. Smith or Jones but with the greatest bourgeois scholar in his field — a man who more than any other living European is knowledgeable about the geography of China. One has but to compare his inferior analysis with what Karl Marx (not a geographer but a historical materialist with no first-hand knowledge of China) said more than a generation earlier (1853) about the conditions and perspectives of China's development. Marx clearly recognized (and certainly not after but long before these events occurred) that the dissolution of the old Chinese economic order through the penetration of mass-produced articles of European capitalism would create "social upheaval" and that China's political and social revolution must in turn "have the most important consequences for civilization."[31] While Marx, using his method, already in the 1850s foresaw the coming of revolution in China and its repercussions on conditions in Europe; Richthofen, with his method, could still at the end of the century predict nothing but "competition between all Europeans and East Asia in a not-distant future."[32] If one compares this with Marx's perspective, which foresaw the coming struggle for liberation in China and India[33] as well as the link with the revolutionary movement of the European working class, if one compares both perspectives with *reality*, one sees that the forecasts of perhaps the greatest "geopolitician" and certainly the greatest German geographer concerning an area about which he is particularly knowledgeable are not only shabby but in essential respects completely false.

We have still in no sense given a full account of Richthofen. But for some readers conversant with Geopolitics, we have perhaps already said too much. It was necessary because, as we will show, certain typical traits which we find in Richthofen — *the combination of an ineffectual geographical materialism with a completely unfounded eclecticism* — are repeated by all geopoliticians. We have preferred to demonstrate this complex of failures first with such an outstanding scholar as Richthofen rather than with one of the more recent geopoliticians, of whom there are many, who have nothing to offer but their mistakes.

4. FRIEDRICH RATZEL

We now turn to *Ratzel,* in whom we encounter the actual starting-point of the new political geography (the

term "Geopolitics" stems from Kjellén). In line with the title of his well-known work, he places the question of the geographical determination of political life or, more precisely, the question of the relation between the state and the soil, at the center of his analysis. For Ratzel, the state is equivalent to politically-organized society; it is the expression of the "totality" of society's interests: "The state emerges only where the goals of the totality are united, only where goals are in fact of the totality and can only be achieved through common effort. In the state, the benefit of the whole is directly promoted; in society, indirectly."[34] Having thus removed the problem of the social sphere and therewith the urgency of a social question, Ratzel has only to let the *economic* sphere disappear and the trick is accomplished; a direct relation between state and soil is established. "The state must live from the soil."[35] Yes. But even if, for the sake of argument, we view "the state" contrary to all reality as a totality of common interests in the sense of Ratzel's state-society, such a "state" is not an earthworm. The human beings who comprise his laudable "totality" do not live directly from the *soil* but from plants and animals that exist on the soil and usually are only produced and made consumable through *labor.*

Where is the sphere of labor by which Ratzel's state "lives off the land"? The process of labor is here not the issue with Ratzel; soil and state are combined in a completely different way: "The political organization of the soil by which the state becomes an organism [arises] where a particular part of the earth's surface is so integrated that the characteristics of the state are composed from the people and the land. The most important of these are the size, location and boundaries of the land, then [sic!] the type and form of the soil, including its flora and water supply and finally its relation to other parts of the earth's surface."[36] Ratzel's language, which usually has a rather clear and rational style when he concretely describes a geographical detail, becomes rather mystical in this passage. This is no accident; form and content correspond one to the other. Ratzel's description of the fact is what gives it a mystical character. Since his state-society is not *really* combined with its natural base through the process of production, it merges with it in an *unreal* way in that "characteristics of the land" like size and location, the type and flora of the soil, are "integrated" in it. According to *Marx*, the stuff of nature required by man — this metabolism of man with nature — "enters" into the use of society through the *process of labor.* This is the natural process. Where it is spirited away, the normal metabolism must of course be replaced by a miracle. Ratzel's theory is one of immaculate conception. The state lives off the land without the "characteristics of the soil" having to pass through the profane and politically-offensive sphere of labor. In keeping with the biblical theme: here we have Ratzel's methodological fall from grace. Having expelled truth from his system, he can only occasionally and secretly let it in again through the backdoor.

Ratzel proceeds from his opening absurdity to one inaccuracy after another. If the relation between land and state is such that the characteristics of the soil together with those of the people determine the character of the state, it follows that if the characteristics of the soil and the people remain constant so also will the character of the state. This in fact is what Ratzel concludes. Consider, for example, a piece of land surrounded by natural boundaries and favorable to the development of a state. "If a people is thus naturally established in its territory, it constantly renews itself with those characteristics it has derived and continues to derive from the soil. The ancient and contemporary Greeks are sailors and merchants, inhabitants of islands and coastal areas. The confederates of the nineteenth century love the freedom of small states as much as their ancestors in the fourteenth century."[37] The effect of location is as endless as the influences that arise from the soil. "The value of a location is lasting."[38]

What Ratzel says here is of course completely *false*; it contradicts the elementary facts of dialectical being and thinking. Nevertheless, it is completely consistent with his initial premises. To be sure, had Ratzel followed through on these premises, he would very quickly have found himself in such obvious contradictions that he would soon have had to discontinue his investigation. Faced with this alternative, he chose to be inconsistent and continue.

What needs to be explained but could not be with Ratzel's previous conception of the soil and all its characteristics are the *changes* which "states" manifestly experience in reality. How do they occur? Here Ratzel employs his organism theory, whereby the state, which was first presented as a product of the characteristics of the soil and the people, is an organism and "it belongs to the organic character of the state that it moves and grows as a totality."[39] What this means is that the state *grows only to a certain size:* "The state should remain fully comprehensible and easy to grasp."[40] Ratzel's state, which here suddenly is changed back into the pre-political society of the primitive, this pristine "state" reproduces itself in the same format and always on the same level. Its movement is exhausted in its simple reproduction. "Left to itself, this growth renews a simple political body and repeats it ever anew, but creates no other out of itself." "In order not to exceed a familiar size, the number of people is kept in bounds by all possible means, leading to the most cruel abuses, whereby the growth of the state is again limited."[41] Ratzel does not tell us why this actually occurs among a number of primitive peoples. If he had permitted them to live from the produce of the *cultivation* of the soil (understood in the widest sense) instead of *directly* from the soil, the mystery would be quickly solved, for then the unequivocal connection between the amount of food that can be produced and the number of people would be seen. But since Ratzel doesn't properly allocate the factor of material production in his system, it naturally cannot serve to illuminate this circumstance.

The growth of "states" resulting from the sources of material prosperity cannot be disclosed. What is Ratzel's

explanation? "Foreign influence" presumably caused the growth of pristine states. Aliens carried larger spatial and political concepts from their home states to the region of small states. Since according to Ratzel *all* states originally have the tendency to remain small, this "explanation" obviously raises the question of how the states that developed somewhere "abroad" were able to overcome this law of spatial smallness. A different law of growth must have been operative for at least *one state*; the *first* state with larger spatial and political conceptions could not itself have been called into being by aliens from a state with such conceptions, for this would contradict the concept of the *first* state. How then? Ratzel does not answer this question. Such states which have broken the law of the spatial "comprehensibility" of states are just there. The questioner has but to come to terms with their existence. There the matter rests: "People from areas with larger spatial concepts carry the idea of a larger state to areas with smaller spatial concepts."[42] Enough!

So be it. But once the idea of the larger state has been transferred from the outside to "states" that until then have simply reproduced their size, how does the further growth of the state proceed? For a change, the Ratzel who thus far has implicitly equated his state with a primitive community now subscribes to a state with *imperialist-expansionist tendencies*. "It belongs [so we discover] to the essence [sic!] of [sic!] states that they develop in rivalry with other neighboring states, whereby the winner's prize is most often territorial gain. Land acquisition becomes the goal of political development."[43] So Ratzel does succeed in developing a certain cohesion of the purely spatial manifestations of the growth of social and political regularities, if not of *internal development,* and thus gives us an idea of what we may expect from this type of science. The procedure is clear enough. We do not obtain a system of *interlocking* scientific *explanations* but a conglomeration of *mystifications externally stuck together.* Apart from their common function of scientific deception, they still have only one thing in common—the deliberate exclusion of any attempt at an economic explanation. The principle of immaculate conception, which acted as godfather in the *origin* of Ratzel's *conception of the "state,"* has faithfully attended Ratzel's state through all phases of its (mystical) growth.

In spite of everything, Ratzel would certainly not be the great geographer he is (Plekhanov was able to find many proofs for the correctness of historical materialism in Ratzel's writings[44]) if he had been satisfied with theories like these, which are not only empty but plainly misleading. We find many partial analyses as well as a number of basic remarks which attempt to take into account the significance of economy as the connecting link between nature and society not only in his *Geography of Settlement and Communication* and his *Anthrogeography* but also in his *Political Geography*. In one place Ratzel states: "The main characteristic is. . . . that economy is closer to the soil than politics";[45] or: "We associate the idea of a certain density of relations to the soil [?] with the concept of culture, but the deepening of relations to the soil, which increase with greater permanence of settlement, is still more important. . . . Thus the decisive significance for culture of the cultivation of the soil is already expressed in the etymology of the word culture."[46]

Even here the obscurities are by no means eliminated. What is the meaning of the formula, "density of relations to the soil," if it does not mean intensification of agricultural relations? Once more we are in the realm of mysticism. Ratzel's statement that increasing settlement is followed by the deepening of agricultural relations to the soil is in this form unacceptable. *Settlement follows the intensification and fixation of agriculture.* Once realized, settlement in turn also has an increasing retroaction on agriculture. But Ratzel completely distorts the picture when he conceals the fundamental origin of the total dialectical relation and only points to the retroaction. The result is that his thesis concerning the decisive significance of agriculture for culture is not organically rooted in his other concepts.

We will demonstrate how little Ratzel is able to achieve a systematic progression of these ideas. He does not begin with the *real* foundation of historical development, which Marx terms the "organism of production";[47] he must therefore base his analysis in part on political categories and above all on *geographically-perceived* natural elements. Consequently, he investigates the formation of states from the perspective of location, expanse, boundaries, and intercourse between land and sea. In the last segment he concerns himself, among other things, also with *rivers*. The first thing that appears important to him for the political development of mankind is the fact that rivers are "extensions of the sea."[48] "The Nile shares with the Red Sea the task of connecting the Mediterranean with equatorial Africa. . . . In a different way, the Tigris, the more important communicational artery among the rivers of Mesapotamia, supplements the Persian Gulf by extending it to the North."[49] Just as the Nile is an extension of the Mediterranean and the Tigris of the Persian Gulf, so also is the Yangtzekiang an extension of the Pacific Ocean: "Since ancient times, powerful commerical states have arisen at favorable sites on the Nile, Shatt al-Arab and the Yangtze. . . ."[50]

The false conclusion is self-evident. In these three particular cases history clearly reveals that the significance of rivers has not been primarily *commercial* but *agricultural.* "Powerful commercial states" did not originate on these sites, as Ratzel tells us, but rather imposing waterwork cultures in which trade was not predominant as it was, for instance, in Lubeck, Hamburg and the Netherlands, which Ratzel equates with Egypt, Mesapotamia and China.[51] Above all, the assertion that China became a "powerful commercial state" because it is grouped around the mouth of the Yangtze strikes anyone with even the vaguest notion of the social and economic history of China as ludicrous. Like Richthofen's arid-zone theory, Ratzel's great-river theory demonstrates what happens when one analyzes the

direct effect of natural conditions on circulation or on the state and ideology rather than their effect on the sphere of production. The result can only be "*arbitrary determinations*," at best near misses or chance hits.

5. RUDOLF KJELLÉN

What Richthofen and Ratzel each in his own way began has since the war been somewhat modernized and developed into a system of Geopolitics. Kjellén, its founder in the narrow sense of the word, knew better than to *consistently* follow through with the (false) method of his two predecessors. They certainly did not know what to make of the *basic concept* of the economic sphere, yet they at least took it into account in their *concrete analyses*. But Kjellén manages to make it a farce, not only in his dogmatic statements but also in his concrete analysis of individual cases. The reason is not that Kjellén is less intelligent than his predecessors (the Marxist knows that representative figures of history can never really be characterized with such individualistic categories) but that the social situation in which Kjellén formulated his geopolitical ideas had changed.

Although Richthofen and Ratzel were both adherents of an imperial politics, they wrote their most important works during the time when the elements of modern imperialism (whose birth Lenin dated around the turn of the century) first began to consolidate. When Kjellén wrote (his two most characteristic works originated in 1914 and 1916), modern imperialism with its monopolistic-reactionary features was fully developed and a theoretician of the dominant imperialist class had also, in his scientific analyses, to come to other conclusions. This Kjellén does. His new science, "Geopolitics," not only adapts to the needs of monopolistic-imperialistic capitalism; it even anticipates its future needs. Kjellén may indeed claim the dubious honor of having created several years before the emergence of a fascist state a theory of fascism as the higher phase of the domination of the bourgeoisie—a phase which grew out of the "antiquated" phase of the domination of parliamentarianism and liberalism.

As Kjellén wrote in *The State as a Form of Life*,[52] the book he completed in 1916 and published in 1917, "We stand in the sea trough of a high tide of social equality and must await a new swell whose peak will give us a new organic form of society and a new principle."[53] In Kjellén's view, modern "democratism"—the victory of the principles of the general right to vote—was necessary to overcome the old corporate state of the Middle Ages. Parliamentary methods alone lead to thoroughly unsatisfactory consequences and bode still worse for the future. "In an industrialized society [where] the working classes are in the majority, this kind of electoral system threatens [sic!] to put all power in their hands. . . ."[54] Here the Swedish geographer rather overestimated the capitalist stability of bourgeois democracy; but its consequences nevertheless remain highly interesting. With manifold detours, for instance through the introduction of proportional representation,[55] modern imperialist-bourgeois states will rise above the condition in which the egoism[56] of the working class menacingly asserts itself to a "monarchistic renaissance" or a "caesaristic centralization (principality)"[57] in a developmental spiral leading away from parliamentarianism "through a line ascending over the principality to a new absolutism (caesarism)."[58] In this we see the obvious attempt to give the fascist tendencies inherent in maturing imperialism their theoretical justification before the fact.

This political program *is* at once a practical program in accord with the orientation of scientific analysis. In Kjellén's book, *The Great Powers of the Future*,[59] the great imperialist states are each considered from four perspectives: the geographical ("empire"), the ethnic ("people"), the social ("society") and the constitutional ("state").[60] There is clearly no room for the *economic* sphere in our fascist prophet's conception. In his *State as a Form of Life* he at least inserted a small mention of it in a section of his examination of the state [sic!]. But Ratzel's mysticism was not thereby eliminated. When we read that the state is bound to a particular soil "from which it sucks its food,"[61] we note that Kjellén, who heedlessly overlooks many *valuable* aspects of Ratzel's writings, did not fail to reverently incorporate the core *mistake* of his master into his own system.

Richthofen and Ratzel were extensively occupied with the analysis of non-capitalistic societies (Richthofen, especially with China; Ratzel, with the primitive peoples of all continents in his great *Geography of Settlement and Communication*). Both proceeded from the standpoint of the imperialist ruling class, which was then still in its early stages. But in their natural-scientific urge for completeness, not to say in their naive materialism, they paid much attention to the economic factor. Kjellén places the great modern imperialist states in the center of his analysis and it is clear that they have something to do with economy. But what? "The role of economy in the essence of the state has grown more significant in our time with the large increase in population and the general materialization of existence [!]."[62] One observes the "mystagogically"-cleansed mode of expression of the teacher of big bourgeois politics! The economic tasks of the imperialist state are here not drawn from the economic sphere but from the shocking growth of materialism (one has the impression of receiving instruction in a Sunday School class) and from the fact that too many children are being born (apparently out of ignorance). It certainly fits into the methodological frame of the book that a few lines later Kjellén already calls the striving to find sources of raw material and markets for export the goals of English economic politics;[63] shortly thereafter he says the same of Germany: "It must create a secure market for the purchase of raw material and the sale of products."[64] But where does this need of large imperialist states lead? Kjellén, who has proclaimed fascism as the last constitutional word of the bourgeoisie, also knows a similarly-consistent solution for economic politics. Imper-

ialist *autarchy* is necessary, must come, will be won through struggle. Capitalism proceeds from the system of the open door to a politics of "*closed spheres of influence*."[65] Once again Kjellén's analysis evidences little profound thinking but a fine sense for the most recent and forceful monopolistic tendencies of modern imperialism.

All this has much to do with politics but little with science, even if it is only geographical materialism. During the World War, the claims of six large German economic associations were thoroughly consistent and made perfect sense from the standpoint of German imperialism, but they were not yet science and scientific analysis. Kjellén certainly made a great number of analyses; but they clearly show that a method which guesses rather than examines leads necessarily to the crudest blunders when it ceases guessing and attempts to examine with precision. Even the relations to geographical milieu, of which the geopoliticians are so proud, are in Kjellén's case crude, superficial and coincidental. Since the process of production almost disappears theoretically with our master economic politician, because in practice it is also superficially considered, the connections Kjellén makes with the natural side of social life are *completely arbitrary*. A few examples from his book on the great powers of today will graphically illustrate the insecurity, inconsistency and childishness of the analyses of the father of modern Geopolitics.

Kjellén only knows enough of *England's* agriculture to report that English soil must struggle with a humid climate "that is not very conducive to the raising of crops."[66] The fact that precisely this humid climate made England the "production area of the best wool,"[67] so that by the end of the Middle Ages England dominated the wool market in Flanders (Bruges) "almost without competition,"[68] and that the naturally-conditioned causes of England's agricultural productivity, large-scale sheep farming and textile manufacturing, are found precisely in this climate have been overlooked by the "geographer" Kjellén, for whom economy is not a constitutive element of political unity. When Kjellén says: "The riches of the mountains have . . . provided plenty of substitutes for the relative poverty of the soil,"[69] perhaps he means that in England wool is mined from the bowels of the earth. His analysis of Germany (1914) is equally profound.

According to Kjellén, it is easy to explain why *German* capitalism developed so strongly after 1871. The five billion marks extracted from France provided "the working capital."[70] He does not appear to have found worth mentioning the fact that there was something such as coal and iron within the borders of German industrial capitalism at that time. The reason why *French* industrial capitalism did not develop as it did in Germany until the war, in spite of Kjellén's contention that it could find much indigenous and free "working capital,"[71] would seem curious had not the ideological explanation (hence the name "Geopolitics") appeared at the right time. The French are just misers, who build no industry because they are *niggardly*: "The thrifty French . . . are sitting on their sou, instead of actively using it for development."[72] The originality of the analysis matches the effectiveness of the perspective, which the astonished students of the mastermind of Geopolitics take to heart. The dissolution of the unity of Austria and Hungary appeared "out of the question"[73] to Kjellén in 1914. In France, he confirms a sinking of the "stocks of the Republic",[74] and a growing yearning for a "strong hand." "It is an open question whether in the long run demands can be met within the framework of the present form of the state."[75] Since he considers parliamentarianism the major disease of modern bourgeois France,[76] one can read between the lines that he would find a return to monarchy not only possible but desirable. The next historical period in Tsarist Russia will presumably be characterized by a democratization of the state and an increase in Slavic hatred [!] of the Germans.[77] It is also hinted that "Russia," because of its hostility to Asia and above all to the "yellow peoples," will probably move closer to "Europe."[78] Fifteen years later, one reads this prophecy with a certain amusement, given the outcry of all bourgeois "Europe" over the alarming fact that "Russia" has unfortunately become the leader of the oppressed oriental peoples, including the "yellow peoples," *against* "Europe." As far as Germany is concerned, Kjellén foresees an imperialistic Great Germany with its "virile, purposeful emperor at the head,[79] sitting in the saddle, riding toward the future."[80] In a European federation, he envisions "Germany as the natural leader geographically and culturally. For Germany, as the steward of Europe's birthright, this would mean the acceptance of its calling to world domination. . . ."[81]

Our overview of these typical analyses and perspectives has a definite reason. One only discovers how Kjellén is looked upon as one of the cornerstones of the church of Geopolitics by re-reading the works of geopoliticians.[82] Then one understands why it is well to clarify the character and scientific value of its "cornerstones" if one wants to discern its quality. True, Kjellén's works appeared to German geographers and politicians as an enormous step forward. True, he stepped forward in glaring opposition to the purely conceptual, metaphysical speculations that had previously prevailed with his "purely empirical, scientific political science," as stated by the four editors of *Zeitschrift fuer Geopolitik*.[83] But what did his empirical approach, his "inductive way" mean? It meant only that Kjellén, contrary to the old German school, at least made known certain facts which the previous geography and "scientific political science" preferred to keep hidden. After all, Kjellén did *speak* about the labor movement, if even as a fully-conscious reactionary;[84] he dared openly to describe German ambitions for world power as *imperialistic*, if seeing in imperialism "not only [!] a striving for material gain, but a feeling of responsibility for mankind."[85] What in fact he offered was the *protocol* of at least part of the existing sociopolitical phenomena, but it was and remained a completely external, "crude and vacuous verbal expression of the phenomena."[85] Since "things

often appear as the opposite of what they really are,"[87] anyone wishing to directly understand forms as the expression of general laws without first understanding and developing the connecting links[88] must arrive at grotesque "laws" and the most absurd perspectives. In the foregoing we have given a few examples of the laws as well as the manifest perspectives found by "master" Kjellén. Everything beyond the crudest description of the isolated phenomena which interested him (we have seen that he had only limited interest in the social sphere and no interest at all in the economic) is scientifically worthless. The enthusiasm with which geopoliticians have greeted this new "star of the north" says nothing for the *high* scientific level of Kjellén but speaks volumes for the *low* level of the geopoliticians.

6. KARL HAUSHOFER

It would be tempting to review a number of third or fourth-rate intellects active in the *Zeitschrift fuer Geopolitik* who follow the model of masters Ratzel and Kjellén. As members of a class with easy access to many things of a political, economic and commercial nature, they supply all kinds of raw material in their naive descriptive manner but scientifically never surpass the limits set by their splendid "empirical," "inductive" method.[89] Thus we turn now only to Haushofer, who completed what Ratzel and Kjellén began, and whom the geopolitical school now sees as their present intellectual leader. We will deal with Graf and Horrabin separately.

Haushofer is without doubt the most interesting of the bourgeois geopoliticians. One can even say that he further developed the method in the sense of approximating the Marxist standpoint. We are not suggesting that Haushofer became a Marxist. But, like Richthofen, within his limitations and with respect to his *area of specialization* — monsoon countries, especially Japan and to some extent China — his analysis led him to extensive consideration of the economic (less so, the social) factor. That is still not Marxism. In addition, his approach has had no effect either in his own methodological conception or in the writings of his students. Nevertheless, it deserves to be mentioned since it improves the quality of his concrete observations.[90] In comparison with Ratzel or Kjellén, one can even speak of a certain tendency to dialectical thinking. Ratzel wrote: "The value of a location is lasting." In principle, Haushofer tries to avoid such rigid formulations (which, incidentally, Ratzel occasionally accompanies with deeper insights).[91] For example, Haushofer opposes "static boundaries always overtaken by life" to "the prevailing dynamics of the reality of life."[92] Unlike Richthofen, race for Haushofer is not an immutable but a changeable category. To the same extent that the masses of Chinese settlers found economic opportunities they also saw a transformation of long-established ethnic groups.[93] In this instance, Haushofer makes the economic factor more important than simple forms of soil, with their enabling or impeding influence on the mixture of population.[94] Were one to abstract a scheme from Haushofer's analysis, it would approximate: climate — forms of agriculture, movements of settlement — racial melting.

All the same, Haushofer cannot come to any methodological conclusion. Since the specific regularity of the economic and social spheres is not clear to him (what he presents are in essence only rough connections between economy and geography, with an attempt to find a direct derivation of political phenomena), he also must eventually fall back on the old mystique of "arbitrary determinations." Although he makes some very true (though not completely differentiated) statements about the social consequences of rice economy,[95] it is indicative that he cannot explain regularities in the development of China, Japan and India. Why was there no autonomous development of industrial capitalism in these three areas? Haushofer does not even attempt to answer this question. Why are the colonial and semi-colonial peoples of South and Southeast Asia today moving to regain their independence? What are the deeper economic and social causes of this movement? Haushofer is satisfied that they exist, but is only able to offer "increasing pressure" as an explanation[96] — demonstrating again the inherent limitations of Geopolitics, even when (as with Haushofer) it makes more of an attempt to acknowledge the economic factor.

Haushofer once wrote something about a work by the author of this article. Even a bourgeois must take cognizance of such books, "otherwise one sees only one side of the barricades; on the other side [the Communist camp!] one sees (even if distorted by hatred) both sides. In accord with geopolitical logic, this gives one who finds himself in the position of seeing both sides of the picture a practical advantage."[97] Certainly more than most of his colleagues, Haushofer has tried to understand the national-revolutionary movement in Asia. He has also zealously followed the new Marxist geographical literature of Soviet Russia (which in his view contains "masterpieces of geopolitical writing").[98] In spite of this, he remains on the bourgeois side of the barricades. Given the present constellation of this class, he can only view the struggle for independence as a revolt of oppressed nationalities against the imperialist powers competing with German imperialism. The inner law of social regularity remains a mystery to him. He does not shrink from falsifying history, as in his presentation of Wang An-shih's reform in China;[99] nor from childish perspectives, such as expecting the early end of "Bolshevik experiments" in the Soviet Union. Presumably, other similar [sic!] attempts like Wang An-shih's have "also[!] . . . never lasted more than a century."[100] The praise he lavishes on such social patriots as "[August] Winnig and some Young Socialists" for, in his opinion, coming to their senses geopolitically[101] is organically linked with attacks against the lazy German proletarians "who in reality shy away from any agricultural labor lasting twelve or more hours."[102] If one then also reads of his fear that Germany

will "remain a filter for Eastern Jews between the Mediterranean and the Slavic world,"[103] one understands why even the present leader of the geopolitical school got stuck in a blind alley — a class situation which has been put on the defensive scientifically and is no longer capable of recognizing the clearly visible material relations of contemporary political life.

Just as the geopoliticians differ *theoretically* in insignificant nuances, so also do their *political results.* All the same, Geopolitics is in essence completely uniform — one struggles for the preservation of bourgeois (and, where still relevant, also feudal) privileges, stressing the necessity of pursuing an imperialist politics for class objectives. This is in fact the line that Richthofen, Ratzel and Kjellén follow with one mind. Haushofer's flirtation with the national-revolutionary movement in Asia could easily be joined with the neo-imperialist marching orders of these representatives of modern bourgeois politics. What Haushofer only intimates, one of the editors of the *Zeitschrift fuer Geopolitik,* Erich Obst, has openly expressed: The areas occupied by the other imperialist powers are just "ripe" for independence. "The population of the Near and Far East has become in almost all respects equal to the European in civilization and culture and we understand only too well that there [sic!] mankind wants to be completely free and to determine its own fate."[104] In the colonies of the *competing powers*, idealism is running high. But in those areas occupied earlier and again today claimed by *Germany,* Professor Obst says "We [he means the new German imperialism] do not want to colonize in Asia but in Africa and the South Seas. The people of these far-flung areas cannot be deprived of a friend and teacher. . ." (Yes, gentlemen, it is of course a completely different matter!) "*We* will bring them our culture, which everyone knows is first-rate. . . We want to continue German colonial politics in this spirit of a duty to mankind. . . free of vulgar self-interest. . ." etc. etc.[105] One recognizes the same melody Kjellén had already played into the imperialist posthorn (imperialism understood as the "feeling of responsibility for mankind"). Here too the German bourgeois Republic adopts the proud traditions of the Empire. One recalls that the Colonial Resolutions of the Brussels Congress of the Second International (at which Graf recommended, as he does now, the revolutionary labor movement's acceptance of "geopolitical" thinking) follow exactly in the footsteps of the new German imperialism.

"Free of vulgar self-interest. . ." Obst declares on page 153 of his article titled "We are Reclaiming our Colonies!" Two pages later, with a sigh of relief, he takes off his kid gloves and takes up the slide rule, which suits him much better. Starting "free of vulgar self-interest," Obst calculates what modern German capitalism needs: "On the one hand, we lack export markets for our finished products; on the other. . ." cheap raw material, "both of which the German economy badly needs for survival."[106] Then he ponders what can be taken out of (and pumped into) areas claimed by German imperialism and comes to a conclusion significant for every friend of colonialism up to the members of the SPD [German Socialist Party]: "There is no doubt that we could eventually obtain the raw material necessary for our industry from the colonies."[107] "German colonies" could have similar significance as export markets. "They could in all seriousness be a means of preventing economic catastrophe and ending the terrible unemployment in our Fatherland.' "[108] Obst concludes on a similar note: "*Germany must face collapse if it does not soon reclaim its colonies.*"[109]

We will spare the reader the variations which gods of a lower rank would offer on the same theme;[110] we will spare the reader the attempt to prove the scientific questionability of such calculations as Obst offers (already before the war, when the devastating critique of Social Democracy was not yet closely linked with imperialism, people with similar convictions operated with such calculations); finally, we will spare the reader further examples of the "scientific" quality of the court theoretician of the new German imperialism. What we first established by a pure critique of the *method* of the geopoliticians — that they arrive at "short-circuits," arbitrary determinations and fantastic perspectives because they fail to recognize the connecting links — is confirmed when one knows that the theoretical *orientation of the political program* is the essential obverse of its pro-imperialist practice.

At the moment when the contradictions of capitalism have become as critical as they are today, especially in Europe, bourgeois social science can no longer articulate true general conceptions without at the same time articulating all these contradictions and therewith the necessary coming of the proletarian revolution. For this reason, bourgeois science in general is only capable of limited insights in specialized studies and even these are possible only with serious methodological errors. But since Geopolitics is a science of synthesis, as it wants to combine different "elements" of social life (with Kjellén, four) as the constituent factors of a higher social unity, the law of the diminishing power of perception of bourgeois social science here manifests itself with particular sharpness in the phase of imperialism. Individually, they are fairly rational; but altogether a bunch of blockheads, as Frederick II said of his generals. It is also true of the realtion of individual disciplines employed by Geopolitics and of Geopolitics itself. Individual, concrete description and analysis may nevertheless be solid and occasionally even inspired by a naive materialist spirit. *But synthesis becomes childish.* From a critical, revolutionary perspective, the most that Geopolitics can do is amass material, which the science of Marxism-Leninism must critically separate, which can only be adopted in particulars for a completely new general conception.

7. GEORG ENGELBERT GRAF

As previously noted, Graf reproaches Marx and many

Marxists for having "neglected the primary and given facts of nature."[111] On the other hand, he also maintains that "The purely geographical method of analysis of Ratzel and some of his students, who often read too much into and argue too much out of these matters, is also unacceptable. . . ."[112] Graf is thus obviously of the opinion that both tendencies must be combined, whereby he ("Leftist" Social Democrat that he is) gives precedence to Marx in *words* but to Ratzel in *practice*. In his program he wants to "build into" historical materialism not only the research *methods* but also the results of the geographers we have just tried to picture; in reality he is little concerned with historical materialism, whose decisive methodological positions (as we will prove) he *does not understand*. On the contrary, he secretly confuses historical with geographical materialism; worse still, he confuses Geopolitics with the decadent deterioration of geographical materialism.

Under Ratzel's influence, Graf omits the mediating economic link and "infers" the political form of life directly from nature when he explains: "Climate forces states into very specific geographical locations." "The concentration of population and the formation of states is essentially limited to the temperate zones."[113] In this instance Graf repeats completely and uncritically what the old geographical school said previously and what Ratzel, for example, also incorporated into his system as dogma.[114] The number of people and the political-constitutional form which covers and expresses socioeconomic life is not determined by such abstract and partial geographical factors but by the type and productivity of a *process of production* operating on a particular natural-social basis. Concrete analysis shows that especially hot and dry areas with the possibility of artificial irrigation supported large masses of people and made possible large state formations. "Climate—such as the nature of the soil, namely the vast deserts stretching from the Sahara, over Arabia, Iran, India and Tartary to the highest plateaus of Asia, made artificial irrigation by canals and waterworks the foundation of Oriental agriculture. The unconditional necessity of a thrifty and economical use of water. . . caused in the Orient. . . the intervention of centralizing governmental power."[115] Thus with Marx it is not a one-sided, abstract factor but the differentiation of naturally-conditioned elements—the "variation of natural conditions within which he [man] lives," which "spurs him to multiply his own needs, abilities, means and methods of work."[116] The thesis of higher population density and state formation in the most temperate zones must therefore be rejected as an "arbitrary determination," as a typical geopolitical short-circuit. According to Ratzel, "a climate [is] hot if it has an annual mean temperature above 68°F; in moderate climates this decreases to 50°F. . . ."[117] At present the mean temperature is[118]:

In the region of old Babylon (Bagdad)	73.04	Degrees	Fahrenheit
In Egypt (Cairo)	70.88	"	"
In Allhabad (Ganges Valley)	77.72	"	"
In Agra (Ganges Valley)	78.80	"	"
In Bombay	79.07	"	"

The greater part of the population of China lived in the valley of the Yangtsekiang, in a sub-tropical zone which shows an annual mean temperature of 50°–70°F. In all these areas emerged the first enormous population masses of world history, the first large state formations. Half the world's population still lives in these areas.

Manifestly, the abstract method of Ratzel and his successor Graf is little suited to "fulfill" Marx's method of research. Graf said Marx had neglected the "primary and given facts of nature." But Marx incorporated these facts into his method and analyzed them more thoroughly, distinctly and above all more correctly than Ratzel and his Social-Democratic prophet Graf. Graf and Ratzel both neglect the factor of production, which in Marx's view is the basis for understanding the whole process of social life. Graf: "The area only becomes a state through people who organize in terms of settlement and communication, who support, clothe and reproduce themselves."[119] First: Ratzel's conception of the state in this formulation has replaced that of Marx and Engels (the class factor, without which there is no state in Marx's view, has disappeared; later, it is artificially and externally attached;[120] thus Ratzel is not "built into" Marx but Marx is attached to Ratzel). Second: As with Ratzel, the sphere of production is forgotten. How the people of Ratzel's and Graf's state are able to clothe and support themselves *without working* is Graf's secret. We have again arrived at that already-familiar immaculate conception which characterizes the thinking of bourgeois geographers with respect to their method, if not their details. Like the class factor, the economic factor is attached later. People "not only settle, they want to live."[121] At this point Graf's imprecise mode of expression is deliberate. In fact, he blurs the primacy of the sphere of material production established by Marxism. According to Marx, historical complexes grow and decline through changes in the *powers* of production and accordingly in the mode of production. Graf shifts the causes from the sphere of production to the sphere of communication: "All great world empires of the past perished through inadequately developed communication."[122] "Despite an extensive network of roads and a wide-spread courier service, neither the Roman Empire nor those of Charlemagne or Charles V could be held together; primitive communication technology was not capable of handling distances beyond a certain extent."[123] The crudeness of conception, which is indicative of the bourgeois geopolitician, manifests itself in the confounding of three completely different social complexes—the Roman Empire, which was based on a slave economy; the early-feudal state of Charlemagne; and the late-feudal state of Charles V, which was permeated by germs of early capitalism. According to Engels, antiquity declined because the typical *form of production* (slave economy) deteriorated: "Slavery was [became] economically impossible;"[124] *hence* the decline of Rome. By comparison, Graf attributes the decline of the Roman Empire to its inadequate conditions of communication.

Elsewhere Graf calls *population* increase the driving

force of development. He quotes his master Ratzel: "The number of people grows, the soil . . . remains the same. It must bear more and more people and more fruit. . . ." Following Ratzel, he concludes: "This also explains the stages of the development of the state."[125] Marx has it that the productivity of the corresponding process of social labor determines the possible increase in population; Ratzel and Graf, that the soil "must bear fruit" because there are more people. Here Marx's dependent factor (population movement) is made the determining factor; the productivity of labor, the derivative factor.

For the most part, Graf's *consideration* of the economic factor follows the crude, abstract and undifferentiated approach rejected by Marx but familiar with others like Haushofer. "States whose economic life is built on the wealth of organic nature are distinguished by peaceful, equitable development, without sudden structural changes. They are also politically neutral." "Conversely, states which live primarily off inorganic nature are somewhat restless, precipitate, unstable."[126] Immediately thereafter, Graf tells us that he understands by "products of organic nature" animals and plants. In this light, his description of the character of states "built on the wealth of organic nature" appears more than grotesque. Have the great nomadic states of the Mongols, the Arabic empire, the Negro empires of Central Africa and the states of India recorded a "peaceful, equitable development"? Or are the state formations in East and South Asia that were produced by, and those in Africa that were influenced by the nomadic conquests not characterized by restlessness, precipitateness and instability? Deep down, Graf was obviously thinking about the uneven development of capitalist states. But then he would have had to attempt to analyze the diverse character of the "instability" of capitalist industrial states and pre-capitalist peasant-nomadic states. He chose to be satisfied with the characterization of external political traits, which he nevertheless falsely determines because (following the geographers) he derives them from abstract and partial natural factors rather than the peculiarity of the total conditions of production.

We believe we have proved with the aforementioned examples our assertion that Graf, who feels closer to Marx in words, in reality substituted the method of Ratzel and his students for Marx's, much to the detriment of his scientific results. Revolutionary Marxism must at best say thanks for such a "fulfillment" of historical materialism, which is combined with a gross ignorance of the actual significance of the natural factor in the Marxist system. This theoretical improvement of Marxism is about on the same level as the political improvement Graf speaks of at the end of his article—to the extent that he is able, Graf would educate the working class "for democracy"[127] instead of struggling for Marx's goal of proletarian dictatorship.

8. JAMES FRANCIS HORRABIN

The way from Graf to Horrabin is in a sense a step backward but at the same time also a step forward. Graf made his attempt to introduce the labor movement to the ideas of bourgeois political geographers of the Ratzel school at a time when and in a country where an extensive Marxist literature and an intensive discussion of almost all important problems of historical materialism already existed. The German socialist Graf stands on the shoulders of a labor movement which, at least compared with that of England, is much more under the influence of Marxist ideas. It is known that Marx and Engels, however much they inveighed against petty bourgeois and reformist dangers and tendencies, nevertheless stressed the superiority of the German over the English labor movement. With due respect to men like Plekhanov, even Lenin called the German school of Marxists grouped around the journal *Neue Zeit* the teacher of himself and all Russian socialism. In Germany, where all the important works of Marx and Engels were published and easily accessible; in Germany, where in *Neue Zeit* Plekhanov and others had theoretically discussed the problem of the relation between geography and historical materialism;[128] in Germany, where Plekhanov's book, *Fundamental Problems of Marxism* (with its *very clear position* on the question of the primary and given facts of nature), is readily accessible and available to everyone, including Graf—here it is at least inexcusable negligence, and in truth a conscious backsliding from a level of Marxist thinking already achieved, when a man like Graf returns to the bourgeois geographical method without taking into consideration Marx's and Engels' fundamental treatment of naturally-conditioned factors and Plekhanov's formulation based on them.

In England, where the mass proletarian movement had not even completed a legalistic schooling in class struggle as it had in Germany; in England, where (with the exception of a few assessments) there was no developed Marxist theory until the War—here Horrabin's geographical materialism could not signify a step backward because the incomplete but nonetheless forward step of the German movement had not yet been made.[129] Bourgeois political geographers formulated their political theories; but the point is that they still did not (like the Germans) practically engage in hidden or open polemics against Marxism (which would threaten them with a bad conscience and make them anxious about their own type of materialist conceptualization). Therefore, when Horrabin (like Graf) followed the bourgeois geographers he found materialist teachers who similarly embodied the global political experience of the bourgeoisie of a country which had dominated the world for more than a hundred years and who were accordingly accustomed to thinking in terms of continents. For this reason, Horrabin's *Economic Geography* (which, incidentally, is also less dependent on its bourgeois predecessors than is Graf on Ratzel) presents a robust, concrete materialism which at least often surmises the grand inter-

relatedness of the world even when it cannot conceptually comprehend it. Favored by these same conditions, the English liberal Hobson* ascertained more about the real essence of the modern imperialist world by raw empiricism than many mainline Marxists on the continent. Following good instincts, Horrabin also put his finger on a number of important connections between the naturally-conditioned factors of historical development and its concrete economic-political form.

If we were to indicate the positive features of Horrabin's work, we would first have to mention the significance he (instinctively following the directives of Marxism) attributes to the naturally-conditioned powers of production for the respective form of the process of production. One has but to compare how Kjellén or a contributor to the *Zeitschrift fuer Geopolitik* like Adolf Guenther mystically explains France's relatively modest industrial development (Kjellén blames it on the niggardliness of the French depositor; Guenther finds no explanation for the prewar situation and falls back on ideology to explain postwar development)[130] with Horrabin's presentation (which is clearly directed to what is most essential—it was the peculiar situation of France's raw material and particularly its lack of sufficient quantities of coal[131] which, also according to Marx, was far more significant than lack of the more valuable and cheaply-transportable iron)[132] to understand the superiority of Horrabin's geographical materialism over the abstract ideological reflections of the German geopoliticians. With respect to the decline of English capitalism, Horrabin (completely in the sense of Marxism) advances as one of the central factors the difficult accessibility of the remaining coal reserves.[133] As Marx tells us, the greater or lesser abundance of the naturally-conditioned means of labor is more decisive in industrial development than the socially-developed means of labor. The significance of raw material in the industrial phase of the development of mankind is rooted in the essence of historical materialism and need not rely on the masterful teachers of geography. In this connection we should also consider the strong emphasis Lenin placed on the problem of raw material, particularly in the phase of imperialism, where the most important naturally-conditioned prerequisites of production become monopolistically fixed.

Together with these naive Marxist characteristics of Horrabin's *Economic Geography* (to which must be added a naturally-rooted dialectic in the emphasis on the changing historical value of natural factors),[134] we of course also find quite a number of passages wherein Horrabin's approach (though superior to the abstract, eclectic and decadent procedure of Ratzel's German school) nevertheless disregards the fundamental directives of historical materialism. What Lenin objected to in the truly-revolutionary French socialist Golay—that he made *practical political* mistakes because he disregarded Marxism[135]—is also true in areas of *scientific* practice. One cannot be a revolutionary socialist (as Lenin tells us in his review of Golay's pamphlet) if one does not rigorously promote Marxism in word and deed.[136] Had Horrabin been able to accomplish by thought what in many cases he does by instinct, he would have in principle clearly established the significance of the natural factor in the formation of economic, social and political life. He writes at the start of his book that he chose to emphasize one of the two most important factors in historical development, the economic-geographical factor, because "the other basically important factor of history, class struggle, the exploitation of one part of human society by another . . . does not directly fall within the purview of this book"[137] Unquestionably, the connecting link of what Marx calls the "social process of life" must also be included in the analysis, if even only by suggestion. But as important as is the inclusion of this connecting link (which Horrabin, *to his great loss*, leaves unconsidered in many critical instances) is a thorough-going analysis of the role of the "naturally-conditioned powers of production,"[138] the general natural conditions of production (and of communication, itself a factor of production) in the development of the mode of production and thus in the formation of the whole structure of society. Since Horrabin includes neither, he makes a number of analytical mistakes. Since H. Walecki has pointed out the most important political mistakes in his preface, we can concentrate on discovering the mistakes in his historical analysis.

Graf "derived" the decline of the Roman Empire from the limits of communication technology. Horrabin is no less convincing when he makes the "much too extended" boundaries of the Roman Empire responsible for its fall.[139] The phenomenon is not explained in terms of the sphere of production, as did Engels concretely, but in terms of communication and warfare. The typical, geopolitical "short-circuit" is completely clear. Horrabin does not even attempt to explain why only West Rome declined while Byzantium (having also experienced a considerable regression) was still able to maintain itself on the level of a crude commercial capitalism. He simply states it as a fact.[140] Had he concerned himself with the diversified natural preconditions of agriculture in the western and eastern areas of the Empire he might have discovered the necessity of artificial irrigation in East Rome, that peasant rather than slave labor was its basic form of production, and thus that the explanation for the greater stability of East Rome could not be completely explained by the decline of slavery. Obviously, it could not be explained without a differentiated consideration of the various factors which constituted the process of production. But in this Horrabin failed.

Marx explains Asiatic stagnation from the peculiarity of the existing mode of production;[141] Horrabin (especially with respect to China), from the remoteness of the country.[142] Here again, Horrabin puts the communication factor above consideration of the mode of production. Marx

*John Atkinson Hobson, economist and author of such works as *Physiology of Industry* (1889), *Evolution of Modern Capitalism* (1894), *The Economy of Distribution* (1900), *Imperialism* (1902), etc.

also emphasizes the role of China's isolation; but with Marx it is a secondary factor which does not explain why China failed to independently develop industrial capitalism (which must be explained on completely other grounds) but only why China stagnated (for *lack* of earlier external contact).[143] As Horrabin has it, the victory of England and Holland over Spain and Portugal was possible because both northern states had developed a more sophisticated type of ship than the countries of the Iberian peninsula.[144] Again, one can easily recognize the geopolitical short-circuit. Marx also occupied himself with the history of Spain, whose stagnation and decline after Charles V he did not explain from secondary factors derived from the sphere of communication technology but from the economic sphere.[145]

In the final analysis, although Horrabin's geographical materialism contains many features tending toward Marxism, it is nevertheless far from a Marxist method of analysis. His political insecurities are an organic outgrowth of his lack of theoretical clarity. While Graf's standpoint constitutes actual *capitulation* to bourgeois geopolitical principles, Horrabin at least leaves open the way to a consistent revolutionary Marxism in his *Economic Geography*. Of course, a *retreat* from Marxism and the revolutionary labor movement is also left open should the abstract "geopolitical" factors be strengthened (which would certainly go hand-in-hand with a corresponding practical-political development).

We believe we have established with full clarity the invalidity of the geopolitical method. In response to this method and the attempts by Social-Democratic "Marxists" like Graf to retreat from historical materialism and finally, in view of such ambivalent presentations as that of Horrabin, it is necessary (also, perhaps, for a clarification of the views of the adherents of Marxism-Leninism) to give a positive description of how Marx and Engels incorporated the naturally-conditioned factors into their system of historical materialism, of their type, significance and relation to the socially-conditioned factors of production. In the second part of our study we will attempt to answer these questions in the sense of the founders of historical materialism.

II

1. GEOGRAPHICAL MATERIALISM AS A SCIENTIFIC WEAPON OF THE BOURGEOIS REVOLUTION

In the first part of our investigation we described modern geopoliticians as the *epigones* of geographical materialism. By what right? What is the basis of the comparison between the "real" geographical materialists and their successors? What is the relation between Marx and the pioneers of a geographical-materialist conception of historical development? To what extent did Marx possibly develop their conception further? In what respect does Marxism nevertheless signify something completely new? We will now attempt to answer these questions.

In order to properly ascertain the historical role of the great geographical materialists, one must know against whom their theses and attempts at a new interpretation of historical development were directed. Just as courtly-aristocratic interest was in the forefront and dominated the official stage in the form of principal actions and acts of state in the *belles lettres* of the age of absolutism, so also were distinctions in historical writing determined by the peculiarities of individual countries. According to the German historian Sleidan, the factors actually at work during the time of Charles V were the emperor, the imperialist states and the high theological advisors. The Frenchman Jaques Auguste de Thou saw the personal interests of high-ranking dignitaries and families as the dominant forces of more recent political-religious development. The counter-revolutionary English historian Clarendon deduced the events of the English revolution from the shortcomings of the representatives of the old regime as well as from the "ability" and "prodigious industry" of the leader of the revolution.[1] Guicciardini, Chemnitz and Pufendorf possibly brought principal actions and acts of state even more into the central focus of history by emphasizing the foreign-policy factor. Despite occasional reference to other factors, *which never were completely lacking*, "the formalistic observation of foreign policy continued to be the arena of the struggle for power and freedom"[2] in the thinking of all three.

In opposition to the rhythmic pomp of courtly *belles lettres* appeared a bourgeois-oriented "prosaic" literature, together with a new prose transformed in accord with the new prosaic content: Voltaire and Rousseau in France; the English bourgeois novel; in Germany Lessing with his prose dramas, "Miss Sarah Sampson" and "Emilio Galotti"; Schiller with his "Robbers" and "Cabala and Love." The third estate intruded its mode of life and its interests into the place once held by the interests of absolutism. Precisely the same took place in the consideration of historical phenomena. With the exception of Holland and England: Alongside the movements and interests of the still-absolute state appeared (in manifold variations but in principle clear) "bourgeois society" with its "prosaic" bourgeois interests.

Historical judgement only reflects what class development ratifies. Instead of the accidental fate of individual "stars" of courtly politics, one wants to investigate the anonymous life of the third estate, "the people." Instead of military history, there should be cultural history (Voltaire). In the sphere of politics there is no longer any interest in the accomplishments of more or less skillful reprsentatives of the old order but in the principle which politically expresses this old order—the constitution of the country or the lack of a constitution and thereby the necessity of bringing about a real, i.e. bourgeois constitution (Montesquieu, Rousseau).

The new direction of interest is combined with a new form of observation. Out of the increasingly-industrialized economic sphere the method of the natural sciences impresses itself on the thinking of bourgeois revolutionaries. Given the place of industry and science, the method of the revolutionaries is essentially mechanistic; the materialism they oppose to the metaphysical mystifications of the prevailing half-feudal, theological ideology is a mechanistic materialism. Once the mechanical laws of nature are discovered, more or less developed practically and more urgently explored theoretically, the way leads necessarily to the search for analogous general and binding laws (possibly also of a mechanistic character) in the world of history.

Instead of the deeds and destinies of lone "stars" of world history, what in this line of reasoning constitutes the real foundation of anonymous historical masses, tribes, peoples, mankind? On the part of bourgeois-revolutionary thinkers, *God* is either denied altogether (Holbach) or made a prisoner of his own laws (Montesquieu). In any case, he is no longer considered. The *free will* of man can also not step into the breach because man the machine has no free will. Thus only "*nature*" remains as that factor which prescribes forms of life and their development to man as well as animals. Nature in this broad, vague and spatially-ordered sense is best conceived in the encyclopedic natural science of *geography*. The progressive thinkers of the maturing bourgeois revolution, especially in France and Germany, become expressly or actually the prophets of a geographical-materialist philosophy of history.

Holbach spoke of the influence of "climate" on human beings; however, as Plekhanov indicates, often more superficially than Montesquieu.[3] Helvetius no longer speaks only of the direct influence of the climate on human disposition but of the "*works*" which man executes on the basis of different natural circumstances and which lead to various forms of life and perception. Plekhanov has it right: "That is an altogether different point of view." But the great Russian Marxist does not fully appreciate Montesquieu's accomplishment in that he fails to see that Montesquieu also held this point of view. As we will show, Montesquieu systematically placed the natural factor (including the labor factor!) in the forefront of his explanation of history. Moreover, Montesquieu was the thinker whose geographical-materialist ideas were most widespread in Germany. Not only does Herder call him the "great Montesquieu"; his work was also greatly influenced by Montesquieu.[4] Moeser came to a deeper understanding of the state through Montesquieu, whom he knew and admired.[5] Hegel mentioned Montesquieu's name only with the greatest respect.[6] Thus we have chosen Montesquieu to show how the scientific pioneers of the great French Revolution sought through geography to prepare the way for a materialist understanding of history.

a) Montesquieu

Plekhanov was of the opinion that Montesquieu "only repeated the views of a few Greek and Roman writers" and otherwise "said nothing new on this topic." There is no doubt that the philosophers and historians of antiquity strongly emphasized the natural factor. But Montesquieu, who lived in a later age, had a longer historical perspective and, as a result of the development of industry and communication technology, a greater geographical field of vision, going far beyond the old philosophers even in the purely factual sense. Moreover, with Montesquieu a new aspect is introduced which positively identifies him as the son of an early-bourgeois world becoming industrialized and oriented to the natural sciences—a world which at once distinguishes him from antiquity and its geographical materialists—his emphasis on experimentation as a means of understanding how man reacts to his natural environment.[7] Herder, despite his admiration, might have subtly concurred in the reproach that Montesquieu "constructed his climatic spirit of the laws on the deceptive experiment of a sheep's tongue."[8] But the will to explain sociohistorical phenomena by means of the natural sciences remains nonetheless noble and unquestionably revolutionary.

For Montesquieu, man is a machine whose feelings, desires and actions are determined by climate. In the southern countries emerged "a tender, weak but sensitive machine," while "in the northern countries a healthy and strongly-built but ponderous machine finds pleasure in everything that can move the spirit—hunting, travel, war and wine."[9] The inadequacy of what we might call this climatological materialism was not difficult to recognize and refute. But one must pay very close attention to the *sources* of the refutation. When Voltaire makes the power of great thinkers rather than climate responsible for the development of Europe,[10] that is certainly no fundamental step forward but rather a giant step backward. Then too, it must be remembered that Montesquieu's analysis is in no sense exhausted with his reference to the influence of climate. In all thirty-one chapters of Book XIII of *The Spirit of the Laws* he is occupied with the dependence of the political and constitutional conditions of different peoples on the soil from which they live and develop their corresponding economic forms. When the soil is too fertile, as in (South) America, or when the abundance of buffalo favors hunting, the people remain savages.[11] But savages or barbarians live in small nations[12] and enjoy a free constitution because their mobility makes it impossible for them to be tyrannically subjugated.[13] Arable land that is not very fertile makes the people who cultivate it industrious, sober, tough, courageous and adapted to war;[14] fertile arable soil produces a type of people very much engaged in work and little concerned with freedom,[15] an easy-going, somewhat spiritless people absorbed in their own lives.[16] Where the land requires constant efforts to maintain the form of culture created through human industriousness, the people create a moderate form of government, as on the great plains in China, Egypt and Holland.[17] A bourgeois system of legislation arises only if the soil becomes divided by private ownership.[18] Where this has

not yet occurred, the people do not yet have laws; they live according to their customs. In this situation, the aged enjoy great authority because they embody the memory of the past.[19] The free constitution of the ancient Germans at the time described by Tacitus derived from the fact that the germanic peoples had not yet shifted to agriculture.[20]

We have only reproduced a few of the major analytical points from that most remarkable Book XIII of Montesquieu's *magnum opus*. It is true that in another part of his book Montesquieu weakens his argument concerning climate by saying: "People are dominated by several factors (*choses*): climate, religion, the laws, the maxims of government, the example of the past, customs and habits; from all emerges a general spirit (*esprit général*)."[21] But the primacy of the natural factor is emphasized again and again: "The realm of climate is the first of all realms."[22] What is appropriate to this realm is historically viable. Everything else can only be preserved through violence and tyranny. It is also true that the climatic factor is crude by comparison with the soil factor without a clarification of their relation; specifically, neither is the very complex phenomenon of "soil" differentiated nor the natural foundation investigated. This is all correct. But to fully understand what kind of a breakthrough to a higher form of truth was in fact accomplished one must bear in mind the character of the historical analyses *combatted* by the great materialists of the eighteenth century—the persistence of feudal-absolutist conceptions of diplomacy, wars, intrigues and the miraculous achievements of statesmen. God was either explained away or put in chains;[23] an anonymous power was discovered in "nature" whose effects on the people had more force than all the old laws and constitutions which contradicted their welfare. Behind the geographical materialism of Montesquieu and the other materialists of the eighteenth century stands *the demand for "equality"*[24] (political equality, generally understood!). In spite of all the obeisance to the government; behind this geographical philosophy of history was hidden the claim to political power of the young, self-conscious bourgeoisie.

b) The German Geographical Materialists

Owing to the retarded character of German industry, the obeisance of the German geographical materialists to their diverse rulers great and small was much more fawning, the power of the young bourgeoisie much less developed, as was the self-confidence and claim to power of the bourgeois class. Indicative is the fact that German thinkers did not attain the absolutely radical materialism of their colleagues on the other side of the Rhine. Still unsure of itself and for the most part servile, the German bourgeoisie could not accept the idea of man as a more or less serviceable machine—this mocking challenge to the sacred, metaphysical-theological falsehoods of absolutism. If the German geographical materialists wished to speak a lá Montesquieu, they had still to reckon with the theological prejudices of their own fundamentally petty-bourgeois and middle-class thinking. Their theoretical concessions to the ideology of the ruling class appropriately expressed their respective practical and political weaknesses.

Herder, who consciously and systematically puts the geographic factor in the forefront of his great outline of a new (materialist) conception of world history, nevertheless places above "climate" an inner energy—the so-called "genetic power," "the mother of all terrestrial formations, which climate only affects in ways hostile or harmonious."[25] What is the character of this genetic power? Is it subject to the laws of nature; did it evolve according to these laws? Herder refuses to answer this question. It is, he declares, "a vital, organic power; I know nothing of its origin [!] or of its inner being. . . ." It is the spirit that exists "prior to the body." The invisible power "becomes visible in a self-contained mass, and whatever might be its origin it must retain the appearance of its kind. The new creation is nothing but an idea of creative nature become real. . . ."[26] The peculiarity of this "life-force" makes the effects of nature complicated and dissimilar: "This is also true of the effects of climate—every person, every animal, every plant has its own climate because each in its own way organically assimilates all external influences."[27] The influence of nature on the formation of all life is obviously not overcome; it even becomes *inscrutable*: "Climate is a chaos of causes which influence each other very unevenly, thus also gradually and differently, until they finally penetrate the inner self and thereby change it through custom and regeneration. *The resistance of the vital power is long, strong and peculiar to itself*; but not being independent of external passions, in time it must also submit."[28]

This is a clear rejection of the standpoint of the French materialists—that man is a mechanically-functioning machine whose reactions must accordingly and in principle be accurately determined. One might conceivably have rejected Montesquieu's mechanical explanation based on the natural sciences, which would already show that the biological sphere of life must be investigated according to its own laws with methods peculiar to itself and that even *social* life has its own peculiar "natural laws" which can only be analyzed by a particular *social science*. That would have been a progressive critique! Marx, who was full of admiration for the achievement of the English and French materialists, later made precisely this critique. But Herder's critique is not of this kind. He does not attempt to replace the mechanistic-materialist conception of life and society with a higher and more efficient mode of materialist thinking but drops the materialist viewpoint entirely. Together with the "genetic power" an irrational force beyond scientific clarification intrudes itself into the world of relations bound by natural laws. In this we see the theological elements of the ideology of absolutism reflected in a not yet completely materialist *theory* of a German bourgeoisie not yet revolutionary in *practice*.

It is indicative that the other ideologists of the German bourgeoisie of that time, as well as their successors, eagerly adopted Herder's reactionary qualification of radical French

materialism and made it their own. In Kant's review of Herder's works he declared that "the reviewer is in complete agreement" with Herder's rejection of a purely mechanical influence of external causes. With specific reference to this remark, Kant especially states that Herder's genetic power leads back to a self-generating capacity "which in the final analysis we can as little explain as make conceivable."[29]

The great German geographer *Karl Ritter*, whose lectures Marx attended in Berlin,[30] also incorporated Herder's qualification into his system. In addition to, and independent of the "external effects of natural conditions on the direction of the development of mankind," Ritter finds still "another area, of the internal effects . . . of a purely spiritual nature in the development of human beings, peoples and nations. . . ."[31] In contrast to Herder and Kant, he considers this independent "spiritual nature" of man accessible to scientific inquiry; although he excludes this complex from his investigation. In order to save his soul, he is satisfied with a bow to the "independent" spiritual powers. In practice, however, he is no longer concerned with this mystical sphere.

What is true for Ritter is also true for Kant within his own limited range of historical observations.[32] To some extent, it is also true for Herder. They are all fundamentally convinced of mankind's general dependence on the surrounding natural conditions. Herder gives his "genetic principle" a disturbing significance by placing a very high value on race and "national character"; but even this factor is modified in the long run by natural influences.[33] The same Herder who pays tribute to fideism with his genetic power says: "In physical nature we are not concerned with miracles but laws which we find in all respects equally effective, unchangeable and orderly. With its powers, changes and passions, how could mankind extricate itself from this chain of nature?"; "*The whole of human history is a purely natural history of human powers, actions and instincts conforming to place and time.*" In these passages there is no more talk of opaqueness and self-determination of the genetic factor; there is only a system of relations based on exact natural laws: "With this strict principle all ideals, all phantoms of a magical sphere disappear; one seeks everywhere to see clearly what is there, and once one sees one usually knows why it is so and could not be otherwise. Once this becomes the habit of historical thinking, it has found the way to a sound philosophy it could scarcely have found anywhere outside natural history and philosophy."[34]

This reflects the self-confidence of a young, revolutionary science which, in spite of all reservations, considers itself capable of actually disclosing the laws of the given subject with its own methods. Ritter was no less strongly convinced of the power of his geographical explanation of history. Thus he wrote that man is "spatially and physically . . . the mirror of his terrestrial locality"; "Every man is the representative of his natural homeland, which has conceived and educated him. The Fatherland is reflected in the people. The local effects of the landscape on the characteristics of its inhabitants are unmistakeable with respect to stature and physique, skull formation, color, temperament, language and intellectual development. . . . Man's temporal existence is wholly bound to the earth—held tight with thousands of unseverable roots."[35]

That is pure materialism. That is Montesquieu with all his strengths; but also with all his weaknesses. Ritter's formulation of the reflex theory repeats Montesquieu's thesis of mankind's direct dependence on "climate," only with a broader understanding of the concept of climate. The mediations are missing; the "short-circuit" is obvious. Like the great Frenchman, his "more moderate" German colleagues frequently (but not consistently!) objected to the short-circuiting of the connecting links and at least took account of the economic if not the social factor. Together with the "genius" of a people—its innate, organic, genetic characteristics, Herder emphasized that their "way of life" strongly affects the formation of a world view: "The shepherd looks at nature with other eyes than the fisherman and the hunter. . . ."[36] However, "no other way of life has caused so many changes in mankind's way of thinking than has agriculture on a defined piece of earth."[37] This statement is followed by a description of the effects of agriculture on economy, political constitution and character formation which only repeats in a somewhat more rudimentary form what Montesquieu presented more extensively and discriminately in his Book XIII.

Kant also said (in "The More Probable Beginning of Human History"*) that certain forms of settlement, concepts of property and types of social confluence essentially opposed to the forms of life of hunters and shepherds result from sedentary conditions and agriculture. Having theoretically asserted a prestabilized harmony between spiritual and natural determination, *Hegel* (for whom the natural determination[38] of history has both a subjective and an external side—the "natural will of the people" and the "geographical"[39]) demonstrated the practical dependence of different forms of life on their geographical milieu. A nomadic life with all its constitutional, characterological and moral consequences conforms to a particular type of landscape.[40] But suddenly forgetting his prestabilized harmony, Hegel at this point provides a regular genesis. The alluvial plains tempt people to another kind of economy: "Fertile soil itself causes the transition to agriculture[!]. . . . People's concerns are no longer just for a day but for a long time. Tools must be invented; inventiveness and also art develop. Fixed ownership, property and rights originate. . . . Through this mutually-determined, exclusive but general independence the natural isolation is breached. . . . Thus there is the possibility of a common ruler and the essential rule of laws. Great empires . . . arise, and the institution of powerful states begins."[41]

*"*Mutmasslicher Anfang der Menschengeschichte*"

For certain, that is still not historical materialism. But despite all the mystifying elements, it cannot be denied that it is a serious attempt to derive the unity of social phenomena from the base of production and the process of labor. Also interesting in this respect are Ritter's analyses, which hit again and again on the process of labor (and its natural foundation) as the starting-point for his explanation of the character of particular peoples and groups of peoples. For example, Ritter[42] (also by way of Hegel)[43] derives *the peculiarity of Chinese society* (which so astounded bourgeois revolutionary thinkers and resulted in the glorification of Chinese conditions—the lack of those feudal institutions so bitterly suffered by the bourgeoisie of the West[44]) *from the prevailing importance of waterworks* for the formation of the material foundation of the colossal empire of the Far East. He attributes the different world views of the Arabs and the Hindus to the different natural bases of their respective processes of labor (here nomadism, there permanent settlement), even though the factor of the process of labor does not stand out in full clarity. Ritter then proceeds to point out various combinations of natural conditions, resulting in an even greater variety of "soil economy, water economy, the life of hunters and mountain people, sheep herding, permanent settlement, roaming in bands (and then come a series of non-economic categories): warfare, peace and feuding, isolation and social gathering, crudeness and culture, etc."[45] Thus one cannot say that he sees no connecting links. Like the other geographical materialists, he does see them; but he gives no clear account of the inner order existing between them.

c) Limitations and Problems

We turn now to the critique of the bourgeois-revolutionary geographical materialists, who were not only influenced by, but further developed the ideas of Greek and Roman authors. Their great historical merit obviously consists in the fact that they sought to replace the prevailing type of formalistic, idealistic and religious historiography with a materialist conception. It appeared to them that the determining factor was "nature"; more precisely, the geographical factor in part or in toto. Especially the German cultural geographers preserved idealistic elements in various forms such as teleologism, objective idealism, emphasis on an irrational genetic factor,[46] eventually also in the view that the dependence of man on "nature" will gradually decrease[47]—a thesis which, being built on a true partial insight within a false generalization, leads to a new and original form of idealistic subjectivism

Apart from these idealistic remnants (which play a greater role in backward Germany with the ideological representatives of a backward German bourgeoisie than in France) a number of methodological limitations and errors are evidenced in the materialist thinking of the historical geographers. We will single out three of the most important of these typical mistakes, common to all geographical materialists, because recognition of them is necessary for ascertaining which, and in what way, problems not solved by these pioneers were later tackled and solved (or not solved).

(i). *The En-bloc Method* designates references to "climate," "soil," "environment" without considering their interrelation and that the dominant factor among them might change with the stages of history. The vagueness here is not accidental; it results from the class position of the geographical materialists. Owing to their bourgeois starting-point, they do not proceed systematically but only occasionally from the process of labor as the formative power of society; they lack the firm criterion which alone can exactly determine the interrelation and (dynamic) hierarchy of different natural factors. For Herder, climate includes "the heights and depths of a region, its quality as well as its products, the food and drink which man enjoys, his way of life, work, his clothing, living arrangements, even his amusements and arts, together with a host of other circumstances which produce much by their vital interaction." Having given his "picture of changed and changing climate" much color, he abjectly asks: "Which human hand is capable of bringing order to this chaos of causes and effects in a world in which every individual circumstance, every individual region is given its due and none receives too much or too little?"[48]

In fact, the result of the *En-bloc Method* is *chaos*. Even such careful examination of the natural factors cannot provide clarification, which is only possible through an analysis of the given social process of production. But owing to the social inauspiciousness of their intellectual perspective, it is precisely this the geographical materialists have not accomplished.

(ii). *The Short-Circuit Method* designates a procedure (typical of the geopoliticians) which omits from the analysis one or more of the most important connecting links and thus leads to "purely arbitrary determinations," which might occasionally be true but for the most part are only half-true or completely false because they are not in fact scientifically developed. For example, either the process of labor is omitted from the analysis (this is even true of Montesquieu and his successors, who derive political, moral and spiritual conditions directly from climate or features of the landscape) or the "social process of life" remains unexplained (as is most often the case with the geographical materialists). Both sins of omission might also be harmoniously combined into what might be called a short-circuit of the first magnitude. We need not pursue the scientific value of the results of the "analysis."[49]

(iii). *The Emancipation Perspective* apparently designates a type of content rather than a methodological failure. It emphasizes that man progressively becomes the "master" of nature. What is true and false in this thesis can only be determined with a dialectical as well as materialist type of analysis. Here the geographical materialists touch upon one of the most profound questions of the philosophy of history; but leave it (necessarily) unresolved. If their

"solution" is consistently pursued (the formulations are most uncertain, inconsistent), it leads back to idealism. The practical application of the *Emancipation Perspective* to concrete problems results in a chain of flagrant analytical failures as well as a misinterpretation of basic historical connections.

Further consideration of the significance of the natural factor for historical development might take three different directions. One could continue to maintain with slight differentiations the fundamental propositions and thus also the misinterpretations and analytical failures of "enlightened" historical geographers and their successors. This was the choice of the Englishman Henry Thomas Buckle. But despite his attempt at a materialist explanation of progress and the restraints on the progress of civilization in various parts of the earth,[50] he did not *in principle* go beyond Montesquieu and Herder;[51] his *historical descriptions* blatantly demonstrate the limitation of his prized method.[51]

The geopoliticians have tried the second possibility. But even when they, at least in principle, attempted to maintain the level of the old geographical materialism they regressed from the standpoint of that once proud and struggling science under the impact of changed circumstances. They were confronted with the powerfully more effective and politically more threatening challenge of Marxism. While the pioneers of geographical materialism were convinced they could lay bare the dynamic laws of history with their method, their epigones became much more modest. In Haushofer's candid formulation, they would be content with 25 percent of the truth. In view of the existence of Marxist historical analysis, the good conscience disappeared. Some geopoliticians may still be good geographers, like Richthofen and Ratzel, or experts in the field of foreign policy and military affairs, like Haushofer. But altogether they have become poor historical geographers. The formerly-honorable materialist science has sunk either to a metaphysics of the needs of imperialism (Kjellén, Obst, Dix) or to a collection of refined rules of strategy and foreign policy.

2. THE ROLE OF THE NATURAL FACTOR IN MARX'S CONCEPTION OF HISTORY

The third possibility is to solve the problem raised in the contradictory and unsatisfactory formulations of the geographical materialists with a different starting-point and new methods. The fact that new methods alone are not sufficient to establish such a different scientific discipline is evidenced by the inability of the great bourgeois economists to clarify the place of the natural factor in the historical process.

a) The Great Bourgeois Economists Necessarily Misunderstood the Natural Conditioning of Labor

Given the kind of research undertaken by economic specialists, bourgeois economists were single-mindedly and instinctively drawn to the significance of the natural factor. Nevertheless, this did not help them overcome the three fundamental errors of the geographical materialists. Still, the classical economists made progress by placing great importance on the natural factor in their treatment of ground rent (the actual infertility of the soil, the so-called law of diminishing returns of the soil). Their conception of the significance of natural powers was also progressive by comparison with that of the Physiocrats, who still considered nature the source of all wealth, thus also of surplus value.[53] Ricardo says clearly that the effectiveness of natural powers influences use value without affecting exchange value.[54] But the analysis of the natural factor in the question of ground rent remains rigidly undialectical[55] and, despite many and in part brilliant allusions in particulars, neither the classical economists nor their critical successors and opponents were able to attain a satisfactory classification of the natural factor in general. Adam Smith (in an interesting economic parallel to Kant's epistemological inversion) reversed the faulty thesis of the Physiocrats and made labor (in his own terms, the *subjective* factor) the sole source of all wealth of society.[56] Ricardo, like Adam Smith, was incapable of recognizing the essence of constant capital; thus he was incapable of conceiving capital as the independent power of the material conditions of labor in opposition to the worker.[57] Instead, he took refuge in the assumption of the traditional distinction of fixed and circulating capital in the process of *circulation* and left untouched and unrecognized the problems of the organic structure "*within the actual process of production.*"[59] Both of the greatest thinkers of bourgeois economics, each in his own way, obscured and misjudged the question of the material conditions of labor and their natural foundation. The possibility of a scientific clarification of the problem was certainly nipped in the bud.

How can this failure be explained? Was it by chance or does it again demonstrate the class limitations of knowledge? With respect to Adam Smith, whose insight into these questions was deeper than Ricardo's,[60] Rosa Luxemburg answered that his "biased bourgeois view" did not see behind the value and surplus value of the productivity of the workers "*the general relation of man and nature.*"[61] But how does one account for such a "bias" concerning the material, natural conditions of labor? In Marx's Critique of the Gotha Program, which is pointedly aimed at Adam Smith's fine thesis that labor is the source of all wealth, he has indicated the profound class significance of this theoretical failure: "*Nature* is as much the source of use values . . . as labor. . . . Labor becomes the source of use values and thus also of wealth [only] to the extent that man

himself is treated as originally belonging to nature, as the first source of all means and objects of labor, as its proprietor." Then follows the disclosure of the social significance of the "phrase" found in every bourgeois primer: "The bourgeois has good reason to ascribe *supernatural productive power* to labor because it follows directly from the natural conditioning of labor that the man who owns nothing but his labor power must in all social and cultural circumstances be the slave of other men who have made themselves *owners of the material conditions of labor*. He can only work with their permission, thus he can only live with their permission."[62]

Complete and consistent acknowledgement of the significance of the natural conditioning of labor leads directly to the acknowledgement of exploitation in all class societies. Given the standpoint of the bourgeois economists, they could not follow this path. Until today they have been unable conceptually to grasp that the elementary organization of the process of production becomes clearly antithetical through the power, means and object of labor. However, the question of the type, distribution and fluctuating stress on the natural factor can only be properly and efficiently posed through an analysis of this structural core of production. From the bourgeois standpoint, it is impossible to admit labor power as a wholly specific element of the material conditions of the capitalist process of labor. This excludes the possibility of even the most brilliant of bourgeois economists bringing inner order to this apparent "chaos" of natural factors. They are incapable of overcoming the *En-bloc Method* of the geographical materialists. A purely *physical* principle of classification of natural factors, such as later undertaken by Ratzel and his school, is only a more recent expression of the fact that a *social* principle of classification for these factors (still conceived as sociohistorically effective) has not yet been found.

The bourgeois economists were no more successful in achieving a unified and total sociohistorical conception. Previous attempts only led to the conclusion that the sociopolitical factor must again be in the forefront (Adam Smith: the organizational side of the process of labor, the division of labor; Friedrich List: protective tariffs and national unity as the most essential "productive powers"). Smith's historical sketch[63] is not even a consistent illustration of his own thesis of the significance of the division of labor for the development of social wealth; List's historical chapters are completely devoted to the justification of his protectionist program.[64] One can no longer reproach such a presentation for ignoring the connecting links since the ultimate link, "nature," is included, although in scattered observations that cannot sustain the whole and are almost without consequence. This is striking evidence of the fact that one cannot simultaneously be a professional economist and a social idealist.[65]

b) The New Epistemological Starting-Point

The geographical materialists raised problems which neither they nor their colleagues in the economics faculty could solve. Thus a new epistemological starting-point had to be found. The revolutionary labor movement accepted the challenge. Marx and Engels proceeded from a completely different social position to solve a problem that had presented insurmountable difficulties for the most brilliant of bourgeois thinkers.

The extent to which the theory of the labor movement and its struggle for liberation must be materialist as well as dialectical is often mentioned. Enough to say here that it is precisely this dialectical-materialist method in its sociohistorical form as historical materialism that also provides the key to clarification of the question of the role and place of the natural factor in the social process. For example, it resolves the problem behind the second basic error of the geographical materialists by substituting (for an approach that accidentally links the individual spheres of life with each other and arbitrarily with their natural foundations) a conception which views the different social, political and intellectual processes of life as inseparable and overlapping instances of an historical unity that evolves necessarily out of the mode of production of material life.[66] The contradictions which arise between the various spheres of life (which the dialectician recognizes as necessary to all processes of life) do not abolish this unity but rather turn something rigid and dead into something living, transitory, part of the ebb and flow of existence.[67] By emphasizing the decisive importance of material production, we counterpoise to all idealistic obscurities and errors the only scientific (materialist) standpoint. The question of connecting links, which the geographical materialists could not comprehend with an approach which partially isolated and always misconceived the significance of the economic axis, is answered easily by utilizing the method of historical materialism. From the standpoint of Marxism, the *Short-Circuit Method* becomes absurd and impossible because it contradicts this profound way of conceiving social interrelations.

This stipulation already eliminates one of the basic errors of geographical materialism. This kind of Marxist critique of the geographical materialists is nothing new. It is obvious and completely correct; but it reveals only one error of the bourgeois camp. Much more difficult, and thus especially important, is the critical overturning of the first and third theses of the geographical materialists. In a genuinely scientific investigation, how should the natural factor be differentiated and, if necessary, evaluated in changing historical circumstances? From the standpoint of dialectical materialism, what is the crucial place of the relation between man and nature in the origins of historical development? This leads back to the most profound and central questions of every general investigation of history. We cannot begin to answer these questions without attempting to show how the natural factor is classified in

the historical process of human life as seen in the historical-economic conception of the two founders of historical materialism. Although the attendant doctrinal and socio-political dispute among Marxists is not without interest, discussion of its effusions is beyond the scope of this study. We will only refer to it when and where it is of value to illustrate a specific point of or an unmistakeable divergence from the standpoint of Marx and Engels. We are primarily concerned to give the most exact possible elaboration of their views.

c) Man: A Very Specific Part of Nature

Every Marxist discussion of the relation between man and nature must first take note of the fact that in the core of the materialist conception *no contradiction* exists "as if these two 'things' [were] separated from each other."[68] Man is a part of nature; he belongs to it "with flesh and blood and brain."[69] He is himself a power of nature,[70] a thing of nature, albeit (and this is the first distinction) a living thing conscious of itself.[71] Again, within the world of living things man belongs to the active powers of the evolving animal world. But this certainly does not elevate him above nature. His power is nothing save "the stuff of nature transformed into human organism;"[72] his labor, the activization of "his natural bodily powers, his arms and legs, head and hands;"[73] a physiological process.[74] What is true of the manual process of labor is also true of the process of thought, which should similarly be considered a "natural process."[75] Man's labor does not abolish the character of the stuff of nature; it only changes its form[76]—turns it "into a form adequate to his own needs."[77]

The animal is also capable of "systematic action" to a degree consistent with its rising level of development.[78] Man has an active relation to nature.[79] But in its own way so also does an animal.[80] Man only distinguishes himself from the animal kingdom in the way he pursues his activity.[81] He becomes thereby an animal of a very special type. His particular physical constitution[82] allowed him to recognize something in embryo,[83] in its initial stages in some of the more highly-developed animals and by transforming this available quantity into a new quality to make it the center of his whole affirmation of life—the *use and creation of the means of labor.*[84] Thus man became capable not only of directly extracting his required material from the nature that surrounds him but of interposing something between himself and the desired objects to strengthen his bodily organs and ("in spite of the Bible") prolong his natural life. This "mediating" action in the satisfaction of needs and the means acquired thereby led to new needs. That is the beginning of history.[86]

d) The Fundamental Relation: Man and "Nature"

Man stands in the midst of nature as a part of nature. As an active element, as a very specific type of active element, he simultaneously stands in opposition to *surrounding* nature and constantly struggles with it through the process of labor: "*Man and his labor on one side; nature and its material on the other.*" This is the fundamental relation, the "*eternal natural conditioning of human life and thus equally independent of every form of this life and above all its social forms.*"[87] In Marx's writings he continually refers to this fundamental relation, always with the same intensity. Man and nature (or the "earth," which is often used with the same meaning) are the father and mother of all material wealth,[88] the two sources of material wealth,[89] the two "archetypal creators of wealth,"[90] the two original creators of all products, the "fountains of all wealth,"[91] the two general "elements of the actual process of labor,"[92] the only two original means of production.[93] Nature first proffers laboring man the general, objective conditions of his activity; it provides him his location (*locus standi*[94]), the "space required as an element of all production and all human action."[95] It also functions as his "natural larder" from which he can take his prepared foodstuffs, fruits, etc.[96] Finally, it is his "original arsenal of the means of labor"[97] as well as the "primordial arsenal,"[98] the "natural storehouse"[99] of his primary objects of labor. Thus it is possible to establish the most *abstract and general formula of the process of labor* on the basis of these articulations before dealing with all higher developments and without the necessity of considering the social side of these material relations.

e) The Basic Components of the Process of Labor

This formula does not read as Heinrich Cunow* has it—labor power, nature and technology;[100] but completely otherwise. Astonishingly, he considers both formulations equivalent: "*The basic components of the process of labor are purposeful activity or labor itself, its object and its means.*"[101] In such an abstract and simple conception of the process of labor there is no room for the most primitive conditions of human society in which the means of labor are still unrefined[102] and where even the division of labor is still naturally and physiologically determined by sex and age.[103]

In the course of historical development a decisive change occurs within the three basic components of the process of production in that labor aptitude develops

*Heinrich Cunow (1862–1936) was a Social Democrat and anthropologist, highly regarded by Engels when he wrote *The Origin of the Family* and by many Marxists in the 1920s.

together with education and the higher forms of labor organization (unification and division). Differentiated tools and eventually machines take the place of the undifferentiated stones which primeval man used for throwing, rubbing, pressing and cutting. The chain of the labor process is lengthened; objects of labor, having already passed through several stages, no longer directly exhibit "natural" features.

Was Marx convinced that the development of the socio-historical features of the three decisive points of the process of labor would cause its natural side to disappear or no longer play a relevant role? Bearing in mind all the statements Marx made concerning nature as one of the original creators, as one of the sources of all material wealth: if Marx were so convinced, it would have been tantamount to abandoning his own thesis. But Marx was not of this mind! In his analysis, in his formulations of the social factor in all its diverse historical forms, he never forgot the natural factor. In the course of development the natural factor's center of gravity dialectically shifts (in an exceedingly interesting way) within the three basic components of the process of labor; but its fundamental significance is thereby only reformulated, not abolished. This is one of the most important (and most frequently misunderstood) peculiarities of Marx's conception of history, one of its decisive characteristics. We will attempt to show that it finds expression in the totality of Marx's works—from *The German Ideology*, which he coauthored with Engels, in the *Critique of Political Economy* and *Theories of Surplus Value*, to the last volumes of *Capital*—not by means of "quotations" out of context but by reference to the development of his thought, hopefully documented with an extensive compilation of Marx's most essential statements.

f) The Natural Side of Labor Power

We will deal first with the natural side of labor power, since it has been little clarified by Marxists or the pertinent disciplines. It is thus extremely difficult to raise this question. Even Marx made few concrete remarks. Still, we have an abundance of statements by Marx and Engels which repeatedly emphasize decisive points of the question. At least here we should take note of the principles upheld by Marx.

Where Marx speaks of the starting-point of every scientific historiography he mentions together with the objective "natural conditions" found and later historically-modified by man the subjective natural-conditioning of man insofar as he has certain "physical characteristics" and is subdivided by "tribes, races."[104] The "Feuerbach" section [of *The German Ideology*] speaks of the specific "energy . . . of individual nations"—"energy already acquired through the mixture of races."[105] This is obviously an extremely sketchy articulation of the principle. But as such it is quite remarkable. Similar formulations of the principle are later and regularly repeated. We have already mentioned the postulate set forth in Marx's "Introduction" to his *Critique of Political Economy*, namely that we must begin with nature's objective and subjective conditioning of man. In his discussion of the theories of Richard Jones in the third volume of *Theories of Surplus Value* (completed in 1863[106]), Marx explains: "Not all peoples have the same natural tendency to capitalist production. Some primitive peoples, like the Turks, have neither the temperament nor the disposition to capitalism."[107] We will see below that Marx did not hold that this natural tendency of certain peoples or its lack is something eternal and suprahistorical. We have only to recognize that such specific traits in temperament and disposition exist in Marx's conception. Shortly before completing the first volume of *Capital* he exchanged several letters with Engels discussing Trémeaux's theory* that geological soil formations influence the development of human nationalities as well as different kinds of animals. Like Engels, Marx obviously saw the geological factor mediated by its economic function as "soil" and thereby originating specific breeds of plants and animals. In fact, it plays the same role with respect to nationalities: "There is only a natural basis for certain questions like nationality, etc."[108] The first volume of *Capital* contains one of the fundamental tenets of Marx's appraisal of the natural factor, namely that the conditions of nature are all "reducible to the nature of man (such as race, etc.) and the nature that surrounds him."[109] In the third volume of *Capital* Marx identifies the three most essential factors that can cause the same economic base to assume different empirical forms: "Natural conditions, *race relations*, external historical influences."[110] At another place in the same volume he says that the economic development of serf labor, etc. is "dependent on favorable circumstances, on *innate racial* character, etc."[111] Remarks concerning the specific character of different nationalities appear throughout the correspondence of Marx and Engels.

This is one side of the standpoint of the founders of historical materialism. It would be as scientifically foolish as practically useless to deny that Marx and Engels presumed certain "natural" traits in the human power of labor, not only in their most primitive, prehistoric form but throughout history—the Slavs (in the Trémeaux discussion), the Turks, the Germans, Americans, etc. However, Marx and Engels certainly did not maintain that the subjective natural factor of the process of labor is stable, eternal and unchanging, but that even this side of the natural equation changes with historical circumstances. The same Engels who said, "*Race itself is an economic factor*,"[112] also joined Marx in asserting that all history proceeded from subjective and objective foundations "and their modification in the course of time through human

*Pierre Trémeaux (1818–?) was a French natural scientist who published a commentary on Darwin: *Origine et transformations de l'Homme et des autres êtres* (Paris, 1865).

action,"[113] that man has an "historical nature."[114] The young Marx already saw the whole of history as "a continual transformation of human nature."[115] In what way does this transformation occur? By the process of labor reacting upon (developing or curtailing) the nature of laboring man: "*By effecting and transforming external nature through this activity he [man] simultaneously changes his own nature.*"[116] Obviously, this is not only or primarily true for the individual but for whole population groups and ethnic complexes with a uniform method of working and living. Having said that the Turks had neither the temperament nor the disposition for capitalist production, Marx excluded any possibility that his remark might be misunderstood as having some fetishistic racial connotation: "But these are exceptions. The development of capitalist production creates a general level of bourgeois society and therewith the temperament and the disposition among various peoples."[117]

Under these circumstances, can we still say that there are natural traits in the productive power of workers in historically developed societies? Has not everything now become "social," i.e., the product of historical development? This is obviously not Marx's opinion. If he always mentions the "subjective" together with the objective "natural conditions,"[118] he no doubt has something very specific in mind. The key may lie in Marx's conception of the natural and social character of the fertility of ameliorated soil. Certain kinds of cultivation change the soil in such a way that it acquires a new base—what might be called a new "nature"—which does not evidence the labor that has gone into it. The incremental fertility of the soil combines with its natural fertility to form a new unity "in such a way that it can no longer be distinguished from its original fertility."[119] With respect to our question, the original fertility of the soil corresponds to the natural qualification of labor and the peculiar nature of man. More specifically, the human characteristics "acquired" through working and living conditions become one with the original nature of man and cannot be distinguished therefrom, resulting in what we might call the "second nature of man." The subjective natural foundations of the process of labor are modified but not abolished.

So much for the natural factor in the first link of the simple process of labor. Despite all Marx's historical modifications, this factor continues to exert its influence. But having told us this, Marx says almost nothing concretely about *how* this occurs. His reticence can be explained by the level of anthropology and ethnology at that time—the qualification of labor was almost completely neglected. In the interim, the orientation of these two sciences has remained essentially unchanged. Under these circumstances, we should also hold back. Marx saw in principle, and for certain correctly, that human nature, race and national character change. At what rate and in which way these transformations occur is a question requiring detailed research. But there are indications that, given the appropriate influences, these transformations may occur more rapidly than was previously thought possible.

Parenthetically: Throughout human history the nature of man persists not only in the differentiation of races and tribes but also in its biological structure. Human beings remain vital entities, divided into *two sexes*, experiencing *youth, maturity and old age.* During the whole "prehistory" of mankind the *physiological division of labor* thus continues in effect. Owing to the changing historical forms of society, however, it is often under the most grisly distortions (the heavy workload of women in primitive societies, because they are weaker in economy and authority; unseemly female and child labor in capitalist industry). Only a socialist organization of production manifests the valid and just division of labor, allowing the human being—man and woman, young and old—to participate or not in the forms of the process of labor most suitable to their "nature."[120] With this understanding, socialism does not signal the disappearance of human nature but rather its first full realization.

g) The Natural Objects of Labor

What we have said thus far about the natural side of labor power has been rather meager for concrete historical analysis. But we have two good reasons for this discussion. First, because this component is necessary to round out the picture. Second, it was necessary to correct an error concerning Marx's view of this question made by a number of real (and so-called) Marxists. Graf accused Marx of having neglected "the primary and given facts of nature." Completely apart from everything said thus far, just how little justification there is for this accusation is shown by Marx's position on the natural side of human labor and particularly the qualification of labor. Although the level of research at the time was inadequate, although he could not go into detail and had to use the greatest discretion in dealing with concrete questions, he nevertheless emphasized both the existence and the significance of the natural factor.

The two other components of the process of production are much easier to handle; the role of the natural factor in both is much easier to grasp. Since the connections are more visible with respect to the *objects* of labor, we will begin with them.

All objects of human labor not yet subject to a process of labor belong to the natural side of the objects of labor,[121] which category includes:

(i). All plants and trees not yet cultivated "agriculturally"; all wild animals, including fish, which have not been artificially bred.[122] Excluded are cultivated plants and animals. As Marx writes: "The animals and plants one usually considers products of nature may be products of labor from the previous year; in their present form they may also be products mediated by human labor and gradually transformed by human will over many generations."[123]

(ii). All so-called mineral wealth: ores, minerals and

petroleum. With increased industrial development, the second group obviously moves to the foreground. Although extractive industry basically covers both groups ("mining, hunting, fishing, etc."[124]) it is nevertheless primarily *mining*, which has been considered the central sphere of extractive industry since the beginning of the industrial age."[125]

Even if one excludes agriculture and its objects (since even plant seeds are already filtered and changed by labor[126]), the quantity of "objects of labor found in nature" is still enormous. All the inorganic raw materials of industry come under this heading. Given the sufficient effort of labor and the corresponding level of technology, the productivity of extractive labor is dependent on the abundance of the "natural storehouse."

Before dealing with the economic-historical significance of this question, we have still to examine the means of labor. Enough to say here: Considering the whole spectrum of the objects of labor put to work in the social process of labor, all but the products of agriculture in the wider sense can be traced back to a natural source not created by human labor. However vague and abstract this formulation, it already suggests the significance of the natural factor at this stage of the process of production and it is as true for primitive society as for the industrial spheres of more highly-developed societies. It already demonstrates that the natural factor obviously does not have the same significance for all three basic components of the process of labor at different stages of production.

h) The Natural Means of Labor

Turning now to the problem of the natural means of labor, we must caution against the misleading simplifications and direct misinterpretations such as Cunow has sought to introduce with respect to the pertinent questions. Marx designates as general objective prerequisites of the process of labor not only the "conditions" of labor (which Cunow must acknowledge[127]) but also the means of labor ("in the wider sense"[128]). Cunow opts for a "purist" terminology, i.e. an abstract categorization of individual aspects, whereas Marx's terminology rejects abstract definition as untenable from the standpoint of dialectics[129] and proceeds in a flexible "metaphysical" manner to explicate the diversity of the ever-changing relations of real life. The *general* objective *conditions* of the process of production are at once also *indirect means* in that they do not enter directly into this process but without which it "can proceed only imperfectly or not at all."

More vexing than the terminological are the factual mistakes that slip into Cunow's analysis. Under the general prerequisites or what he calls the "conditions of production" he includes not only the objects of labor provided by nature but also soil fertility, waterfalls, navigable rivers, etc.[130] He apparently arrives at this completely untenable thesis (from deep-seated methodological reasons) by misunderstanding Marx's terminology. Marx does, of course, speak of "natural conditions" when listing these factors.[131] But this group of conditions is at once the "means" of production in the narrower sense,[132] without which the process of labor can only proceed imperfectly or not at all. They also participate directly in the process of labor; they are part of it. If one begins with the result or even the direct participation of the means of labor in this second, narrower sense, they are for Marx "both means and objects of labor."[133] Thus the "means of labor" in the narrowest sense are "a thing or complex of things which the worker interposes between himself and the object of his labor, serving to orient his activity to the object." This by no means implies exclusively mechanical effects. The worker "utilizes the mechanical, physical and chemical properties of things in order to realize their potential on other things in accordance with his purpose."[134]

Do all the means employed by man in his social labor consist of devices resulting from a process of labor? In other words, must all means of production be considered social means of production? This seems to be the position of Hermann Gorter, who not only sees no natural means of labor but also seeks to restrict the social powers of production to "technology" in that he completely ignores the social side of the power, qualification, and organization of labor.[135] It is difficult to imagine a more blatant misunderstanding of the real facts of the matter and Marx's presentation of them. For clear insight into Marx's meaning, one need only read the classic chapter on the process of labor in the first volume of *Capital.*

The earth offers man "his original arsenal of the means of labor." Thus primitive man finds the means of labor fit to his needs without these means being modified by labor. At a higher stage of development the earth itself becomes a means of labor, namely for man in agriculture. In order to exploit the earth as a means of labor, man requires a "whole series of other means of labor"; but given these prerequisites, the earth as an "agent of production"[136] is most effective in agriculture.* It is a *natural* agent of production. Sociohistorical modifications do not abolish its natural character; they only initiate a new and higher (or lower) form of it.[137] Man possesses the soil. However, since he does not "create" the fertility of the soil but only accepts and exploits it, it is a means of labor freely put at his disposal, a "gift of nature," even a "productive power of nature." As Marx writes: "Here, in agriculture, the collaboration of natural powers, the increase of human labor power through the use and exploitation of the powers of nature is from the beginning and for the most part automatic."[138] The earth constitutes "the most essential means of production,"[139] a "naturally-conditioned power of production"[140] of the highest order, a "gratuitous power of production"[141] whose collaboration in the agricultural process of production has the most significant social consequences.

*This touches upon the historical factor inherent in all natural elements of production, which will be discussed below.

In order to make the activity of this means of production perfectly clear, Marx several times compares the fertility of the soil with a machine[142]—a machine which differs from an industrial machine only in that it costs nothing. Even so, he is thoroughly cognizant of the complicated and manifold way in which the fertility of the soil effects plants. Apart from its mechanical function as a natural depository, the "chemical composition" of the soil is what influences plants.[143] As Marx's example of amelioration demonstrates, parts of these fertile nutrients enter directly into plants, while others remain in the earth in their original chemical form. Here also, "means of labor, auxiliary resources and raw material . . . blend" together.[144]

Two objections can be raised against this conception. One might argue from a position overemphasizing the social factor that it is still only through human labor that agricultural products come into being. Does not human cultivation of the soil give the process of production a purely social character? The opposite point of view, represented by Eduard David, considers nature the "direct producer" to which human labor takes a second place.[145] Both are based on a misunderstanding of the peculiarity of agricultural production. The former overlooks that production time and labor time do not coincide in agriculture and similar branches of production, that there are "gaps wherein the object of labor is subject to the impact of physical processes without any additional human labor. In this case, the process of production and thus the function of the means of production continues, although the process of labor and thus the function of the means of production as means of labor is unbroken. . . . *Production time is accordingly longer than labor time.*"[146]

The physical processes of soil and weather undergo a highly essential modification of economic function. So long as the labor process is at rest, they cease to be means of labor but continue functioning as means of production of a process which labor alone set in motion "by subjecting the means of production to conditions whereby they automatically modify themselves as a result of natural processes and without the further input of labor."[147] This elucidation points up the total invalidity of Gorter's imputation that the powers of production can be reduced to technology, since it overlooks the natural factor (as well as a series of social factors) in the complex of the powers of production.

In yet another grotesque distortion, David opposes the peculiarity of agricultural production to Marx's presumed position "that the process of production in agriculture and industry is essentially the same."[148] He does not let the laborer appear as a direct producer and overlooks the fact that it is the working man who organizes the agricultural process of production and gives it his impetus, that he not only directs but "even creates it 'a bit'."[149] True enough, in agriculture he must pay attention to the peculiarity of the object of his labor. But in industry the working man must also adapt his activity to the peculiarity of the object of his labor; his activity consists solely in utilizing certain attributes of a group of things as a means of effecting the object of labor. There is no other form of "direct production." Given the fact that agricultural labor, as well as the object and means of labor, contains elements of a "haphazard" character, difficult to predict, it is certainly harder to predetermine the productivity of labor; it is precisely less calculable.[150] Even so, the labor itself does not thereby cease to enter *directly* into the process of production. In his attempt to present agriculture and industry as basically incomparable (and surreptitiously to deny the existence of concentrated tendencies in agriculture[151]), the revisionist David arrives at a conception of the predominant role of nature in agriculture which in this respect brings him dangerously close to the conceptions of the Physiocrats.

Together with soil, Marx mentions *water* as an important natural means of labor. At different stages of production water is utilized as a means of production in divers ways. Waters rich in fish[152] serve simultaneously as reservoirs and feeding grounds for the indigenous fish or the game fish bred in them. Irrigation water moistens and fertilizes plants.[153] Navigable water[154] is one of the most important auxiliary means of the transport industry. Falling water,[155] which propels mills,[156] turbines and the like, is an important natural power for industry. The various and sundry other natural powers of production—the energies of coal, steam, metals, electricity, the natural wealth of which becomes decisive at a higher stage of history[157]—do not as such cost anything more than the natural fertility of the soil or the useful properties of water.[158] However, similar to the agricultural activation of soil fertility, certain socially-produced and thus "costly" means of labor are required to exploit them.[159] This explains why they only become effective at a higher stage of economic development. It also serves to emphasize that the ultimate aim of this investigation—the identification of the relationship between the naturally-conditioned and socially-developed powers of production—is a problem deserving the most intense concern. Since its solution requires the clarification of a series of connecting links, we will leave it unanswered for the present and take stock of our findings thus far.

i) A Summing Up

Following Marx's example in his presentation of the process of labor and of absolute and relative surplus value, we will present our findings in the form of a *synopsis*, which should serve as the starting-point for the combination and historical differentiation of what has heretofore been considered only in isolation and only with intimations of present history.

Once development has reached a certain level, the three basic components of the process of labor all have both a natural and a social side.

Our examination of the racial factor and soil fertility has already concretely demonstrated that the natural and

SYNOPSIS: I

The Three Basic Components of the Process of Labor
after the Unfolding of their Social Side

Social Side	Organization Qualification (skills & knowledge)	Machine Tools	Raw Material ("filtered through labor")
	LABOR	MEANS OF LABOR	OBJECT OF LABOR
	POWER		
Natural Side	"Human Nature" (physiological characteristics, race, national character)	Natural Powers (characteristics of soil, water, wind, heat, steam electricity, etc.)	Natural Material as it exist "independent of human labor"

SYNOPSIS: II

Shifting Significance of the Natural Factor within the Three Basic Components of the Process of Production in the Course of Historical Development

TYPE OF PRODUCTION	I LABOR POWER	II MEANS OF LABOR	III OBJECT OF LABOR
Primitive Societies (gathers, hunters, fishers	Social Side: Development depends on III mediated by II. Natural Side: Race. Physiological division of labor	Social Side: Tools (poorly developed) Natural Side: (almost undeveloped)	*Extractive Component* (significance of natural material absolutely dominant
Precapitalist Agricultural Class Societies	Social Side: Primarily dependent on II Natural Side: Race?	Social Side: Tools *Natural Side: Decisive*[163] (soil fertility, water—"Asia!")	Extractive Component only important for the *secondary* spheres of (handicraft) industry; organic "raw material" dominant in agriculture.
	Social Side: Epoch-making (Cooperation as a "social power of nature")	Social Side: Tools Natural Side: Water power	Same as above. As long as the textile industry remains predominant, the extractive component is not very essential.
Industrial Capitalism	Social Side: Determined by II (Science) Distortion of pysiological division of race	Social Side: Machines Natural Side: Enormous significance of natural powers utilized by industry	*Extractive Component now very important;* increasing significance of raw material now supplying extractive industry

social sides of the process of labor are not rigidly separated. The parallel interpenetration of natural and social traits, as between the powers and relations of production, shows that the boundaries in and between nature and society are fluid and shifting. But the real differences are not thereby abolished.[160]

After this clarification of the basic relationships in their most general and abstract form, we will now attempt to ascertain how the shifting emphasis of the natural factor is evidenced in various ways within the three basic components of the process of labor in the course of historical development. We define primitive societies as those based primarily on hunting and gathering. Precapitalistic agricultural societies[161] are conceived in the wider sense Marx gives to the word agriculture,[162] which includes nomadic societies. Like agricultural societies, they exhibit only slight differentiation.

III

j) Does the Natural Factor Become More or Less Significant With the Development of Social Production?

We are still not asking the decisive "historical-philosophical" question: "Which factor determines the other, the natural or the social? On the basis of the historical evidence offered so far, we will first ask another question: Did the significance of the natural factor increase or decrease with the development of the social factor of production? For the reader who has really followed the logic of Marx's conception, the answer is contained in the question. But numerous misunderstandings concerning this matter call for a very explicit answer.

The significance of the natural factor grows together with the social conditions (powers) of the process of production; the unfolding of socially- and naturally-conditioned powers of production goes hand-in-hand. Yet this mechanism is not mechanically rectilinear but follows a fairly complicated "zig-zag course." We have already shown by word and symbol that specialized research on the formation of the "nature of man" has not progressed far enough for clarification of the facts. Leaving this question open, our attention is principally directed to the changing significance of the objects of labor. The direct extraction of natural material, which is absolutely decisive at the earliest stage of production, becomes quite insignificant at the stage of the great "agricultural societies," when nature exerts its influence mostly through the naturally-conditioned *means* of production (soil fertility, water). At the stage of manufacturing, when the "social power of nature"[1] (cooperation) changes the character of material production, the significance of the natural objects of labor does not increase substantially. Only with the breakthrough of machine-based industry does natural material attain its surmounting significance. With the progress of mechanization in agriculture, its productivity also becomes (to an ever-increasing degree) indirectly dependent on the character of the "reservoir" which contains the natural wealth in industrial objects of labor.

Picture the structure of modern capitalism in its totality. The basis of "*industry proper*"[2] is, on the one hand, *agriculture*, which provides the organic raw material, and, on the other, *extractive industry*, which provides the inorganic raw material. *Transport industry*,[3] which interpenetrates and interconnects these three spheres, functions as a fourth sphere of material production and completes the picture. By comparison with previous stages of development, the major emphasis within the different spheres has shifted substantially; and this shifting continues. Most important in this context is the shifting of natural and social factors in agriculture. As Marx tells us, it is inherent "in the natural laws of agriculture that, at a certain level of culture and its corresponding depletion of the soil, capital (here understood also in the sense of previously-produced means of production) becomes the decisive factor of agriculture."[4] This seems to imply that the natural factor is forced out of the agricultural sphere. But the utilization of growing numbers of mechanical devices in the agricultural process of labor simultaneously implies the adoption of new methods either to exploit other groups of natural powers not yet utilized or previously-utilized powers more intensively. Moreover, to the extent that agriculture becomes directly dependent on industry proper and thereby indirectly dependent on extractive industry, the significance of the natural conditions underlying this sphere of production becomes cumulative. *The dependence on natural conditions assumes an increasingly mediated character; but the dependence persists.*

How are favorable and unfavorable natural conditions socially expressed? In the border-line case, the productive quantity of a mode of production rises or falls to such an extent that a historical threshold is crossed and a new quality of the material relations of production (together with the attendant social consequences) is cultivated. But how is the favorability or unfavorability of the natural factor expressed *within* a particular economic order (for example, within the capitalist mode of production) so long as the historical border is not reached? Marx rejected in varying turns of phrase the Physiocratic view that surplus as such grows out of the soil and that surplus value is roughly equivalent to soil fertility. The favorability or unfavorability of the naturally-conditioned powers of production only increases or decreases the mass of products and changes the amount of *use values* produced. In any case, this is the indisputable starting-point. But can we remain content with this? Are there no social effects? *Do exchange-value relations remain unaltered by this change in use values?* If change brought about by natural conditions affected all branches of production equally, if the productivity of extractive industry and agriculture changed just as evenly, and if the resulting rise or fall in the price of food and raw material similarly influenced all branches of industry, there would be no change in the organic composition of industry; there would be a corresponding fall or rise in the rate of surplus value, thus also in the rate of profit and accumulation.[5] But in fact it is "never likely to happen"[6] that a change of value in the sphere of primary production would equally affect the value of raw material as well as wages.

As far as the interplay of "uncontrollable natural conditions" is concerned, it is much more the rule that increasing or decreasing productivity shows itself to be *completely disproportionate.* Either only one division of primary production, agriculture or extractive industry, or even (as is more often the case) only individual sectors within one of these two complexes change their productivity. If the amount of labor inherent in one group of use values increases or decreases relative to that in the remaining products, the proportions of value shift simultaneously. *The organic composition of capital undergoes a change.* Take the

hypothesis of decreasing productivity in one branch of the production of raw material:

> *The value of raw material increases* . . . , volume decreases. . . . More must be expended in raw material; less remains for labor. The same amount of labor as before can not be absorbed. One reason is physical, because there is a deficiency in raw material; another, because a greater portion of the value of the product must be turned into raw material, thus a lesser portion can be turned into variable capital. *Reproduction can not be repeated on the same level.* A part of fixed capital remains in place; a part of the workers is thrown onto the street. *The rate of profit falls* because the value of constant capital has increased relative to variable capital and less variable capital is employed. Fixed yields (interest, rent), which are anticipated according to the steady rate of profit and exploitation of labor, remain the same and can not be partially paid. *For that reason: crisis. Crisis of labor and crisis of capital.*[7]

In the case of the rising cost of food production, what is in effect true of other intermediary elements is also true of the rising cost of raw material. A change in the quantity has a similar effect as the good or bad quality of raw material.[8] The importance of raw material for reproduction is thus absolutely decisive: ". . . here again is demonstrated how a rise in the price of raw material can either inhibit or curtail the whole process of reproduction, since either the price obtained by the sale of the commodity is not sufficient to replace all its elements or it becomes impossible to pursue the process on a level appropriate to its technical base."[9]

Favorable natural circumstances in agriculture and extractive industry have a similarly portentous effect. We will only briefly indicate what Marx has investigated extensively in assessments and analyses, namely the main economic factors of their interrelation. If the "productively-exploited material of nature (which constitutes no value-component of capital), soil, oceans, minerals, forests, etc." is more lucrative, only the volume of products is initially expanded but not its value.[10] On the contrary, the value per unit of use value falls, as does the price of the raw product. If it is raw agricultural products that become cheaper, the wages of workers in all branches of production are reduced because of the price of food.[11] If a fall in the price of non-agricultural raw material *directly* affects those industrial branches of production that are the immediate consumers of such material, it *indirectly* affects all branches of industry because a fall in the price of raw material for machines, buildings, etc. always has this effect,[12] although empirically in the most diverse variations. There is also an indirect effect on food and thus again on wages because the growing productivity of the means of production used to produce food results in a "cheapening of labor."[13] Thus the same value-product (with additional capital—new variable and constant capital) on a larger value-product can be produced because the rate of surplus value rises with a smaller expenditure of value. Reproduction can be expanded; accumulation mounts.[14]

Why is the question of raw material so essential for developed industry? Why do changes in the productivity of raw material and thus corresponding prices in this sphere have such drastic effects? On the one hand, it is incomparably more pressing to replace raw material than machinery. The former (including auxiliary material[15]) is completely used up each time and thus must be purchased anew, whereas only the wear and tear on the latter must be repaired after every sale of the product. This factor has such enormous effects only because the amount of raw material and its value increase in relation to labor and machinery with the expanding development of industry and its growing productivity (the increasing quantity of raw material that can be processed by social labor in a definite period of time). As Marx writes: "In proportion to the development of the productive power of labor the value of raw material constitutes a steadily-expanding component of the value of the commodity not only because it enters into it completely but because in each aliquot part of the total product the part formed by the depreciation of machinery and that formed by additional labor both steadily decline. As a result, the other part of value formed by raw material grows in proportion if such is not neutralized by a corresponding decline in the value of the raw material obtained from the increased productivity of the labor expended in its own production."[16] But is the decrease in the value of raw material large enough to compensate for the increase in the relative value of raw material in the process of production? Marx well saw the tendencies working in this direction. However, despite the cheapening of certain products of agriculture and mining, the main tendency he identifies outweighs all the others owing to the natural conditions required for the production of organic raw material and that of mining: "The cheapening of raw material, auxiliary material, etc., checks but does not curtail the growth of the value of this part of capital."[17]

The proportionately greater significance of natural conditions, especially for modern industry, naturally raises the question whether the development of the social powers of production might be able to compensate or perhaps even to over-compensate for an eventual diminution of natural wealth in its present form appropriate to economy. In Georg Lukács' analyses* he emphatically speaks of the

*Wittfogel and the Hungarian Marxist philosopher Georg Lukács (1885–1971) represented opposing aspects of the struggle within Marxism during the 1920s—between positivism and historicism, social science and philosophy. In Lukács' 1967 Foreword to *Geschichte und Klassenbewusstsein* (*History and Class Consciousness*), he attempted to answer Wittfogel's criticism and offered what he termed "a less one-sided view," particularly with respect to the role of nature: "Above all one is struck by the fact that, contrary to the subjective intentions of the author, *History*

receding of the natural barriers, by which he means that in the course of a certainly protracted development socialized man becomes the master of nature, that he has already accomplished "the subordination of nature to the categories of socialization."[18] Quite aside from the purely technical misunderstanding of such a Marx expression as "receding of the natural barriers,"[19] in these one-sided formulations emphasizing the active factor operative in socially-working man, the other, material-natural side of the relation is completely forgotten. We find analogous neglect of the social in favor of the natural factor in the pessimistic formulations of the law of the diminishing returns of the soil. What is a pessimistic dogma for the theoreticians of the bourgeoisie and an optimistic dogma for those who over-estimate the active factor (the technicists who, like Lukács, believe that the social powers of production are able to determine the development of history) was for Marx, Engels, Plekhanov and Lenin the subject of a very careful analysis in which the weight of both factors is dialectically and materialistically balanced and the dynamic relation between them is always clearly seen.

Marx said with all the clarity one could wish for that socially-working man will *never* completely master this part of his process of production owing to the organic character of *agriculture*.[20] Engels pointed out the contrast between industry and agriculture ("which until today is necessarily controlled by weather instead of controlling weather"[21]) and Lenin also emphasized the peculiarities of agriculture ("which are absolutely[!] impossible to overcome. As a result of these peculiarities, large-scale mechanized agriculture will never exhibit all the characteristics peculiar to industry"). Being "in the all-too distant future and all-too problematical,"[22] Lenin excludes the possibility of a systematic production of food (which, even so, would not eliminate the natural factor but again heighten its significance in extractive industry as the inevitable supplier of raw material). As long as man is dependent on this type of production, there will always be a distressing, indomitable "earthly residual," which may be exceedingly restricted by the development of the social powers of production but can never be completely eliminated. Marx extensively developed the thesis that within the scope of capitalist accumulation the naturally-conditioned growth patterns of agricultural production constitute a typical crisis factor (quite aside from crises brought about through poor harvests).[23]

In *primary production* overall (the increasing importance of which should already be clear), Marx sees a struggle between the two basic components of the productivity of labor:

> The fact that the development of productive power in different branches of industry not only advances very disproportionately but often in opposite directions arises not only from the anarchy of competition and the specific character of the bourgeois mode of production. The productivity of labor is also dependent on *natural conditions*, which often become less favorable as productivity rises (to the extent that they are dependent on social conditions). There is accordingly *contrasting movement in these two different spheres—progress here, regression there.* Consider, for example, the bare influence of the seasons, on which the quantity of almost all raw material depends, the depletion of the forests, coal and iron mines, etc.[24]

> [Elsewhere, he writes in a similar vein:] Agriculture (as well as the mining industry) [has] not only [to do] with the social but also the natural productivity of labor, which is dependent on the natural conditioning of labor. It is possible *that the increase in the social power of productivity* in agriculture might only compensate or not even compensate for *the decrease in the power of nature* (this compensation is always effective only for a certain period) so that *in spite of technical development the product does not become cheaper but is only prevented from becoming still more expensive.*[25]

> [Or with special emphasis on extractive industry:] As far as coal and metal (and wood) are concerned, they become much cheaper with the progress of production; with the depletion of mines, this will also become more complicated.[26]

and Class Consciousness objectively supports a tendency in the history of Marxism which, irrespective of the very strong differences of opinion regarding both philosophical origins and political effects, is willy-nilly directed against the ontological foundations of Marxism. I mean the tendency to view Marxism exclusively as a theory of society, as social philosophy, and thus to ignore or repudiate its inherent relevance to nature. . . . I naturally confine myself here to a critique of *History and Class Consciousness*, but this is not to imply that this deviation from Marxism was less pronounced in the case of other writers with a similar approach. In my book it has the effect of confusing what is decisive with respect to the very concept of economics, which here should naturally constitute the central methodological position. It is true that the attempt is made to explain all ideological phenomena with reference to their economic foundation, but the purview of economics is restricted thereby in that its basic Marxist category—labor as the mediator of the metabolic interaction between society and nature—is missing. But that is the natural consequence of such a fundamental methodological approach. It follows that the most important real pillars of the Marxist view of the world are lost and that the attempt to nurture the ultimate revolutionary implications of Marxism in the most radical way is deprived of a genuine economic foundation. It is also self-evident that the ontological objectivity of nature, which constitutes the essential basis of this metabolism, is also lost" (Georg Lukács, *Geschichte und Klassenbewusstsein*, *Lukács Werke*, Vol. 2, Luchterhand Verlag, Neuwied, 1968, p. 11).

To Marx this means something completely different than recognition of the law of the diminishing returns of the soil or something similar. What he simply expresses in these formulations is the actuality of both factors of productivity—the social and the natural. Whether or not the productivity of labor is raised through the opening up of new natural resources, through the cultivation of new soils, is according to Marx "a historical question. In reality the ascending and descending lines intersect, increased demand is satisfied through transition to sometimes more, sometimes less fertile kinds of soil, ore [and] natural conditions of production."[27]

If Marx ultimately arrives at an optimistic perspective ("the earth . . . , properly handled, steadily improves"[28]), it is an optimism bounded by certain historical assumptions. As in his analysis of capitalist production, where social factors render impossible the unfolding of all the material powers of production—the social as well as the natural powers released by the social—his scientifically-grounded view is that the development of soil fertility under capitalism is hindered by social factors.[29] If Marx imputes to the era of communism an ever-richer flow of sources of material wealth (then "all the fountains of cooperative wealth [will] flow more freely"[30]), he does so because completely new *natural* powers of production can be released (or old, already-exploited natural powers can be utilized more intensively) with the full unfolding of the *social* powers of production. Thus we see that the struggle with nature—"*the realm of natural necessity*"—does not end. On the contrary, it "*expands*" together with the increasing social demands, as do the powers of production which satisfy these demands. Thus even the real wealth of society remains dependent on "the more or less plentiful conditions of production within which it (the process of labor) takes its course."[31]

k) Problems of Location: Interplay or Isolation of Different Organisms of Production

Having examined the significance of the natural factor in the three spheres of production—agriculture, extractive industry and "industry proper"—we will now deal with those questions associated with what is sometimes called "communication" [*Verkehr*], that is those questions which present themselves as problems of location, of the reciprocity or separation of the different historical organisms of production. In this connection, geological, orohydrographical, climatic and other natural factors[32] play a fundamental role insofar as they find their *location* at the points of production from which the threads of communication are knit together—a location which is naturally never lasting but may change quite decisively with a change in production proper and the development of transport industry, which itself is dependent on general industrial development.

Where the earliest centers of human life came into existence was determined geologically and biologically by the character of soil and climate, the plant and animal world. Drawing on Trémeaux, Marx assumed more recent geological formations to be more fertile and thus more favorable to plant and animal life. Engels found something "enormously plausible" in this assumption but its soundness nevertheless in doubt.[33] With respect to Marx's fundamental assertion, it is irrelevant whether his concrete conjecture concerning the character of the context cited to support it has been proven correct by expert knowledge. Nevertheless, it is not without interest that modern professional geographers attest to the fact that translocated and thus younger soils "are on the whole superior to residual soils. They are found as a rule in plains and lowlands. . . . This is one of the reasons why plains are much richer than highlands."[34]

But Marx never subscribed to the belief that soil fertility alone is sufficient to insure a particular agricultural development. He emphasized more the *combination* of soil and other agricultural agents, i.e., their complementary presence and position. Above all, it is access to agriculturally-usable water that stimulates progress.[35] Marx also emphasized the significance of yet another "geographic" factor—the measure in which water is available to be controlled by human hands. The necessity of water regulation on a "large scale" produced the great "Asiatic" production organisms with their specific political superstructure that Marx and Engels observed cutting a mighty path across the Orient[36] and presumed had an offshoot in Moorish Spain's agricultural and state organization built on artificial irrigation.

Marx and Engels considered the location of different natural factors of agriculture in relation to each other essential to the shaping of particular economic and political formations. Problems of location with respect to production do not end with the coming of the age of modern industry; they only acquire a new meaning. The relative location of raw material, production and market centers to each other, which had already played a certain role in developed agricultural societies (particularly the coastal locations of Tyre, Carthage and Alexandria[37]), now becomes increasingly more essential. Given the significance of minerals, the dependence of their economic exploitability on their location becomes much more crucial: "Infertility can paralyze a favorable location, so that such mines cannot be exploited at all. On the other hand, an unfavorable location can paralyze fertility, so that one such mine, despite its natural fertility, cannot be exploited."[38]

Within the sphere of raw material, this law obviously has very different consequences as to the value-content of each unit of weight transported. As Adam Smith tells us, there are greater difficulties of distance for coal than for metal.[39] The distance of production centers from market places is by no means economically irrelevant, since it determines the length of time of total turnover. Read Marx: "Improvements in the means of communication and trans-

port shorten the transit-period of commodities absolutely, but do not abolish the relative difference in circulation-time of various commodity capitals during transit. . . . For example, improved sailing vessels and steamships, which shorten the journey, do so as well for nearby as for distant harbors. The relative distance remains, though it is often reduced."[40] The efficacy as well as the impossibility of eliminating the natural factor of "space" could not be more strongly emphasized. Relations of transport, which derive their power and character from the conditions of production centers proper, proceed in turn to have an effect on them. Together with the concentration of centers of production one finds that "a shifting and relocation of corresponding production sites and market places occurs as a result of changes in the means of communication. A production site, which has a particular advantage owing to its location on a main artery or canal, now finds itself on the side of a single branch railway which only functions at relatively long intervals, while another site which was located far from the main line of transport, now lies at the intersection of many rail lines. The second location prospers, the first declines."[41]

What applies to a *single* organism of production obviously also applies to the reciprocal effects of *different* organisms. It is primarily through exchange and political-military struggle that this action occurs. According to Marx (and modern ethnology quite strongly supports him[42]), trade begins at the borders of primitive organisms of production.[43] But whether and in which way the interaction occurs always depends on the character of the socioethnic units in question: "The interactions of different nations with each other depend on how far each of them has developed its powers of production, division of labor and internal communication."[44] This sentence, which emphasizes anew the primacy of production vis-á-vis circulation, is not only true of highly-developed modern nations but also of all previous stages of historical development.

The basis of location in the process of circulation lies in the location of the powers of production within the individual centers of production, in the location of production itself. Only with this understanding can we really grasp the essential interrelationships of sociohistorical units situated in particular "locations" relative to each other. *How the economic and military ("communication") relations between them are constituted depends on the type and quantitative power of the different complexes of production.* The conquests of the English (Ireland), the Romans, the Turks and the Germans are not manifestations of power based on nothing. As always, the power of the conqueror is based on the specific type and strength of production;[45] it is the result of a struggle between different types of production whose character depends in turn on the character of their respective starting-points of production.[46] This is thus the premise of what Marx calls "*derived, transferred, secondary relations of production.*" In order to understand them, it is necessary to deal with the "interplay of international relations."[47]

The factor of spatial proximity is inherent in all these ideas; but it is always viewed from the standpoint of economics in the Marxist sense of the term, i.e., from the standpoint of production. According to Marx (as demonstrated in a series of examples offered by Marx and Engels), just how essential the juxtaposed spatial relations of different complexes of production are for the concrete configuration of historical development cannot be concretely analyzed without an investigation of these natural conditions. As has already been shown in observations concerning the variability of economic centers, location plays a dynamic role. Although the objective spatial structure of the earth remains constant, its historical efficacy undergoes the greatest transformations. The division of the Old and New World did not allow the aborigines of America to share the wealth of domesticated animals and plants possessed by Europe and Asia.[48] The relation to the Atlantic, which had the effect of separating the inhabitants of America (as well as those of the East) at a lower stage of production, later acquired a completely different function. The Pacific, which effected China's "isolation" during the era preceding machine-based production,[49] underwent the same change of function. *North America*, supported by a powerful development of modern industry, now becomes the "*focal point of global communication*," as did "Italy in the Middle Ages and England in more recent times."[50] As Marx wrote in 1850: "Thanks to the gold of California and the untiring energy of the Yankees both coasts of the Pacific will soon be as populated, as open to trade and as industrialized as is now the coast from Boston to New Orleans. Then the Pacific will play the same role as the Atlantic does now and as did the Mediterranean in the Middle Ages—the role of the great waterway of global communication. . . ."[51] The factor of location is here seen in its full significance, although as a *changing* variable whose concrete configuration is dependent on the development of "industry" at certain pertinent sites.

The less-developed industry of *Germany* as compared with that of Italy, Flanders and England, the less-developed agriculture of Germany as compared with that of England and the Netherlands, already in the Middle Ages made Germany a land lacking in economic unity, a land with only scattered centers of culture. Its backwardness kept its divisions separate and oriented in totally divers directions: "The south had completely different trade connections and market centers than the north; the east and the west were almost totally cut off from communication. No single city was in a position to become the industrial and commercial focal point of the whole country as, for example, London already was for England. . . ."[52] When the economic center of gravity shifted to the Atlantic, resulting in the "exclusion of Germany from world trade," medieval fragmentation was even more consolidated.[53]

As for *Spain*, it has been established that "the favorable form of a peninsula, which the country possesses, as well as the existing communication with Provence and Italy" led to the development of prominent mercantile and

port cities along the coast.[54] But the social secret of Spain is still not revealed by the character of circulation but by the basis of production. The diversity of Spanish society was originally based on "the configuration of the land" and developed through its piecemeal separation from the territory of the old Moorish state. At this point Marx chose not to mention which circumstances had "drained the sources of national activity"[55] and "ruined Spain's trade, industry, seafaring and agriculture."[56] However, we know from other remarks of the founders of historical materialism that Spain's absolute monarchy must "at a certain stage be compared with Asiatic forms of domination rather than with other European absolutist states (with which it exhibits only minor similarities),"[57] that *artificial irrigation* was the basis of production for "the flourishing of the industry of Spain . . . under Arab rule,"[58] and that the sources of national activity were drained by the devastation "of the largest part of the irrigation works on which the highly-developed agriculture and horticulture of the Moors had been based."[59]

By the same reasoning, *China's* "isolation" can only be properly understood from the development and non-development of production not only in China but in Europe and America. The barriers were broken by the industrial development of the Occident, especially of England (in earlier periods, China's "isolation" was never so absolute as must appear in more recent times owing to the measures warding off foreign influence instituted by the Manchus). With further development, also of America, this area of isolation is becoming a center of world history.

What is generally true for the relative "location" of individual organisms of production to each other—that it is as essential to the concrete formation of history as the stages of production with which it changes—is especially true also for the location of the more important sources of raw material insofar as they are scattered in various countries. If we reflect on the fact that with the increasing development of large-scale industry raw material (together with wages) becomes more and more the most important factor of production, then we must readily agree with Marx's assessment of "how important low prices of raw material are for industrial countries."[60] In Marx's time, England led capitalist production. Thus the fact that Ricardo was unable to recognize "the enormous importance to England, for example, of the acquisition of cheap raw material for industry"[61] was for Marx a serious fault. However, the location of raw material so "enormously important" for the great industrial countries is again a question of natural circumstances. There are countries simply favored by nature, which possess a kind of "monopoly" and thus "produce under the most favorable conditions."[62] In Marx's time, the *customs policy* of capitalist states was primarily determined by such considerations.[63] In the era of *imperialism*, the monopolistic associations of entrepreneurs that subsequently developed strive wherever possible to acquire control of all sources of raw material. This struggle proceeds by means of an appropriate colonial policy. Lenin wrote: "The more capitalism is developed, the more perceptible the shortage of raw material, the more acute competition and the chase after sources of raw material throughout the world, the more desperate the struggle for the acquisition of colonies."[64]

Changes in scientific insight and technological practice can thus continually bring new kinds and sites of raw materials to the fore, replacing the old as obsolete and outworn. But this change in the concrete form of application does not invalidate the principle of the fundamental importance of sources of raw material, their "location," and thus the necessity for capitalism to struggle for their control. It is precisely because of this dynamic character inherent in raw material (not by "nature" but by reason of the activity of social labor) that the struggle for sources of raw material (those already known and those which may possibly become significant in the future) in the age of imperialism is so feverish and the goals of imperialist politics so boundless. Lenin has it right: "Finance capital is not only interested in the already-discovered sources of raw material but also in potential sources because the development of technology in our time is extremely rapid and land useless today may be fertile tomorrow if new methods are found (to this end, large banks can equip special expeditions of engineers, agronomists, etc.) and more capital is applied. The same is true of the search for mineral wealth, new methods of processing and utilizing this or that raw material, etc."

Lenin also saw that "finance capital, *taking into account potential sources of raw material*, generally strives to seize the largest possible amount of land of all kinds, in all places and by whatever means, fearing it will be left behind in the mad scramble for the last scraps of the undivided world or for repartition of those that have already been divided."[65] Interest in the export of capital also necessitates conquest and the establishment of colonies. But it is quite clear that Lenin did not see that the decisive incentive behind the colonial policy of imperialism issues not from the sphere of circulation but from that of production (to which belongs the question of raw material). While he restricts his reference to the incentive for export to a few lines, he treats the incentive for raw material quite extensively in his explication of the chase after sources of raw material and takes the opportunity also to emphasize the respective significance of the natural factor (which he calls the influence of "geographic conditions"[66]). Lenin does not in any sense subscribe to the fantastic idea, given concrete credence by the production of nitrogen out of air, that technology will, so to speak, dissipate the whole problem of raw material into thin air. But Lenin did see the political meaning of a similar argument couched in economic terms that raw material "could" be bought on the free market and that this way is still cheaper and less dangerous than that of colonialism. This is clearly revealed in his statement that the reductionism of bourgeois political reformers soon turns the real relationships into praise and glorification of imperialism.[67] In the opinion of the most

ingenious student and successor of Marx and Engels, the "location" of the raw material necessary for big capitalist industry (with all its technically, scientifically and socially-conditioned modifications and possibilities) naturally determines the direction of the colonial policy of modern imperialism.

I) The Natural Factor in the Bourgeois and the Marxist Conception of History

Man and nature are for Marx the two active antagonists in the development of social production, the ultimate and inevitable ingredients of the material process of life in all its historical transformations. We have concretely proven this assertion by demonstrating how the natural factor continues to be operative in all three basic components of the process of labor, even after the appearance of socially-developed traits. While the point of emphasis on the natural side certainly shifts considerably within these components of the process of labor during the course of the historical transformations of production, there is no justification for speaking of a "receding" or disappearance of the natural factor. It has also been demonstrated that the problems of "communication" within individual organisms of production or between different organisms (whether economic or military) were theoretically considered and built into the total system of Marx's conception of history.

It would take a volume the size of Ricardo's *Principles* to encompass a study of the systematic and scrupulous consideration Marx and Engels gave to the natural factor and the space Marx devoted to the social effect of the natural factor in his various writings. Thus it appears completely incomprehensible how Graf could accuse Marx and many of his students of having neglected "the primary and given facts of nature." One might at first assume that Graf read too little Marx and too much Ratzel. But this is not the whole answer. Anyone who accuses Marx of having neglected the primary and given facts of nature may perhaps have read too *little* Marx. But it is *for certain* that he read him *incorrectly*, that he did not grasp the essential difference between Marx's conception and all bourgeois methods of reasoning.

Marx himself had to criticize the most profound bourgeois economist for getting hung up on the category of circulation when analyzing the phenomenon of production, for not really advancing to the problem of the direct producer and production itself, and thus denying himself access to an understanding of the basic structure and stratification of the process of labor. Since the three basic components of the process of labor cannot be correctly conceived, the question of the role of the natural factor in production cannot be correctly answered; even less can its changing emphasis during the course of historical development be grasped. Concentrating on *circulation*, the bourgeois economist accordingly tries to identify the role of the natural factor in this sphere. Thus he deals with questions of communication, location and "space" in the commercial and military sense. For example: Since the capitalist entrepreneur must also buy raw material, this question cannot be avoided. But since the regulative principle is lacking, it is answered in a superficial, mostly mechanical way. As with *Ratzel*, anything beyond the purely spatial problem of raw material is completely neglected. It is indicative that the term "raw material" does not even *appear* in the extensive indices of Ratzel's two main works—his *Anthrogeography* and *Political Geography*. The subject itself plays only a secondary role with respect to issues of morphology, topography and communication.

What is considered essential to an analysis of "nature" is quite different from the bourgeois standpoint of circulation (and perhaps military history) and the Marxist standpoint of society and its transformation. *For the bourgeoisie and its theoreticians the world is essentially an immense market* (even to the degree that production itself is seen from the market side) *and perhaps also an immense arena of external wars*, whereas *for Marx* the world is essentially *an immense complex of workshops* with a social form corresponding to the form of labor *and* (in addition to circulation and external wars) *class struggle*, which at a certain stage of development becomes constant within society.

Only Marx's conception connects social life with its real foundation, with the type of its material production. Only from this perspective is it possible to understand and analyze the essential aspects of nature insofar as they are economically and historically relevant to man. One has only to read Ratzel's book, *Earth and Life** (which in its own way is perfectly respectable), to recognize that this bourgeois view of the aspects of nature important to "life" does not go beyond a purely superficial, "geographical" description of nature for the simple reason that one cannot derive the inner order of the facts of nature relevant to "life" in general and the history of mankind in particular from the spheres of circulation and "communication." Bourgeois readers do not find enough "nature" in Marx's writings because Marx does not consider nature in its superficial sense of "communication" but rather from the only perspective which gets at the core of the matter—from its relation to material production (understood in the wider sense that includes communication as a very specific agent and result of production[68]).

The natural factor is more profoundly established and integrated in Marx's conception than was possible with the greatest and most daring of bourgeois geographical materialists, let alone their epigones and lesser followers. Thus one cannot speak of any "rounding out" ("fulfillment") of Marxism by geographical materialism. The steam hammer does not need to be supplemented by a stone axe. The

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purposes of Marxism cannot be served by the simple adoption of bourgeois geography of economy, settlement and communication. Marxism, especially Marxist economics, offers completely new guidelines for the proper consideration and integration of the natural factor in the historical development of mankind. Marx demonstrates in *Capital* that a distinct natural environment leads to a distinct mode of production and way of life[69] and that the "variations and shades" of one of the main features of the same economic order can only be grasped by an analysis of the empirical conditions. In addition to external historical influences, he mentions only objective and subjective natural conditions. Thus the natural factor is taken more seriously than is possible in all "geopolitical" guidelines. The starting-point is always "natural conditions and their modification through human action in the course of history."[70] The singular thesis formulated in this clause expresses the whole body of Marx's work and is repeated throughout in numerous ways. It gives us a standard by which to measure the extent to which previous Marxist historiography has succeeded in meeting the requirements Marx established for any scientific, i.e., materialist conception of history.

m) Which Factor Ultimately Determines Historical Development, the Natural or the Social?

What is the meaning of "the conditioning of nature as a starting-point"? Does this guideline merely suggest how the presentation can be simplified, or does it deal with something more profound? Anyone even slightly familiar with Marx's ideas and their methodological basis knows that behind this guideline is not merely pedagogy but a fundamental principle of analysis. It deals with perhaps the most important border-line question in the whole system of historical materialism. At a certain stage of development the material powers of production combined and actively expressed in a particular mode of production of material life condition the social, political and intellectual process of life.[71] Agreed. But what conditions the development of the powers of production? They contain both a social and a natural factor.[72] Which of these is the "driving" factor? Is this even the proper question? Are perhaps both factors jointly decisive in a very specific combination? This is the question that now needs to be answered.

Mostly this question has been asked in a broader and more general form, in the sense that socially-laboring man was juxtaposed to "nature" in general. If we understand the term "nature" to mean all those natural conditions which under certain historical circumstances become active as powers of production, as "naturally-conditioned powers of production," then we can accept the term in this broader sense. We have seen that the geographical materialists assumed that history is one-sidedly determined by nature (in part mediated by the process of labor, in part directly by a short-circuit). This standpoint was later and often adopted; in a particularly unfortunate form by the geopoliticians. Bourgeois scientists, guided by a naive mechanistic materialism, are fond of repeating this thesis. Engels rejected their standpoint as "one-sided," calling it "the naturalistic conception of history."[73] The one-sidedness (not to say, incorrectness) of this position consists in the fact that *human activity* is not considered. It expresses a type of contemplative materialism similar to Feuerbach's conception. The "active side" is completely ignored.[74]

The opposite one-sidedness would consist in a similarly exclusive stress on the significance of human activity. However, this position implies a far more dangerous deviation from the standpoint of dialectical materialism because it ignores dialectics. This is also true of the naturalistic position. But the activistic position also ignores materialism (which the naturalistic position vigorously upholds, if in a mechanical way). Consequently, in its further development it leads to the idealistic standpoint of the domination of spirit over nature, consciousness over being. In his later writings, Kautsky carries this standpoint to its logical conclusion. By adopting Hodgkin's position (whose subjectivism Marx rejected), he ultimately turns the question of the development of the powers of production into the question of the development of natural science: "The developmental stages of the material powers of production arise from the developmental *understanding of nature* and its technical application."[75] By emphasizing only one of the various factors of the "socially-conditioned powers of nature" (namely science), Kautsky sets aside as derivative what Marx sets forth as the primary material core, "the true *prius*, the starting-point,"[76] the objective organ of the process of production. Whereas in other places he makes some allowances, Kautsky here also totally denies the determining influence of the natural factor; in relation to society, natural conditions remain "almost always the same."[77]

Lukács' thesis that "the fundamental determination of social development. . . . [is evident] in the interaction of human social relations within the process of production"[78] repeats within the sphere of economics the idealistic idea of the dominant significance of subjective factors in the historical process. While Marx always emphasizes that the social forms of life are derivative, Lukács reverses this relation. With Lukács, it is not (as with Marx[79]) the mode of production which determines the relations of production but the opposite. Moreover, if Lukács' formula were interpreted to mean it is the organization of people in the process of production that constitutes the decisive factor of development, it would accordingly imply that one of the social factors of the mode of production (namely the organization of labor) is the overlapping factor effecting the development of all other powers of production. This would be analogous to Kautsky's conception (which falls back on Adam Smith's old thesis of the decisive significance of the division of labor)—the subjectivistic attack on Marx's thesis of the "determination of the organization of labor by means of production."[80] Be that as it may, Lukács' con-

ception of the interaction of human relations within the process of production thoroughly contradicts the active materialist composition of society; it contradicts both the letter and the spirit of Marx's conception. By insisting that nature is a "social category"[81] and that if conceived independent of society it becomes a fetish,[82] Lukács reconstructs with economic means Kant's idealistic theory of knowledge. Lukács' nature-"fetish" is in fact the objective, material, external world which exists prior to all social relations. Marx took its "priority" to be self-evident[83] and (following Marx, Engels and Lenin[84]) it has been taken as the starting-point of all dialectical-materialist criticism of knowledge.

The natural factor is also lost in Gorter's conception of development determined by the character of technology in that he over-emphasizes the technical activity of socially-laboring man and accordingly perceives the means of labor as having central significance within the sphere of the social powers of production (even going so far as to identify technology with the powers of production). When he later added that the process of production is not the only cause of development, that "geographical factors [also] play an important role,"[85] nature and the process of labor in his thesis became two arbitrary and opposing factors whose inner connection is not perceived. With such a superficial adoption of the natural factor, it is thus not surprising that Gorter does not even begin to know what to do with it. Having paid his respects to it, he rests content with the notion that technology is the basic driving force of development.

With this we end our critical survey of the two one-sided attempts at solving the problem. Both contain partial truths. But human activity is lost in the mechanical materialism of the naturalistic conception and materialism is lost in the emphasis on this activity in the other. On both sides the genuine dialectical way of treating the question is completely ignored. How should this question be asked and answered in the proper sense of Marx's materialist dialectic? What does Marx tell us?

Man makes his own history. But he does so under the very definite circumstances in which he finds himself and not those he himself has chosen.[86] This is as true for the industrial as the political history of mankind. An active materialism, which stresses human activity, stresses at once the objective conditions under which this activity can alone be effective. On the one hand, there are the given *social* conditions to which this activity is tied—those understood in the wider sense (class stratification, the type of state, legal relations, ideology) and in the narrower sense, such as the social "conditions" of production which enter directly into the process of production as social powers of production (the means of labor, the organization of labor and the qualification of labor). On the other hand, there are the *natural* conditions. Social labor proceeds under general and given conditions whereby it influences nature through the social powers of production corresponding to the stage of production. It is as impossible for social labor to proceed under any other than these two sets of social conditions as it is that it would not do so under objective natural conditions, without which there could be no process of labor, no creation of material wealth at all. Which side now "drives" the process of historical development: man with his social forms of labor or nature, which is not created by social labor but is yet the ultimate material substratum of all labor?

Marx initiated the answer to this question in a reference to one of [the English political economist, Sir William] Petty's remarks that labor is the father, the "earth" the mother of material wealth.[87] Thus each of the two inexorable creators of all wealth executes a *fundamentally different function*. Man and his social activity represent the principle of unrest,[88] of movement; nature (original or modified), the objective substratum which *directs* (or fails to direct) *this activity in a quite definite direction through its material structure*. Although man has an active relation to nature through the social process of labor, at any given stage of the social powers of production he can only organize his activity in accordance with the natural *means* of labor and natural *objects* of labor he has plucked from the earth. Which naturally-conditioned elements are "tapped" by socially-laboring man is above all determined by the totality of the socially-developed powers of production (labor skills, science and its technological applicability, the organization of labor, the volume and efficacy of produced means of production). But the direction of the change in the social form of the process of labor (and whether there is a change at all) is not dependent on the arbitrary will of productive man but on the type, wealth and combination of the naturally-conditioned powers of production socially "available" at any given time. Mankind progressively develops only through a progressively deeper adaptation to the specific structure of nature (actually accessible).

If the totality of the powers of production determine the character of the mode of production at any given historical moment, it is the social aspects which (being the actively-motivating agents) determine change, whereas the naturally-conditioned agents determine whether and if change is possible and accordingly the direction of this change.[89] *Even as man puts nature to his "service", he thereby submits himself to nature* (Plekhanov)[90] *and follows her.* It is self-evident that in the course of history man effects changes in his natural environment by constantly modifying it and that these modifications have repercussions on man himself. He must accordingly modify the way in which he effects changes in the natural environment he himself has modified.[91] The basic relationship ("father" and "mother," active movement and passive determination of direction) undergoes substantial and remarkable modifications in the process; but remains unchanged. There are, of course, a great number of secondary factors which play a role in the formation of the social process of production—the social conditions of the process, political and legal forms, the profusion of "higher ideologies" (alto-

gether, a possibly tremendous weight of tradition), the effects of other organisms of production—what Marx called the "interplay of international relations." All these secondary factors are certainly able to influence the fundamental relation between geography and economy but are in no sense able to abolish it.[92] In the last instance, the geo-economic factor exerts its dominance over all secondary factors as the basis of all social movements.

All this is possible only if the "nature of the matter" (i.e., nature) permits an increase in the social powers of production. As we have shown, such is not in fact determined by and certainly not "driven" by conditions brought about through human labor but through "uncontrollable natural conditions" mediated by both spheres of production (agriculture and extractive industry).[93] In a little-noted, but highly significant, place in the first volume of *Capital* Marx includes a passage indicating the role of the naturally-conditioned powers of production: "*Different communities find different means of production and different means of subsistence in their natural environments. Their modes of production, ways of life and types of products are therefore [!] different.*"[94] The way in which settled peoples of the Old and New World were able to develop their agriculture also depended on the "different natural endowments of the two great continents." The Eurasian continent "possessed almost all the animals suitable for domestication and all the grains suitable for cultivation, with one exception; the American continent contained only one animal suitable for domestication, the llama (and this only in one part of South America) and only one grain suitable for cultivation, if the best, maize. *Owing to these different natural conditions each hemisphere went its own way. . . .*"[95] The Eurasian continent was split between ancient and feudal agricultural society and an enormous belt of "Asiatic" organisms of production. While feudal agriculture remained at a relatively "crude" level,[96] because the only essential aspect of the "machine" of nature utilized was the fertility of the soil; in the "Asiatic" areas a second and tremendously effective natural power of production in the form of irrigation water was activated to increase crop yields. Again, it was a very definite constellation of naturally-given agents that impelled the higher development of the "Asiatic" form of agricultural production. As Marx writes, it is not the absolute fertility of the soil but

> its differentiation, the manifold variety of its natural products, which forms *the natural foundation of the social division of labor* and, *through changes in natural conditions, spurs* man on *to the multiplication of his own needs, capacities, means and modes of labor.* It is the necessity of socially controlling a power of nature, of domesticating it, of human hands appropriating or controlling it on a large scale that plays the most decisive role [!] in the history of industry. Thus, for example, the regulation of water in Egypt, Lombardy, Holland, etc. Or irrigation in India, Persia, etc., where artificial canals not only supply the soil with indispensible water but also mineral fertilizers from the hills in the form of sediment. . . ."[97]

Owing to the prevailing "climatic and soil conditions" in the "Asiatic" areas, there was the necessity to supply the soil with indispensible water, the "absolute necessity of a sparing and economical use of water."[98] Where the prerequisites of size were met (not in Japan!), there developed a particular type of state, Asiatic despotism, with a type of agricultural labor that generally provided a sharp contrast to the crudeness of the feudal type with its scant development of the social powers of production.[99] "Small-scale agriculture (horticulture)," with its almost "wasteful" development of a part of the social powers of production[100] (the qualification and intensity of labor),[101] as, for example, in the rice areas of China or the areas of Japan based on irrigation, is a further and perfect example of the world-historical significance of the natural factor for the development, or non-development, of the social powers of the process of production. Once again, it is the dissimilar structure of the naturally-conditioned powers of production within the irrigation areas, of the prerequisites of size allowing for irrigation to promote unified integration,[102] that brings about large-scale stratification of large-scale forms of agricultural labor as well as large-scale forms in political life:

> 1. *The Egyptian Type* includes, in addition to Egypt, above all ancient Babylon and, despite a number of mitigating circumstances (which are nevertheless compensated for by countervailing tendencies), also China. The overlapping role of centralized waterworks: centralization in China was prevalent only on the provincial level. Still, the country exhibited a relatively "pure" form of Asiatic despotism. Owing to its "isolation" at a particular stage of production, great military-feudal tasks within the unified cultural area were not essential; whereas in classically-unified Egypt the interplay of international relations periodically brought about relations of production with a feudal coloration. Ruling stratum: an administrative officialdom educated in literature with a partly secular, partly religious orientation (the Chinese mandarins were also the bearers of the cults of the state religion!).
> 2. *The Japanese Type* has no "extensive spatial sphere" of irrigation and drainage construction; the river areas could be handled locally. Thus one finds many isolated centers of production with military superstructures, many classical examples of military-feudal forms. The literati and priests of the "Egyptian" type contrast sharply with the warriors of this social structure; the literary Confucianism of China and its disdain of all military virtues (neither of the feudal arts of the charioteer or the archer were taught by Confucius[103])

found its feudal counterpart in Japan in the form of Bushido ideology.

3. *The Indian Type* finds its characteristic feature in that the powers of nature controlled by waterworks assume a middle position between the dimensions of Japan and China. Fragmented, they simultaneously exhibit the large tasks of waterworks as well as all conceivable military-feudal tasks. The ruling class is composed of both castes (priests and knights); since they are antagnistic, the predominance of one or the other fluctuates. The middle position of the structure of the powers of production is matched by a middle position of the mode of labor as well as the social and political structure.

Marx has provided the methodological foundations for a concrete analysis of these examples. We have already outlined such an analysis and in a larger work will attempt to develop the problem extensively, concretely, and with full documentation in order to demonstrate the fruitfulness of Marx's way of handling the natural factor and what it means when Marx insists that concrete historical analysis should take the conditioning of nature as the starting-point. In the historical stages treated thus far, the naturally-conditioned powers of production were crucial for establishing the direction of development of the production of food, soil fertility, irrigation water, etc. As far as the role of the natural factor is concerned, these naturally-conditioned powers of production are decisive in the beginnings of cultures. At a higher stage of development, i.e., in the age of the unfolding of large industry, "the second type of natural wealth is decisive," namely "natural wealth in the means of labor, such as active waterfalls, navigable rivers, wood, metal, coal etc. . . . For example, compare England with India or, in the ancient world, Athens and Corinth with the coastal countries of the Black Sea."[104]

Different from the geographical materialists (Montesquieu or Buckle, for example), Marx indicates that in an age of higher economic development the demonstrable effect of the natural factor does not end; it only assumes a new form. In terms of effectiveness, other groups of natural agents come to the fore to replace the previous ones. In Asiatic India, nature exercised its primary influence on the structure and productivity of agriculture. In capitalist England, the great industrial categories of raw material like metal and coal and the equally essential means of labor of transport industry and navigable waterways are becoming the natural foundation of the present industrial division and arrangement of labor. Marx did not thoroughly analyze the details of this process. But the foregoing remark as well as a multitude of other statements he made dealing with the significance of the quantity and location of large sources of raw material give us the methodological guidelines for the concrete and empirical writing of history. Of course, not one step can be taken toward answering the question of the transition to industrial capitalism without clarification of the sociohistorical prerequisites. However, if we are not satisfied to stop there but wish to explain why the transition to and development of industrial capitalism has evidenced such "infinite variations and shades" and still does so today we must take our starting-point from the natural conditions and their historical modification.

In the first part of this article we indicated why France, arguably the country of the classic bourgeois revolution, did not achieve an industrial development comparable to that of England, which even during its bourgeois period was over-laid with feudal remnants. Since the social conditions of capitalist production in France exhibited such an extraordinary purity, other and negative conditions must have had the effect of stifling development; perhaps even natural conditions. As Marx tells us, progress in the social conditions of production can be almost completely, or more than completely, absorbed by unfavorable natural circumstances. Plekhanov, who in our view expresses Marx's standpoint with full clarity, says that in England's history "*the geographical milieu has never ceased to exert its influence on the economic development of the country, albeit in different ways and by different means.*" It exerted its influence on the population of the country and the formation of its material production in a completely different way during Cromwell's time than Caesar's. Like Marx, Plekhanov emphasized that it would be a blatant error to mistake the *change of form* for a *cessation* of the effects of the natural factor.[105] Above all, it was Plekhanov's great student Lenin who later put his finger on the significance of the differentiation of "geographic conditions" in the age of imperialism.

Lenin mentions England first among the countries that developed more slowly in recent times, evidently also as a result of geographic conditions. That was in 1917. Today we have before us the so-called *Coal Report*, which strikingly indicates the effect of the decline in England's natural wealth of raw material on its production. Although the English bourgeoisie has all kinds of reasons to explain the rising cost of production—above all, the decrease in working hours, the increase in protective regulations for labor, etc.—they draw the conclusion that these profit-lowering conditions must be reduced in order to make British industry again competitive. But the experts of the British bourgeoisie cannot avoid acknowledging that the *physical* difficulties in exploiting coal are becoming more severe and increasing at a faster rate than the countervailing power of technology: "Technical progress and intelligent organization" makes deeper and thinner deposits of coal more accessible than in the past, but "the fact remains that the difficulties are growing. The easily accessible coal deposits of Great Britain have long been depleted; production can only be maintained from year to year by turning to deeper deposits or those more difficult to reach." This is substantiated with figures and, as one of the consequences, by the fact that the shafts are getting deeper, the tunnels longer, and the number of idle on-site miners relative to the cost of labor is increasing.[106] Where once 214 miners were employed, now there are 245.[107] Although attempts have

been made to attribute this to *social* causes (to the effect that men can be laid off!), it must still be admitted that there is a certain "probability" that the larger number of workers in this category is a "reflection of the growing physical difficulties which English mining has to contend with now and in the future."[108] It is claimed that only the harnessing of all social components of the process of production (in addition to technical rationalization, particular stress is put on the lowering of wages and reducing the level of working conditions) will be able "to compensate for the inevitable deterioration of the physical conditions of mining in a country where the easily-accessible sources have long been depleted."[109] It would be as foolish to *deny* this fact (since it could also be used against the miners) as it would be a political mistake to conclude from it that the workers of England had necessarily to *submit* to a reduction in the level of working conditions willed by the entrepreneurs. What in principle was Marx's answer to this situation? Having already observed in 1850 that "the disadvantages of the geographic location" of Europe as compared with America threatened a decline in the industry and trade of the Old World, he did not even consider denying the relative change in favorable natural conditions. On the contrary, he proclaimed that the "only chance" for modern European countries lies "in a *social revolution* which, so long as there is still time, revolves on the mode of production and communication corresponding to the needs of production arising from the modern powers of production and thereby *makes possible the generation of new powers of production* which will ensure the superiority of European industry and thus *compensate for the disadvantages of geographic location.*"[110]

This is the first materialist formula to fully recognize the seriousness of the situation in all its contradictions. It is the first to offer a revolutionary and progressive solution to the difficulties inherent in it and simultaneously leads us from the role of the natural factor in all the major stages of previous history discussed thus far to the question of the role of the natural factor in *socialism*. Following Marx, we have already stated that the material wealth of society will then also depend on the "more or less abundant conditions of production." But is this purely an "historical" question? Is there nothing more to say about it *in principle*? Most assuredly. The breakthrough to socialism signifies an enormous release of the *social* powers of production—once the organization of socialist construction begins, so also does the kind of development of the subjective conditions of the process of labor, of the decisively-important *productive powers of labor* that was necessarily crippled under capitalism. It ends with an overcoming of the kind of chaotic and anarchistic wastefulness characteristic of the capitalist organization of production and the formation of the objective, material means of labor.

This revolution in the *social side of production*, forcefully brought about by the development of the material powers of production initiated in capitalism, also signifies *a fundamentally-changed attitude toward the natural conditions of labor*. If the previously-developed social and natural powers of production can only be developed further by blasting the old social conditions of the process of labor, and on this basis instituting what are initially new powers of production, this at once signifies a dialectical shift in that on the *natural side of production* these new *social* powers are able to tap completely new natural powers of production that were previously unexploitable or to creatively utilize previously-exploited natural powers in the service of social production. The prudence Marx exercised in his often-repeated references to the (still very significant) tendency of the natural factor to decrease in influence should not be taken as moralistic and propagandistic but as stemming from his scientific insight into the real mechanism of history, from his thoroughly *optimistic* estimation of the formation of the powers of production within the framework of a communist economic order.

The conquest of "society" (in the sense that the social process of labor is for the first time consciously and rationally organized) is bound up with a "conquest of nature" whose scope surpasses even the wildest dreams of the poets of our epoch. Even so, no such "conquest" can abolish the fundamental relationship: *We will never "dominate nature as a conqueror dominates a foreign people, as someone who stands outside of nature."* (Engels). Such a notion would be a relapse into an idealistic Christian dualism, which is easily arrived at through a one-sided and activistic conception. But such has nothing to do with Marx's materialism. As Plekhanov explained: "Man always submits himself to nature, even as he puts nature to his 'service'." In our presentation we have essentially followed Plekhanov, while at the same time attempting to elaborate the details and conclusions of his fundamental insights.[111] "As man submits himself to nature, he therewith increases his power over nature, i.e. his freedom."[112] This law is not abolished under socialism; it is changed in a way best suited to the nature of man. As Marx said in his famous exposition on the realm of freedom:

> *As the savage must wrestle with nature* to satisfy his needs, to maintain his life and to reproduce, *so must civilized man; and he must do so in all forms of society and under all possible modes of production. The realm of natural necessity expands together with his development* because his needs expand. But the powers of production to satisfy these needs expand simultaneously. In this sphere, freedom can only consist in that socialized man, the associated producers, rationally govern their metabolism with nature and bring it under their social control, rather than being dominated by it as a blind power. They accomplish this with the least expenditure of energy and under conditions most worthy of and best suited to human nature. *But this always remains a realm of necessity.* Human development as an end in itself, *the true realm of freedom, begins beyond it.*

All the same, it can only flourish on the basis of this realm of necessity.[113]

This brings us to the end of our investigation. We have attempted to present an explication of the role played by the natural factor in the system of historical materialism. In contrast to all the other interpretations, which take either a passive "naturalistic" or a one-sided activistic standpoint, it was our goal to develop the true dialectical-materialist conception of Marx and Engels. Although this conception was not presented by the founders of scientific communism in a *consistent manner*, the great number of fundamental remarks and concrete investigations (together with the fundamental dialectical-materialist observations of both Marx and Engels) constitute in and of themselves an unequivocal and *coherent whole*. Once the totality of the work of Marx and Engels was thoroughly read and analyzed in this regard, the synthesis (so to speak) revealed itself. If Marx and Engels set forth the postulate in their critique of Feuerbach that the writing of history must start from the determinations of nature, if Marx repeated this postulate with particular reference to economic analysis in the Introduction to his *Critique of Political Economy*, and if in the first volume of *Capital* he emphasized the *forward-"propelling"* role of natural conditions in a particular combination, and in the third volume that the variations and shades of economic orders with the same essential conditions require in addition to an analysis of the external historical conditions above all a determination of the objective and subjective natural conditions, then Plekhanov's thesis that only an investigation which combines both the natural and the social conditions of production can disclose "the innermost secrets of history" is the only truly legitimate reproduction of the letter and the spirit of Marx's conception of history.

The fruitfulness of an analysis which actually draws its deductions from the powers of production must prove itself threefold. The value for Marxist *historiography* is obvious. Lenin emphasized the significance of the natural factor for the *analysis of the unequal development of imperialist states, as well as for the directional thrust of the colonial policy of imperialism*. Finally, there is no question that the proper theoretical and practical assessment of the natural factor is also of the highest priority for *problems of the construction of socialism*.

If the various functions of the social and natural conditions of the material process of life are clearly understood in the Marxist sense, then social labor as the active side of the process is attributed the highest significance. Without it there would be no movement, no "unrest" in the history of mankind. Still, let us not forget (lest we only repeat with different symptoms the failure of the contemplative materialists reported by Marx) that all human social activity is ultimately bound to a given material substratum—"nature"—whose peculiarity is decisive for determining the direction of human labor, whether society remains unchanged, whether it moves backwards or forwards, i.e., whether to a lower or higher form of the productivity of human labor. *Active* materialism? Yes! But also: active *materialism*! From the standpoint of dialectical materialism, the question of the relation between man and nature can only be answered in this way.

NOTES: I

1. Georg Engelbert Graf, *Die Landkarte Europas gestern und morgen* (Berlin, 1919), p. 29.
2. Idem, "Geographie und materialistische Geschichtsauffassung," *Der lebendige Marxismus* (Jena, 1924), p. 563.
3. Ibid., p. 587.
4. Karl Haushofer, "Grundlagen, Wesen und Ziele der Geopolitik," *Bausteine zur Geopolitik*, Edited by Haushofer et al. (Berlin-Gruenewald, 1928), pp. 47 ff.
5. Ibid., p. 38.
6. Ibid., p. 41.
7. Ibid., p. 31.
8. Graf explains that now "is the time to integrate the results and methods of geographical research (insofar as they are relevant) into the otherwise incomplete [sic!] edifice of historical materialism." ("Geographie und materialistische Geschichtsauffassung," *Der lebendige Marxismus*, op. cit., p. 565.)
9. In personal conversations with Communist comrades I have repeatedly been assured that Horrabin's Marxism is easy to understand and accept. As the German translator of Horrabin's *Economic Geography: A Study Course for Students* (London, 1923), I am certainly aware of the positive qualities of the book. But again and again I have had to caution its over-enthusiastic readers that Horrabin's geographical materialism, to its great loss, repudiates the fundamental directives of historical materialism in essential points.
10. Ferdinand Richthofen, *Siedlungs-und Verkehrsgeographie* (Berlin, 1908).
11. Friedrich Ratzel, *Politische Geographie*, Third Edition (Munich and Berlin, 1923).
12. Idem, *Anthropogeographie*, Third and Fourth Editions (Stuttgart, 1921 and 1922).
13. Rudolph Kjellén, especially: *Die Grossmaechte der Gegenwart* (Leipzig and Berlin, 1914) and *Der Staat als Lebensform* (Leipzig and Berlin, 1917). On Kjellén, from a sympathetic standpoint, see R. Sieger, "Rudolf Kjellén," *Zeitschrift fuer Geopolitik*, Vol. I (1924), pp. 339-346.
14. Particularly characteristic of the leading geographers' change in perspective is that undergone by the well-known scholar Alexander Supan, also often cited by Lenin. In 1876 he expressed the opinion that "so-called political geography . . . should find no place in the scientific system of geography" in his article, "Gruendzuege der physischen Erdkunde," *Mitteillungen der Geographischen Gesellschaft* (Vienna, 1876), p. 73. Then, in the 1918 foreword to Supan's *Leitlinien der Allgemeinen politischen Geo-*

graphie (Second Edition, edited by Erich Obst, Berlin and Leipzig, 1922), he openly declared that the war had reinforced his growing conviction "that in the future one should unquestionably devote greater attention to the political side of geography."

15. Haushofer gives a good account of this double bankruptcy, which nevertheless fails to advance from pure description to explanation of the inner causes (*Bausteine zur Geopolitik*, op. cit., pp. 29 ff., 56 ff. and 61 ff.).
16. At this point we will not bother to list the most important works of this voluminous literature; but in the course of our study we will nevertheless have occasion to cite the titles of a number of representative works. A complete list can be found in the *Zeitschrift fuer Geopolitik* and in sketches of the development of Geopolitics by E. Oberhummer ("Die politische Geographie vor Ratzel und ihre juengste Entwicklung," Appendix to Ratzel's *Politische Geographie*, Third Edition, pp. 597 ff), Graf ("Geographie und materialistische Geschichtsauffassung," *Der lebendige Marxismus*, op. cit., pp. 574 ff.) and above all Haushofer's overview of the older literature (*Bausteine zur Geopolitik*, op. cit., pp. 31 ff., 43 ff. and 59-73). See also the statements of the four editors of the *Zeitschrift fuer Geopolitik* (*Bausteine zur Geopolitik*, op. cit., pp. 3 ff.) and the works of English, French and Soviet-Russian writers.
17. *Bausteine zur Geopolitik*, op. cit., p. 27.
18. Ibid., p. 67.
19. Ibid., p. 55.
20. Karl Marx, *Das Kapital*, Fourth Edition (Hamburg, 1919), Vol. III, Part 1, p. 297; Part 2, p. 316.
21. Idem, *Theorien ueber den Mehrwert*, Fourth Edition (Stuttgart, 1921), Vol. II, Part 1, pp. 56 ff.; Part 2, pp. 12ff.
22. The letter about Darwin that this conservative scholar wrote to his mother shows that, within the limits of his class, he dared to side with a new perspective against the viewpoints of this class, even when it meant the sharpest offense to the feelings of his comrades. (*Tagebuecher aus China*, Berlin, 1907, Vol. I, pp. 207-210).
23. Richthofen, *Siedlungs-und Verkehrsgeographie*, op. cit., p. 144.
24. Ibid., p. 348.
25. Ibid., p. 137. See also p. 170.
26. Ibid., p. 136.
27. Ibid., p. 105.
28. Ibid., pp. 123 129, and 345 ff. The mistakes in Richthofen's analysis of China resulting from his methodological weaknesses will be discussed at length below.
29. Richthofen, *Tagebuecher aus China*, op. cit., Vol. I, p. 144.
30. Idem, *Schantung und Kiautschou* (Berlin, 1898), p.307.
31. *Aus dem literarischen Nachlass von Karl Marx und Friedrich Engels*, Third Edition (Stuttgart, 1920), Vol. III, p. 445. See also, "Karl Marx ueber China und Indien," *Unter dem Banner des Marxismus*, Vol. I, No. 2, pp. 379 and 383.
32. Richthofen, *Siedlungs-und Verkehrsgeographie*, op. cit., p. 351.
33. "Karl Marx ueber China und Indien," *Unter dem Banner des Marxismus*, op. cit., p. 401.
34. Ratzel, *Politische Geographie*, op. cit., p. 90.
35. Ibid., p. 3.
36. Ibid., p. 4.
37. Ibid.
38. Ibid., p. 80.
39. Ibid., p. 16.
40. Ibid., p. 169.
41. Ibid.
42. Ibid.
43. Ibid., p. 173.
44. Georgi V. Plekhanov, *Die Grundprobleme des Marxismus* (Stuttgart, 1920), pp. 45 ff. and 53 ff.
45. Ratzel, *Politische Geographie*, op. cit., p. 35.
46. Ibid., p. 48.
47. Marx, *Das Kapital*, op. cit., Vol. I, pp. 46, 48, etc.
48. Ratzel, *Politische Geographie*, op. cit., p. 520.
49. Ibid., p. 521.
50. Ibid., p. 522.
51. Ibid.
52. Rudolf Kjellén, *Der Staat als Lebensform* (Leipzig, 1917 and later).
53. Ibid., p. 178.
54. Ibid., p. 191.
55. Ibid., pp. 191 ff.
56. Ibid., p. 181. Here Kjellén speaks of the curbs which must be put on the selfishness of classes (he discretely omits mention of which classes he means, but this is certainly clear from the above-cited quotation).
57. Ibid., p. 195.
58. Ibid., p. 196.
59. Rudolf Kjellén, *Die Grossmaechte der Gegenwart*, Nineteenth Edition (Leipzig-Berlin, 1918).
60. Ibid., p. 4.
61. Idem, *Der Staat als Lebensform*, op. cit., p. 53.
62. Ibid., p. 157.
63. Ibid., pp. 157 ff.
64. Ibid., p. 164. Kjellén also approaches the problem of autarchy in terms of agrarian states. The only example he offers is Tsarist Russia (p. 165). He is certainly only interested in the "Great Powers," i.e., contemporary *imperialist* states.
65. Ibid., p. 163.
66. Idem, *Die Grossmaechte der Gegenwart*, op. cit., p. 91.
67. Georg Brodnitz, *Englische Wirtschaftsgeschichte* (Jena, 1918), p. 438.
68. Ibid., p. 233.
69. Kjellén, *Die Grossmaechte der Gegenwart*, op. cit., p. 91.
70. Ibid., p. 58.
71. Ibid., p. 44.
72. Ibid., pp. 44 ff.
73. Ibid., p. 18.
74. Ibid., p. 49.

75. Ibid., p. 50.
76. Ibid., p. 47.
77. Ibid., p. 180.
78. Ibid., p. 181.
79. Ibid., p. 75.
80. Ibid., p. 83.
81. Ibid., p. 205.
82. For example, one may read about the role Kjellén plays in Haushofer's presentation of the "official history" of Geopolitics (*Bausteine zur Geopolitik*, op. cit., pp. 29 ff. and 32), where respectful note is taken of the practical application Kjellén "has given to the practice of Geopolitics" with his *Grossmaechte der Gegenwart*. See also pp. 49 ff., 52, 54 ff., 57, 59 and 73).
83. *Bausteine zur Geopolitik*, op. cit., p. 3.
84. See Kjellén's *Grossmaechte der Gegenwart* (op. cit., pp. 46 and 68), where the modern labor movement is discussed in an aggressive as well as incomprehensible manner.
85. Ibid., p. 85.
86. Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. III, p. 78.
87. Idem, *Das Kapital*, op. cit., Vol. I, p. 499.
88. Idem, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 1, p. 72.
89. Concerning the relation of Marxism to the purely inductive method, see the section on methodological foundations in Wittfogel, "Probleme der chinesischen Wirtschaftsgeschichte," *Archiv fuer Sozialwissenschaft und Sozialpolitik*, Vol. 57 (1927), published in Russian in the same year.
90. See especially Haushofer, *Zur Geopolitik der Selbstbestimmung* (Munich and Leipzig, 1923); also, *Grenzen in ihrer geographischen und politischen Bedeutung* (Berlin, 1927).
91. On the changing historical significance of the Rhine, the Andes and the Hindu Kush, see Ratzel, *Politische Geographie*, op. cit., p. 84.
92. Haushofer, *Grenzen in ihrer geographischen und politischen Bedeutung*, op. cit., p. 14.
93. Idem, *Zur Geopolitik der Selbstbestimmung*, op, cit., p. 93.
94. Ibid., p. 92.
95. What Haushofer says about the political corporations based on rice as opposed to wheat and millet economy is incorrect in the form he has chosen. If the cultivation of millet is combined with irrigation, it has completely similar effects of binding the peasantry to the soil, as the Huangho areas evidence. The fact that single cultivation of certain plants such as rice endangers the economic self-determination of a natural landscape (*Zur Geopolitik der Selbstbestimmung*, op. cit., p. 116) is also incorrect in the sense of Haushofer's own fundamental conception, i.e., completely aside from the mystifying terminology. The example of Japan, which he knows so well, could have taught him that it really takes something more than rice to cause political passivity.
96. Haushofer, *Zur Geopolitik der Selbstbestimmung*, op. cit., p. 120.
97. *Zeitschrift fuer Geopolitik*, Vol. IV (1927), p. 190.
98. *Bausteine zur Geopolitik*, op. cit., p. 42.
99. Haushofer, *Zur Geopolitik der Selbstbestimmung*, op. cit., pp. 149 ff. See also Haushofer, "Geopolitische Einfluesse bei den Verkoerperungsversuchen von nationalem Sozialismus und sozialer Aristokratie," *Zeitschrift fuer Geopolitik*, Vol. I (1924), pp. 127 ff. Here one also finds the miserably-supported thesis that it is impossible to realize international socialism from control of the soil. Why? Because, according to Haushofer, the "optimum size of landed property that a certain number of people can hold and uniformly cultivate" differs in every habitable area of the earth. (*Zeitschrift fuer Geopolitik*, Vol. I, 1924, p. 128). Haushofer evidently read somewhere that the essence of communism is to make all agrarian units the same size. From which comic book he derived this wisdom is unknown to us. But it is indicative of the "level of information" of geopoliticians that not even the most erudite of their contemporary German representatives knows the ABC's of revolutionary Marxism.
100. Haushofer, *Zur Geopolitik der Selbstbestimmung*, op. cit., p. 158.
101. *Bausteine zur Geopolitik*, op. cit., p. 40.
102. Ibid., p. 76.
103. Ibid.
104. Erich Obst, "Wir fordern unsere Kolonien zurueck!", *Zeitschrift fuer Geopolitik*, Vol III (1926), pp. 152 ff.
105. Ibid., p. 153.
106. Ibid., p. 156.
107. Ibid., p. 157.
108. Ibid., p. 159.
109. Ibid., p. 160. (Obst's italics).
110. Particularly noteworthy in this connection and others are the writings of Arthur Dix, for instance his *Politische Erdkunde* (Breslau, 1922) wherein he also evidences a lively interest in "winning back African colonial possessions" (p. 85). Dix presents a thesis startling to every serious student of Marx, namely that the reason why the Jew Marx attacked industrial capital so sharply was to free "floating loan capital" (*Politische Geographie*, Munich and Berlin, 1921, p. 149). For the word "imperialism" Dix found the nice translation "national sentiment," behind which is hidden not usury capital, which Marx identified and criticized more tellingly than perhaps any serious economist before him, but the attempt to morally *exculpate* the plunderous policy of the imperialistic bourgeoisie. The same Dix has naively equated the guided principles of world politics with those of imperialism. According to him, these are: the striving for sources of food, raw material, markets for export and investment (*Politische Geographie*, op. cit., pp. 36 ff.). Siegfried Passarge (*Die Erde und ihr Wirtschaftsleben*, Hamburg and Berlin, 1926) is not a geopolitician in the narrower sense, but he is close to geopolitical thinking in the way he handles social and political questions. He combines his geoeconomic approach with a racist metaphysics for which the characterization "vociferous anti-Semitism" is scarcely strong enough.
111. Graf, *Die Landkarte Europas gestern und morgen*, op. cit., p. 29.
112. Ibid.
113. Ibid.

114. Ratzel, *Anthropogeographie*, op. cit., Vol. I, pp. 372 and 378.
115. Karl Marx, "Die Britische Herrschaft in Indien," *Unter dem Banner des Marxismus*, Vol. I, No. 2, p. 386.
116. Idem, *Das Kapital*, op. cit., Vol. I, p. 478.
117. Ratzel, *Anthropogeographie*, op. cit., Vol. I, p. 354.
118. Taken from Ferdinand Wohltmann, *Die natuerlichen Faktoren der tropischen Agrikultur* (Leipzig, 1892), pp. 63 ff.
119. Graf, *Die Landkarte Europas gestern und morgen*, op. cit., p. 56.
120. Ibid., p. 78.
121. Ibid., p. 77.
122. Ibid., p. 89.
123. Ibid., pp. 89 ff.
124. Friedrich Engels, *Der Ursprung der Familie des Privateigentums und des Staats*, Fifteenth Edition (Stuttgart, 1918), p. 154.
125. Graf, *Die Landkarte Europas gestern und morgen*, op. cit., p. 26.
126. Ibid., pp. 80 ff.
127. Graf, "Geographie und materialistische Geschichtsauffassung," *Der lebendige Marxismus*, op. cit., p. 587.
128. Georgi V. Plekhanov, "Die Zivilisation und die grossen historischen Fluesse," *Die Neue Zeit*, Vol. IX, No. 1, pp. 437-448.
129. See Friedrich Ratzel, *Die Erde und das Leben* (Leipzig and Vienna, 1902), p. 631, wherein Ratzel expressly denies that his approach leads to a "materialist conception of mankind and its history."
130. Adolf Guenther, "Ueber Frankreichs geopolitische Stellung," *Zeitschrift fuer Geopolitik*, Vol. I, No. 6, pp. 347 ff.
131. J. F. Horrabin, *Grundriss der Wirtschaftsgeographie* Verlag fuer Literatur und Politik (Vienna and Berlin, 1926), p. 176.
132. Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 2, pp. 153 ff. See also Marx, *Das Kapital*, op. cit., Vol. III, Part 1, pp. 82 ff. and 96.
133. Horrabin, *Grundriss der Wirtschaftsgeographie*, op. cit., pp. 144 ff.
134. Ibid., p. 21.
135. V. I. Lenin, "Die ehrliche Stimme eines franzoesischen Sozialisten," *Gegen den Strom* (Hamburg, 1921), pp. 262 ff.
136. Ibid., p. 263.
137. Horrabin, *Grundriss der Wirtschaftsgeographie*, op. cit., pp. 31 ff.
138. Marx, *Das Kapital*, op. cit., Vol. I, p. 480.
139. Horrabin, *Grundriss der Wirtschaftsgeographie*, op. cit., pp. 60 ff.
140. Ibid., p. 61.
141. *Unter dem Banner des Marxismus*, Vol. I, No. 2, p. 388.
142. Horrabin, *Grundriss der Wirtschaftsgeographie*, op. cit., pp. 24 and 147.
143. Marx, *Das Kapital*, op. cit., Vol. I, p. 380.
144. Horrabin, *Grundriss der Wirtschaftsgeographie*, op. cit., p. 78.
145. *Gesammelte Schriften von K. Marx und F. Engels 1852–1862*, Edited by David Riazanov, Second Edition (Stuttgart, 1920), pp. 416 ff.

NOTES II

1. Moriz Ritter, *Die Entwicklung der Geschichteswissenschaft, an den fuehrenden Werken betrachtet* (Munich and Berlin, 1919), p. 183.
2. Ibid., p. 203.
3. Georgi V. Plekhanov, *Beitraege zur Geschichte des Materialismus: Holbach, Helvetius, Marx*, Third Edition (Stuttgart, 1921), p.23n.
4. J. G. Herder, *Ideen zur Philosophie der Geschichte der Menschheit, Herders Werke*, Hempel Edition (Berlin, no date), Book 7, III, p. 50. Writings from antiquity also played a great role in the development of Herder's ideas concerning the influence of the natural factor. At this point he mentions particularly Hippocrates, whom he explicitly characterizes as the "most important author on climate," Book 7, III, p. 51).
5. Ritter, *Die Entwicklung der Geschichtswissenschaft*, op. cit., p. 288.
6. G. W. F. Hegel, *Die Vernunft in der Geschichte: Einleitung in die Philosophie der Weltgeschichte, Hegels Werke*, Second Lasson Edition (Leipzig, 1920), pp. 100 and 175. In Hegel's *Grundlinien der Philosophie des Rechts* (Lasson Edition, 1921) he occasionally relies on Montesquieu's ideas and praises his "profound view" of the question of constitutions "as of so many other matters." (p. 223). He contrasts Montesquieu's method of deriving the legislation of a country from the totality of the definitions "which comprise the character of a nation and an age" with the abstract method of isolating "the truly historical view, the purely philosophical standpoint" (p. 21).
7. Montesquieu, *De l'esprit des lois*, Edition Flammarion, Vol I (Paris, no date), p. 248.
8. Herder, *Ideen zur Philosophie der Geschichte der Menschheit, Werke*, op. cit., Book 7, III, p. 50.
9. Montesquieu, *De l'esprit des lois*, op. cit., p. 249.
10. After criticizing Montesquieu's errors, Voltaire wrote: "It was the philosophers of Athens, Milet, Syracuse and Alexandria, who made today's inhabitants of Europe superior to other peoples." (Quoted in notes to the Flammarion edition of Montesquieu, p. 263).
11. Montesquieu, *De l'esprit des lois*, op. cit., p. 308.
12. Ibid., p. 309.
13. Ibid., p. 311.
14. Ibid., p. 306.
15. Ibid., p. 304. Here Montesquieu hit upon an idea that Haushofer has recently taken up (Cf. note 95 of the first part of this article).
16. Ibid., p. 307
17. Ibid.

18. Ibid., p. 310.
19. Ibid.
20. Ibid., pp. 323 ff.
21. Ibid., p. 330.
22. Ibid., p. 337.
23. Ibid., pp. 7 ff.
24. Ibid., "Avertissement" (p. 6): "What I call the republican virtue is the love of the fatherland, that is the love of equality."
25. Herder, *Ideen zur Philosophie der Geschichte der Menschheit*, *Werke*, op. cit., Book 7, IV, p. 54 (heading).
26. Ibid., p. 55.
27. Ibid., p. 57.
28. Ibid., Book 7, V, p. 62. (Italics added.)
29. See Kant's review of the second part of Herder's *Ideen*, printed in the edition of the *Ideen* edited by E. Kuehnemann (Berlin, no date), p. 315.
30. David Riazanov, "Einleitung zu Friedrich Engels 'Dialektic und Natur'," *Marx-Engels-Archiv* (Frankfurt a/ Main, 1927), Vol. 11, p. 118.
31. Karl Ritter, *Einleitung zur allgemeinen vergleichenden Geographie* (Berlin, 1852), pp. 22 ff.
32. See, for instance, Kant's "Mutmasslichen Anfang der Menschengeschichte." The teleological factor is of course repeatedly asserted by all three of the above-mentioned thinkers, including Hegel.
33. For Herder, even race is not an unchangeable category. He wrote: "Place the negro in Europe; he remains what he is." However, his location in the world also changes him, although very slowly (*Ideen zur Philosophie der Geschichte der Menschheit*, *Werke*, op. cit., Book 7, IV, p. 59).
34. Herder, *Ideen zur Philosophie der Geschichte der Menschheit*, *Werke*, op. cit., Book 13, VII, pp. 120 ff. (Italics added.)
35. Karl Ritter, *Allgemeine Erdkunde* (Berlin, 1862), pp. 14 ff.
36. Herder, *Ideen zur Philosophie der Geschichte der Menschheit, Werke,* op. cit., Book 8, II, p. 79.
37. Ibid., Book 8, III, p.88.
38. Hegel, *Die Vernunft in der Geschichte*, *Werke*, op. cit., p. 179.
39. Ibid., p. 180.
40. Ibid., pp. 183 ff.
41. Ibid., pp. 185 ff.
42. Karl Ritter, *Die Erdkunde im Verhaeltnis zur Natur und zur Geschichte des Menschen*: *Asien*, Vol. 3 (Berlin, 1834), Part IV, Book 2, pp. 723-725.
43. Hegel, *Vorlesungen ueber die Philosophie der Weltgeschichte*, Lasson Edition (Leipzig, 1919), "The Oriental World," pp. 286 and 298.
44. This recalls what Voltaire had to say about China; not to speak of Montesquieu, who continually refers to China in his major work: "One does not need to be a fanatic about China's prospects to recognize that the constitution of the Chinese Empire is the best in the world. . . . It is the only one in which a provincial governor is punished if he does not meet with the approval of the people" (see the article, "Chine" in *Dictionaire philosophique*, Flammarion Edition, Paris, no date, p. 112). At this point, we will not take up the current controversy concerning this subject. In any case, it is a fact that, based on the existing (not meager) knowledge of China, the philosophers of the Enlightenment viewed China as opposed to the still-feudal European continent as possessing a non-feudal democratic constitution.
45. Ritter, *Einleitung zur allgemeinen vergleichenden Geographie*, op. cit., p. 188.
46. Sometimes this factor is considered "hereditary," as in a number of Herder's formulations. In such cases, it is certainly no longer an irrational category but rather a natural factor functioning according to fixed laws. It may not be easily investigated, but in principle it is unquestionably recognizable. However, we immediately pass from the sphere of rationally-explicable natural occurrences to the sphere of metaphysics when we are told that the same genetic power identified as an "inherent" ability is not a natural power like all the others but rather "the foundation of my natural powers" (*Ideen zur Philosophie der Geschichte der Menschheit*, *Werke*, Book 7, IV, p. 57).
47. Already with Montesquieu, where he says that only among the savages does nature rule "almost alone," while other factors like customs, laws and governmental maxims enter in with more highly cultivated peoples. But with Montesquieu climate still remains "the first of all realms" (*De l'esprit des lois*, op. cit., p. 330). Ritter strongly emphasizes the same idea: "It is evident that the decisive influences of natural powers on the personal aspects of human development had necessarily and increasingly to recede in the same degree that they formerly advanced." Civilized mankind, like individual man, gradually extricates itself from the immediate [here Ritter makes a crucially important limitation!] and binding chains of nature and location. (*Einleitung zur allgemeinen vergleichenden Geographie*, op. cit., p. 165).
48. Herder, *Ideen zur Philosophie der Geschichte der Menschheit*, *Werke*, Book 7, III, p. 51.
49. Below, when we treat the great bourgeois economists' answers to these questions, we will demonstrate that we are not dealing here only with a coincidental limitation of the "fraternity" of historians and geographers but with the generally-accepted limitation of the whole of bourgeois science.
50. According to Buckle, soil fertility and climate, especially at the lower levels of development, are the two regulative factors. Thus the condition of the soil, meaning the fertility or infertility of agriculture, determines the density of population, while climate determines man's ability to work. (Henry Thomas Buckle, *Geschichte der Civilisation in England* [*History of Civilization in England*, 2 vols., London, 1857–1861], translated by Arnold Ruge, Sixth Edition, Leipzig and Heidelberg, Vol. I, Part 1, p. 40). In Buckle's view, Asia and Africa, especially Egypt, have more fertile soil. But the climate of Europe is more suitable for work. Given that the natural powers are "limited and stationary," the fertile southern regions did not get beyond a certain level of development, while Europe's climate allowed man to develop his "unlimited" energy. Thus Europe became the leading cultural area of the world. Following Buckle's thesis: It is simply paradoxical how a country like China, which in many areas allows the peasant to work very intensively throughout the year, remained stationary, while the countries north of the Alps, where the

agricultural process of labor endures long interruptions (winter) and is relatively rough, experienced a development from feudalism to capitalism.

51. With Buckle we also find the *En-Bloc Method.* For him, the influences of nature are multifarious: "Climate, nutrition [!], soil and natural phenomena in general" (*Geschichte der Civilisation in England*, op. cit., p. 35). Buckle explicitly rejects any differentiation of the first three factors as confusing; rather, he takes them together in order to achieve an "immediate and more comprehensive view of the matter" (p. 37). This "more comprehensive" view is distinguished by a complete neglect of the specific forms of the process of labor, which are only considered to the extent of how much or how little "wealth" they create. Buckle says nothing about the fact that nature, in addition to providing the means of subsistence, is in Marx's sense also an arsenal of the means of labor. Thus he completely overlooks all the peculiarities of the Egyptian and Indian economic processes arising from irrigation and agriculture. According to Buckle, the cultures of both oriental regions are the result of good soil and hot weather.

    Buckle's failure to consider the natural means of labor leads him straight to the *Emancipation Perspective.* In industrialized countries like France and England, where the significance of naturally-conditioned means of subsistence has receded, nature appears "comparatively weak" to him; Europe is accordingly an example of the "subjugation of organic and inorganic nature by the human spirit," a place where "man actually succeeded in mastering the power of nature" (pp. 130 ff.).

    The *Short-Circuit Method* also serves Buckle's purposes, as we have already indicated in his analysis of India and Egypt. But it is most crassly revealed in his derivation of world views which, according to Buckle, are the products of "imagination" arising directly from the influences of nature as a whole (pp. 35 and 103 ff.).

52. Since Buckle writes mainly about the history of Europe and especially of England, the concrete proof of his thesis is located where (in his own view) nature is "weak." Thus his work, greeted with such wide-spread acclaim for its theoretical importance, actually presents a description of events in politics and the history of ideas in a manner approaching that of the later Enlightenment—a strong polemic against all forms of superstition. But this can not obscure the fact that the natural factor, which, in spite of a few interpolations, was initially said to be so important, in principle only plays the role of a decoration.

53. Cf. Fr. Quesnay, *Allgemeine Grundsaetze der wirtschaftlichen Regierung eines ackerbautreibenden Reiches*, (Jena, 1921), Axiom III, p. 55. See also, A.R.J. Turgot, *Betrachtungen ueber die Bildung und die Verteilung des Reichtums*, Third German Edition (Jena, 1924), Sections 7 and 14 (pp. 43 and 47). Relating thereto, see Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. I, pp. 148 ff.

54. David Ricardo, *Grundsaetze der Volkswirtschaft und Besteuerung* [*On the Principles of Political Economy and Taxation*], Third German Edition (Jena, 1923), pp. 290-292. For Marx's acknowledgement of the fundamental correctness of Ricardo's conception, together with a critique of Ricardo's occasional errors, see: *Theorien ueber den Mehrwert*, Vol. II, Part 2, pp. 343 ff.

55. Neither "the actual, natural causes of the exhaustion of the soil" (Marx, *Das Kapital*, op. cit., Vol. III, Part 2, p. 314) nor the sociohistorical principle behind Ricardo's description of natural phenomena are explored. Ricardo did not understand that what appeared to him as the inevitable and progressive unproductivity of agriculture was only relative and that in this his argument was based solely on bourgeois society (Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 1, p. 260). For a much harsher determination of an absolute exhaustion of the soil through capitalist agriculture, see Marx, *Das Kapital*, op. cit., Vol. I, p. 470, and Vol. III, Part 2, pp. 347 ff.

56. Adam Smith, Introduction to his major work, *Untersuchung ueber Natur und Wesen des Volkswohlstandes* [*An Enquiry into the Nature and Causes of THE WEALTH OF NATIONS*], Second German Edition (Jena, 1920), Vol. I, p. 1. Marx was aware of the fact that Smith ineptly spoke of influences of the natural factor in the sphere of exchange value, whereas in his explanation of labor in its general social form as the division of labor, as the sole source of material wealth, he "completely overlooks the natural factor" (Marx, *Kritik der politischen Oekonomie*, op. cit., p. 41).

57. Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 1, p. 119.

58. Ricardo, *Grundsaetze der Volkswirtschaft und Besteuerung*, op. cit., p. 30.

59. Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 1, p. 97.

60. Not only did Ricardo not solve the underlying problem, "he did not even discover it in Adam Smith" (Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 1, p. 115).

61. Rosa Luxemburg, *Die Akkumulation des Kapitals*, *Gesammelte Werke*, Vol. I (Berlin, 1923), p. 38.

62. Marx and Engels, "Kritik des Gothaer Programms," *Elementarbuecher des Kommunismus*, Vol. 12, Edited by Hermann Duncker (Berlin, 1928), pp. 18 ff. Marx's italics.

63. Friedrich List, *Das nationale System der politischen Oekonomie* (Stuttgart, 1841); see particularly Book III: "Das verschiedene Fortschreiten zum Reichtum bei verschiedenen Voelkern."

64. Although in Lists's introduction he says that nature "urges nations to ever-higher forms of unity through the diversity of climate, soil and products" (p. 61), in what follows he does not speak much more about this "urging" of nature. According to him, in the final analysis the example of Holland, Belgium, the Hanseatic League and Italy "proves" only "that the individual obtains the greatest part of his productive powers from the political organization of the government and the power of the nation" (p. 112).

65. List's historical chapter offers a particularly telling example. As he has it, under Charles V "only one single idea, one individual will" was needed "to make Germany the richest and most important empire on earth." This great chance was lost through a wrong decision on the part of Charles V and his son. The whole chapter is written in this style. The attempt on the part of the geographical materialists to find a new historiography is a return to the traditions of the historiography of absolutism.

66. Karl Marx, *Zur Kritik der politischen Oekonomie* (Einleitung), Eighth Edition (Stuttgart, 1921), p. LV.

67. Idem, Foreword to the Second Edition of *Das Kapital*, op. cit., p. XVIII.

68. 'Marx und Engels ueber Feuerbach," *Marx-Engels-Archiv* (Frankfurt a/Main, 1927), Vol. I, p. 242.
69. Friedrich Engels, "Der Anteil der Arbeit an der Menschwerdung des Affen," Reprinted in *Marxismus und Naturwissenschaft*, Edited by O. Jenssen (Berlin, 1925), p. 68.
70. Marx, *Das Kapital*, op. cit., Vol. I, p. 140.
71. Ibid., p. 165.
72. Ibid., p. 177n.
73. Ibid., p. 140.
74. Ibid., pp. 13 and 38.
75. Idem, "Briefe an Kugelmann," *Elemantarbuecher des Kommunismus*, Vol. 4 (Berlin, 1924), p. 45. Engels was also aware that even as "man himself is a product of nature" so "the products of the human brain . . . are in the last instance also products of nature" (*Herrn Eugen Duehrings Umwaelzung der Wissenschaft*, Tenth Edition, Stuttgart, 1919, p. 22).
76. Marx, *Das Kapital*, op. cit., Vol. I, p. 9.
77. Ibid., p. 140.
78. Engels, "Der Anteil der Arbeit," *Marxismus und Naturwissenschaft*, op. cit., p. 67.
79. Marx, *Das Kapital*, op. cit., Vol. I, p. 336n.
80. Engels, "Der Anteil der Arbeit," *Marxismus und Naturwissenschaft*, op. cit., pp. 66-68.
81. "Marx und Engels ueber Feuerbach," *Marx-Engels-Archiv*, op. cit., Vol. I, p. 238.
82. Ibid., pp. 237 f. On page 247 Marx again explicitly stresses this relation. He states that the particular mode by which human beings produce is necessarily "determined by their physical organization."
83. Marx, *Das Kapital*, op. cit., Vol. I, p. 142; Engels, "Dialektik und Natur," *Marx-Engels-Archiv*, op. cit., Vol. II, p. 169.
84. "Marx und Engels ueber Feuerbach," *Marx-Engels-Archiv*, op. cit., Vol. I, p. 238; Marx, *Das Kapital*, op. cit., Vol. I, p. 142; Engels, "Der Anteil der Arbeit," *Marxismus und Naturwissenschaft*, op. cit., p. 63.
85. Marx, *Das Kapital*, op. cit., Vol. I, pp. 141 ff.
86. Ibid., p. 476; "Marx und Engels ueber Feuerbach," *Marx-Engels-Archiv*, op. cit., Vol. I, p. 245.
87. Marx, *Das Kapital*, op. cit., Vol. I, p. 146.
88. Ibid., p. 10.
89. Idem, "Kritik des Gothaer Programms," *Elementarbuecher des Kommunismus*, op. cit., Vol. 12, p. 18; Engels, "Der Anteil der Arbeit," *Marxismus und Naturwissenschaft*, op. cit., p. 57.
90. Marx, *Das Kapital*, op. cit., Vol. I, p. 568.
91. Ibid., pp. 567 and 472.
92. Ibid., Vol. III, Part 2, p. 351.
93. Idem, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 1, p. 207.
94. Idem, *Das Kapital*, op. cit., Vol. I, p. 143.
95. Ibid., Vol III, Part 2, p. 307.
96. Ibid., Vol. I, pp. 142 and 141.
97. Ibid., p. 142.
98. Ibid., Vol. III, Part 2, p. 361.
99. Idem, *Theorien ueber den Mehrwert*, op. cit., Vol. III, p. 409.
100. Heinrich Cunow, *Die Marxsche Geschichts-, Gesellschafts und Staatstheorie* (Berlin, 1921), Vol. II, p. 163.
101. Marx, *Das Kapital*, op. cit., Vol. I, p. 141.
102. Ibid., p. 142.
103. Ibid., pp. 44 and 316.
104. "Marx und Engels ueber Feuerbach," *Marx-Engels-Archiv*, op. cit., Vol. I, pp. 237 ff.; Marx, *Zur Kritik der politischen Oekonomie* (Einleitung), op. cit., p. XLVII.
105. "Marx und Engels ueber Feuerbach," *Marx-Engels-Archiv*, op. cit., Vol. I, p. 295.
106. See Karl Kautsky's Preface to the first volume of Marx's *Theorien ueber den Mehrwert*, op. cit., p. XII.
107. Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. III, p. 519. Marx's formula, "temperament and disposition," stems from Richard Jones.
108. *Briefwechsel zwischen F. Engels und K. Marx*, Vol. III (Stuttgart, 1919), pp. 342-351. In the course of this discussion, Marx abandons the details of his Trémeaux study (which Engels found useless) but "*quite independent of Trémeaux's presentation*" upholds completely "the *basic idea concerning the influence of soil*" (p. 349).
109. Marx, *Das Kapital*, op. cit., Vol. I, p. 476.
110. Ibid., Vol. III, Part 2, p. 325.
111. Ibid., p. 327 (italics added). See also Marx, *Zur Kritik der politischen Oekonomie* (Einleitung), wherein Marx lists "hereditary racial factors" first among those natural conditions concerned with production, followed by "climate, such natural conditions as access to the sea [!], soil fertility, etc. . . ." Engels deals concretely with racial problems in his articles on the oriental question, wherein he first mentions the Turks, the Arnauts, the Wallachians and Greeks, and then comes to "that race which constitutes the great mass of the population and whose blood is predominant in every mixture of races. . . . That is the Slavic race . . ." (*Gesammelte Schriften von K. Marx und Fr. Engels*, edited by David Riazanov, Second Edition, Stuttgart, 1920, Vol. I, pp. 147-150). In Engels' *Ursprung der Familie* (op. cit., p. 6) he suggests that "the superior development of both races"—"Aryans and Semites"—might perhaps bear some relation to their abundance of meat and milk. This already indicates that racial characteristics are *acquired* and can be *modified* and possibly even *eliminated.*
112. From one of Engels' letters in 1894, printed in *Sozialistischen Akademiker* (1895), reprinted by L. Wohltmann, *Der historische Materialismus* (Duesseldorf, 1900), p. 249.
113. "Marx und Engels ueber Feuerbach," *Marx-Engels-Archiv*, op. cit., Vol. 1, pp. 237 ff.
114. Ibid., p. 242.
115. Karl Marx, *Das Elend der Philosophie*, Seventh Edition (Stuttgart, 1919), p. 133.
116. Idem, *Das Kapital*, op. cit., Vol. I, p. 140.
117. Idem, *Theorien ueber den Mehrwert*, op. cit., Vol. III, p. 519.
118. See among other citations also Marx, *Das Kapital*, op.

cit., Vol. III, Part 2, p. 326; *Zur Kritik der politischen Oekonomie* (Einleitung), op. cit., p. XVII.

119. Idem, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 1, p. 338.

120. Marx, *Das Kapital*, op. cit., Vol. III, Part 2, p. 355.

121. "All things which labor merely separates from their direct connection with the earth are objects of labor found in nature" (Marx, *Das Kapital*, op. cit., Vol. I, p. 141).

122. Marx's broad understanding of agriculture includes the reproduction of cattle and fish as well as the cultivation of trees (*Theorien ueber den Mehrwert*, op. cit., Vol. I, p. 214).

123. Marx, *Das Kapital*, op. cit., Vol. I, p. 144.

124. Ibid.

125. Ibid., p. 567. Here Marx only mentions mining as a representative component of the extractive industry—the activity aimed at exploiting "metal ore, minerals, hard coal, stones." Concerning the shifting significance of concrete natural materials, Marx indicates that at one stage of development they may be economically irrelevant (although already "there") while at another stage they may become centrally important; he speaks of "the differing influence ... things such as coal have under various modes of production" (*Briefwechsel zwischen F. Engels und K. Marx*, op. cit., Vol. III, p. 349.)

126. Marx, *Das Kapital*, op. cit., Vol. I, p. 144.

127. Cunow, *Die Marxsche Geschichts-, Gesellschafts- und Staatstheorie*, op. cit., Vol. I, p. 160.

128. Marx, *Das Kapital*, op. cit., Vol. I, p. 143.

129. Everything relevant thereto has already been said by Hegel. While fully acknowledging the usefulness and even the necessity of "so-called definitions," Engels clearly stated: "Definitions have no value for science because they are always inadequate. The only real definition is the development of the thing itself; but this is no longer a definition" ("Dialektik und Natur," *Marx-Engels-Archiv*, op. cit., Vol. II, p. 403).

130. Cunow, *Die Marxsche Geschichts-, Gesellschafts-und Staatstheorie*, op. cit., p. 160.

131. Marx, *Das Kapital*, op. cit., Vol. I, p. 476.

132. For the worker, "machinery and raw material," i.e. the means and objects of labor, are the "objective conditions" of the process of labor (Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 2, p. 297). See also *Das Kapital*, op. cit., Vol. I, p. 178, note 29, where Marx says: "The use of the same *termini technici* with different meanings is awkward; but in no science can it be completely avoided."

133. Marx, *Das Kapital*, op. cit., Vol. I, p. 143.

134. Ibid., p. 141.

135. Hermann Gorter, *Der historischer Materialismus* (Stuttgart, 1919), p. 23. Kautsky published Gorter's book without indicating this crass misinterpretation of historical materialism. This is no accident. In Kautsky's own work, *Ethik und materialistische Geschichtsauffassung* (Ninth Edition, Stuttgart, 1919), we find a similarly one-sided overestimation of purely "technical" factors together with occasional observations in accord with the Marxist standpoint. Later in his voluminous study, *Die materialistische Geschichtsauffassung* (Berlin, 1927), Kautsky retreated from this technicistic standpoint to one which denied the powers of production any material substance and is in consequence and in fact idealistic. Although he still continues to repeatedly mention the existence of the material means of production and even natural together with social factors (Vol. I, pp. 675 ff., 678, 682 ff.), for him the last instance of development is the growth of the knowledge of nature and its technical application (p. 810). As he writes: "The development of the material powers of production is in fact only another name for the development of the knowledge of nature" (p. 864).

Kautsky bases his position on a section of *Theories of Surplus Value* wherein Marx ostensibly agrees with the basic ideas of the English economist Thomas Hodgskin (Kautsky, *Die materialistische Geschichtsauffassung*, op. cit., p. 813). Unfortunately, Kautsky did not read the section to the end. Giving Kautsky the benefit of the doubt, we will not assume that this is a case of deliberate falsification (although such is not unknown). It is true that Marx takes the side of Hodgskin against his opponents; as compared with them, Hodgskin's standpoint was a step forward (Marx, *Theorien ueber den Mehrwert*, op. cit., Vol III, p. 319). However, 34 pages later Marx explains that in Hodgskin's polemic he made the error of putting too much "emphasis on the subject, that is, so to speak, on the subjective essence of the subject, as opposed to the material object. ..." This caused him to overlook the central importance of the material foundations of production, which constitute the real *prius*, the actual "starting-point" (p. 353). In order to support his subjectivistic thesis, Kautsky thus read into Marx's text precisely the opposite of what is said and meant. If we take Kautsky on good faith, this certainly puts his knowledge of Marx in a strange light. This is all the more true when one remembers that this same Kautsky, whose last work is characterized by ignorance of Marx's elementary arguments, was also the editor of *Theorien ueber den Mehrwert* and must at some point have read all the citations that he himself translated.

136. Marx, *Das Kapital*, op. cit., Vol. III, Part 2, pp. 214 and 351.

137. Ibid., Vol. I, p. 567. "With more permanent improvements of the soil, the artificially-increased fertility of the soil coincides with its natural fertility after the termination of the lease" (*Das Kapital*, Vol. III, Part 2, p. 214). Furthermore, this is also true with respect to the "so-called permanent ameliorations" (Ibid., p. 278). There are also very important formulations in *Theorien ueber den Mehrwert*, Vol. II, Part 1, pp. 301 ff., 337, 343, 388.

138. Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. I, p. 40.

139. Ibid., Vol. II, Part 1, p. 207.

140. Idem, *Das Kapital*, op. cit., Vol. I, p. 480.

141. Ibid., Vol. III, Part 2, p. 278.

142. Idem, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 1, pp. 173 and 280.

143. Idem, *Das Kapital*, op. cit., Vol. III, Part 2, p. 190.

144. Ibid., Vol. II, p. 129. Eduard David accuses Marx of having failed in his discussion of the mechanical function of soil as a medium of labor to consider its function of providing chemical nutrients; also, that soil "might as well be called a raw material as a means of labor" (*Sozialismus und Landwirtschaft*, Second Edition, Leipzig, 1922, p. 42). As evidenced by the quotations already cited (and many more could be added to support the thesis),

Marx's investigation not only differentiates the soil as David would have it but even goes beyond his demands to complete the picture he does not see. Such is the scientific level of a "refutation of Marx," whose most serious weapon is at times a simply grotesque *ignorance* of the author under attack!

145. David, *Sozialismus und Landwirtschaft*, op. cit., p. 44.
146. Marx, *Das Kapital*, op. cit., Vol. II, p. 93.
147. Ibid., p. 95.
148. It is clear from what has already been said that Marx was keenly aware of specific distinctions. The collaboration of gratuitous powers of nature at a certain stage of production made a difference to handicraft industry. But *this* difference disappeared with the higher development of industry. No one knew better than Marx that the production of organic products is subject to the "uncertainties of nature." He continually emphasized this aspect. A specific difference between other types of industry and agriculture is that in the one "the productive power is to a certain extent predetermined; the other is dependent on the uncertainties of nature" (*Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 1, pp. 77 ff.; see also, Vol. I, p. 275n.). Nevertheless, Marx's standpoint is distinguished from that of the revisionist David because he insisted, despite all naturally-conditioned modifications, that the laws of capitalist production also apply in agriculture.
149. Marx, *Theorien ueber den Mehrwert*, Vol. II, Part 1, p. 224.
150. Marx puts the greatest stress on the irrational factor in the production of all organic material. With respect to "organic animal processes used for producing wool, silk, and leather" and what "organic vegetable processes are used for producing cotton, linen, etc.," he asserts that "capitalist production has neither succeeded nor will it ever succeed [!] in prevailing over these materials any more than over purely mechanical or inorganic chemical substances" (*Theorien ueber den Mehrwert*, op. cit., Vol. III, p. 230).
151. Just as Marx also demonstrated the advance of capitalist production in agriculture, so he simultaneously and clearly indicated the "slow and unequal" capitalization of agriculture (*Das Kapital*, op. cit., Vol. III, Part 2, p. 216). He designates three causal complexes: one *natural* (two reasons for "the smaller amount of surplus value generated in agriculture" are the given limits of extending the work-day because of the day/night cycle and the long period of production), *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 1, p. 175; one *economic*, which, however, is rooted in the peculiarity of the natural substratum, i.e., in the impossibility of actually increasing it in the sense that the industrial means of production can be increased (ground rent, whose very existence makes all the capital investments of a capitalist tenant ultimately and necessarily flow into the pocket of the landowner. "This is . . . at the same time one of the greatest hindrances to a rational agriculture because the tenant avoids all improvements and expenses he cannot expect to recoup during the period of his tenancy"), *Das Kapital*, op. cit., Vol. III, Part 2, p. 159; and one *scientific*, which Marx says is not decisive (even though this must distress Kautsky); by comparison with the mechanical sciences and their application, the most important sciences for agronomy, "chemistry, geology and physiology," developed relatively late. *Das Kapital*, op. cit., Vol. III, Part 2, p. 239.
152. Marx, *Das Kapital*, op. cit., Vol. I, p. 476.
153. Ibid., p. 478.
154. Ibid., p. 476.
155. Ibid.
156. Ibid., p. 313.
157. Ibid., p. 476.
158. "Powers of nature, such as steam and water, which become adapted to productive purposes, similarly cost nothing" (*Das Kapital*, op. cit., Vol. I, p. 350; Vol. II, p. 329; Vol. III, Part 2, p. 183; *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 1, p. 207, and Part 2, p. 341).
159. Marx, *Das Kapital*, op. cit., Vol. I, p. 350; *Theorien ueber den Mehrwert*, op. cit., Vol. III, p. 220.
160. Idem, *Kritik der politischen Oekonomie* (Einleitung), op. cit., p. XLVII.
161. According to Marx, this is not only true of feudal society and Asiatic society but also of the most developed "agricultural economies of antiquity" (*Das Kapital*, op. cit., Vol. III, Part 2, p. 320).
162. Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. I, p. 214.
163. Including climate.

NOTES: III

1. Marx, *Das Kapital*, op. cit., Vol. III, Part 2, p. 183. See also Vol. I, p. 297.
2. Ibid., Vol. I, p. 567. Extractive industry and agriculture are here treated as two corresponding spheres of production; together, they constitute the "phase of production" of "primary production" vis-a-vis all other phases (Idem, *Theorien ueber den Mehrwert*, op. cit., Vol. I, p. 215).
3. Idem, *Theorien ueber den Mehrwert*, op. cit., Vol. I, p. 427.
4. Idem, *Das Kapital*, op. cit., Vol. III, Part 2, p. 215.
5. Idem, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 2, pp. 223, 228 ff. and 230 ff.
6. Idem, *Das Kapital*, op. cit., Vol. III, Part 2, p. 219.
7. Idem, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 2, pp. 290, 226 and 230 ff. (Italics added).
8. Idem, *Das Kapital*, op. cit., Vol III, Part 1, p. 57.
9. Ibid., p. 85.
10. Ibid., Vol. II, pp. 328 ff.
11. Idem, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 2, pp. 218 ff. In this case, the *reverse* is explicitly demonstrated. But the principle applies in both the negative and the positive instance, as Marx explicitly says on p. 222.
12. Ibid., pp. 218, 219.
13. Idem, *Das Kapital*, op. cit., Vol. I, p. 568.
14. Ibid., Vol. II, p. 329; Vol. I, p. 568; idem, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 2, p. 342.
15. Idem, *Das Kapital*, op. cit., Vol. III, Part 1, p. 85.
16. Ibid., pp. 84 ff.
17. Idem, *Theorien ueber den Mehrwert*, op. cit., Vol. III, p. 431.

18. Georg Lukács, *Geschichte und Klassenbewusstsein* (Berlin, 1923), pp. 239 ff. When Lukács quotes Marx to the effect that the relation to nature is predominant in all societies based on land ownership, whereas in capitalist societies it is "the social factor created by history" (p. XLIV), he misinterprets what Marx is really saying in this context. Marx is dealing with which form of production is predominant, which form imbues, illuminates and modifies all the others. In agricultural societies it is "earth-bound" agriculture; in capitalism it is capital, which also puts its stamp on agriculture: "Capital is the economic power which dominates everything in bourgeois society" (ibid.). In *Zur Kritik der politischen Oekonomie* Marx strongly emphasizes that the productivity of labor in agriculture and extractive industry is alike determined by "uncontrollable natural conditions," even in the epoch of capitalist production (pp. 14 ff.). One of the elemental theses of Marx's general conception is that in the development of capitalist and socialist forms of production the fundamental relation between man and nature is modified but not abolished, as it must appear in Lukács' formulation.
19. When Marx speaks of the receding of natural barriers he means only the reduction of necessary labor time (*Das Kapital*, op. cit., Vol. I, pp. 478 ff.). The idea of man coming to dominate nature "like a conqueror dominates a foreign people" (Engels, "Der Anteil der Arbeit," *Marxismus und Naturwissenschaft*, op. cit., p. 68) is the necessary consequence of Lukács' general activistic conception which, as we will demonstrate, is neither dialectical nor materialistic and has nothing in common with Marx's conception of the relation between natural and social factors in the process of history.
20. Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. III, p. 430.
21. Engels, *Herrn Eugen Duehrings Umwaelzung der Wissenschaft*, op. cit., p. 183.
22. V. I. Lenin, "Die Agrarfrage und die 'Marx-Kritiker'," *Saemtliche Werke*, Vol. IV, Part 1 (Vienna and Berlin, 1928), p. 256.
23. Marx, *Das Kapital*, op. cit., Vol. III, Part 1, pp. 95 ff.
24. Ibid., p. 242.
25. Ibid., p. 300. (Italics added).
26. Idem, *Theorien ueber den Mehrwert*, op. cit., Vol. III, p. 431. (Italics added).
27. Ibid., Vol. II, Part 2, p. 54.
28. Idem, *Das Kapital*, op. cit., Vol. III, Part 2, p. 314.
29. See note 150 of Part II of this article.
30. Idem, "Kritik des Gothaer Programms," *Elementarbuecher des Kommunismus*, op. cit., Vol. XII, p. 27.
31. Idem, *Das Kapital*, op. cit., Vol. III, Part 2, p. 355.
32. "Marx und Engels ueber Feuerbach," *Marx-Engels-Archiv*, op. cit., Vol. I, p. 237. In a marginal note to the Feuerbach manuscript, beside the sentence that man must be able to live in order to "make history," Marx wrote: "geological, hydrogeographical, etc. conditions of human life."
33. *Briefwechsel zwischen F. Engels und K. Marx*, op. cit., Vol. III, pp. 350.
34. Cf. Ellsworth Huntington and Sumner Webster Cushing, *Principles of Human Geography* (New York and London, 1924), p. 157.
35. Marx, *Das Kapital*, op. cit., Vol. I, pp. 477 ff.
36. "Karl Marx ueber Indien und China," *Unter dem Banner des Marxismus*, op. cit., p. 386. (Marx integrated this quantitative, spatial aspect into ideas concerning the importance of artificial irrigation first formulated by Engels).
37. *Aus dem literarischen Nachlass von K. Marx und F. Engels*, op. cit., Vol. III, p. 443.
38. Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 2, p. 151.
39. Ibid., p. 153.
40. Idem, *Das Kapital*, op. cit., Vol. II, p. 221.
41. Ibid., p. 223.
42. Max Schmidt, *Grundriss der ethnologischen Volkswirtschaftslehre*, Vol. II (Stuttgart, 1921), pp. 140 ff.
43. Marx, *Das Kapital*, op. cit., Vol. I, p. 54.
44. "Marx und Engels ueber Feuerbach," *Marx-Engels-Archiv*, op. cit., Vol. I, p. 303.
45. Ibid., p. 292; Marx, *Zur Kritik der politischen Oekonomie* (Einleitung), op. cit., p. XXXI; idem, *Das Kapital*, op. cit., Vol. I, p. 48. In light of this clearly understandable presentation of the essence and foundation of conquests, it is not really understandable how Franz Oppenheimer (one of Marx's recent opponents, following in the path of Eugen Duehring) can accuse Marx of having not paid attention to these questions (Franz Oppenheimer, *System der Soziologie*, Vol. I, Part 2, Jena, 1923, p. 990).
46. Idem, *Zur Kritik der politischen Oekonomie* (Einleitung), op. cit., pp. XXXI ff.; cf. also *Das Kapital*, op. cit., Vol. II, p. 12.
47. Ibid., p. XLVII. If this principle is already valid for larger complexes of production, then it is obviously still more so for interspersed *parts* of larger economic and political areas. "It would be hard to explain . . . the economic existence of every small German state of the past and present without making it laughable" (letter of Friedrich Engels, dated September 21, 1890, published in *Sozialistischen Akademiker*, 1895, p. 351).
48. Engels, *Der Ursprung der Familie*, op. cit., p. 4.
49. "Karl Marx ueber Indien und China," *Unter dem Banner des Marxismus*, op. cit., p. 380.
50. *Aus dem literarischen Nachlass von K. Marx und F. Engels*, op. cit., Vol. III, pp. 443 ff.
51. Ibid., p. 443. In 1850 Marx also foresaw the coming of the Panama Canal.
52. Friedrich Engels, "Der deutsche Bauernkrieg," edited by Hermann Duncker, *Elementarbuecher des Kommunismus*, Vol. 8 (Berlin, 1925), pp. 19 ff.
53. Ibid., p. 20. Engels gives a broader and more detailed analysis of "location" with respect to the Near East in several articles on "Die orientalische Frage" (*Gesammlte Schriften von K. Marx und F. Engels, 1852–1862*, op. cit., Vol. I, pp. 146 ff., 155 ff., 169 and 173).
54. *Gesammelte Schriften von K. Marx und F. Engels, 1852–1862*, op. cit., Vol. II, pp. 413 ff.
55. Ibid., p. 417.
56. Ibid., p. 416.
57. Ibid., p. 417. This remark is further evidence that Marx found Asiatic despotism had very little in common with late-feudal European absolutism.

58. Marx, *Das Kapital*, op. cit., Vol. I, p. 478.
59. Engels, *Herrn Eugen Duehrings Umwaelzung der Wissenschaft*, op. cit., p. 192.
60. Marx, *Das Kapital*, op. cit., Vol. III, Part 1, p. 82.
61. Idem, *Theorien ueber den Mehrwert*, op. cit., Vol. II, Part 1, p. 166.
62. Idem, *Das Kapital*, op. cit., Vol. III, Part 1, p. 96.
63. Ibid., p. 83.
64. V. I. Lenin, *Der Imperialismus als juengste Etappe des Kapitalismus*, Marxistische Bibliothek, Vol. I (Vienna and Berlin, 1926), p. 74.
65. Ibid., pp. 75 ff.
66. Ibid., p. 73. Lenin does not elaborate. But from his short remarks one can grasp his meaning, namely that economic conditions in the narrower sense, including "geographical conditions," had together determined the different pace of development in America, Germany and Japan, on the one hand, and in England and France on the other. Following Marx and Engels, Lenin uses "geography," "geographical conditions," etc. as all-embracing terms for the totality of natural agents effective in any given moment of time (see below, p. 58 of the text, where we mention one of Marx's statements concerning the significance of the "geographical location" of Europe and America). Plekhanov consistently uses the term "geography" as a common concept for the totality of natural agents effective in any given moment of the development of social production. In contrast to bourgeois scientists like Ratzel, he and Lenin always use this term in the sense of Marx's "natural conditions," in the sense in which Engels speaks of the "geographical foundation" that is "*included under the concept of economic conditions.*"
67. Ibid., p. 75.
68. Marx gladly left the treatment of trade and geomilitary questions to his friend Engels, since he himself considered them derivative. When he was required to write on the "Oriental question," i.e. on problems of "commercial and military importance" in certain areas, he asked Engels to do it for him: "This is primarily a military and geographic question; thus not in my department," *Briefwechsel zwischen F. Engels und K. Marx*, op. cit., Vol. I, p. 395). Marx was always passionately interested in all questions of nature so far as they pertained to the central sphere of economy (but by no means only in this regard!). This is clearly manifest in his critique of Feuerbach and all his later works. While Engels began a more thorough study of the natural sciences only in 1853, it was Marx who (contrary to the popular legend also adopted by Graf) early on diligently pursued questions of natural science. The same Marx who, according to Graf, showed little interest in "the primary and given facts of nature," was sufficiently interested in geographical and geological problems (perhaps stimulated by his secondary school teacher Steininger) to attend the lectures of two geographers (Karl Ritter and Hendrik Steffens) while he was a student in Berlin (cf. Riazanov's Introduction to Engel's "Dialektik und Natur," *Marx-Engels-Archiv*, op. cit., Vol. II, pp. 117 ff.). The extent to which geological questions interested Marx throughout his life is evident from his stance in the debate on Trémeaux and in all his writings. From his knowledge also of Marx's unpublished writings, Plekhanov indicates that "he evidenced special interest in geology and paleontology" (ibid., p. 117). As a mature man, Marx continued to attend lectures and courses on natural science. In connection with his investigations of the economic role of machines, he studied mechanics and mathematics. When he was preparing his discussion on ground rent, he studied agronomy and agricultural chemistry (ibid., p. 125). Marx's interest in Darwin may be explained by more general motives, but the aforementioned studies were without doubt intended to explore those natural phenomena of primary significance as natural agents of the material process of production.
69. Marx, *Das Kapital*, op. cit., Vol. I, p. 316.
70. Ibid., Vol. III, Part 2, p. 325.
71. Idem, *Zur Kritik der politischen Oekonomie* (Einleitung), op. cit., p. LV.
72. In the presentation of historical materialism it has often been overlooked that there are natural as well as social powers of production. Among other things, one of the main purposes of our investigation thus far has been to make clear the fundamental importance of these ideas for an understanding of historical materialism. To that end, we will indicate a few more of Marx's formulations. The formula "naturally-conditioned powers of production" is found in *Das Kapital* (op. cit., Vol. I, p. 480); its counterpart consists of the "historically-developed social powers of production." The same juxtaposition of "social" and "natural powers of production" is in *Theorien ueber den Mehrwert* (op. cit., Vol. III, p. 133n.). Natural powers are described as a "power of production" (ibid., Vol. II, Part 2, p. 16); as a collaborative agent (ibid., Vol. I, p. 40); as natural "agents of production" (*Das Kapital*, op. cit., Vol. III, Part 2, pp. 183, 214, 351). "Gratuitous natural powers of production" are also mentioned (ibid., Vol. III, Part 2, p. 278). Lenin is one of the very few Marxists who recognized the significance of Marx's formula and integrated it into his analysis. In his study of "The Agrarian Question" he points to the "productive powers" of the soil, basing himself on Marx's identification of natural agents as a "gratuitous productive power of labor" ("Die Agrarfrage und die 'Marx-Kritiker'," *Saemtliche Werke*, op. cit., pp. 229 ff. and 299).
73. Engels, "Dialektik und Natur," *Marx-Engels-Archiv*, op. cit., Vol. II, p. 165.
74. Cf. Marx's first thesis on Feuerbach.
75. Kautsky, *Die materialistische Geschichtsauffassung*, Vol. I, p. 810 (Italics added).
76. Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. III, p. 353.
77. Kautsky, *Die materialistische Geschichtsauffassung*, op. cit., Vol. I, p. 810.
78. Georg Lukács, Review of Nikolai Bukharin's *Theorie des historischen Materialismus* in *Archiv fuer die Geschichte des Sozialismus und der Arbeiterbewegung*, edited by Carl Gruenberg, Vol. XI (1923), p. 219.
79. Marx already formulated this thesis clearly in *Das Elend der Philosophie*: "The relations of man to man" proceed from the powers of production and the mode of production, which are the "conditions of existence" of these relations (op. cit., p. 97 and also p. 91). See also, *Zur Kritik der politischen Oekonomie* (Einleitung), op. cit., p. LV; *Das Kapital*, op. cit., Vol. I, p. 48n.

80. See Marx's letter to Engels of July 7, 1866, just prior to the completion of the first volume of *Capital*, in which Marx wrote: "Where is our theory of the determination of the organization of labor by the means of production more splendidly proven than in the industry of human slaughter?" (*Briefwechsel zwischen F. Engels und K. Marx*, op. cit., Vol. III, p. 331; see also Marx, *Das Elend der Philosophie*, op. cit., pp. 124 ff.). The only case where the change in the mode of production was brought about through the reorganization of labor power, manufacturing (*Das Kapital*, op. cit., Vol. I, p. 334), only proves that the organizational possibilities of the means of handicraft labor were not yet exhausted and that their full exhaustion through cooperation in manufacturing was only possible at a certain level of development of the productivity of labor. But it must be emphasized that even here the process did not start from the organization of labor but from the material conditions of labor: "The development of the division of laborpresupposes the concentration of workers in a workshop" (*Das Elend der Philosophie*, op. cit., p. 122). From a completely empirical standpoint, the form of the division of labor is changed: "*If this form changes in other than secondary aspects, it is always and only the result of a revolution in the instruments of labor*" (*Das Kapital*, op. cit., Vol. I, p. 329). With very little civility, Marx characterizes Proudhon, who viewed the division of labor as the primary sphere "in the sense of Adam Smith," as a man who "if he sees anything at all, sees things as standing on their head. . ." (*Das Elend der Philosophie*, op. cit., p. 123). When Lukács refers to manufacturing (Review of Bukharin's *Theorie des historischen Materialismus* in *Archiv fuer die Geschichte des Sozialismus und der Arbeiterbewegung*, op. cit., p. 221) he presents his thesis in the sense of the primary significance of the division of labor; however, when in the same review he points to general social conditions (slavery) as the factor determining technology he demonstrates that he is already willing to conceive social conditions in a dual sense—but only to the extent that he is able to support his belief that these relations are the determining and not the derivative factor. Lukács simply insists on seeing things under all circumstances as standing on their head.

81. Lukács, *Geschichte und Klassenbewusstsein*, op. cit., p. 240.

82. Idem, Review of Bukharin's *Theorie des historischen Materialismus* in *Archiv fuer die Geschichte des Sozialismus und der Arbeiterbewegung*, op. cit., p. 219.

83. "Marx und Engels ueber Feuerbach," *Marx-Engels-Archiv*, op. cit., Vol. I, p. 243.

84. V. I. Lenin, *Materialismus und Empiriokritizismus*, *Saemtliche Werke*, Vol. XIII (Vienna and Berlin, 1927), pp. 59, 88, etc.

85. Gorter, *Der historische Materialismus*, op. cit., p. 39.

86. Karl Marx, *Der achtzehnte Brumaire des Louis Bonapartes*, Marxistische Bibliothek, Vol. 7 (Vienna and Berlin, 1927), p. 21.

87. Idem, *Das Kapital*, op. cit., Vol. I, p. 10.

88. Ibid., p. 143.

89. Marx explicitly speaks of a "natural basis of surplus value" (*Das Kapital*, op. cit., Vol. I, p. 475). But what follows from this expression must be thoroughly examined. Nature always provides only the possibility of a given productivity of labor; never the certainty of it: "The fertility of nature here forms *a* limit, *a* starting-point, *a* basis." Without it, nothing occurs. But natural fertility alone also produces nothing. "On the other hand, the development of the social powers of production forms the other side" (ibid., Vol. III, Part 2, pp. 174 ff,; italics added). It is also true that labor by itself cannot achieve anything either; it possesses no "supernatural power of creation" ("Kritik des Gothaer Programms," *Elementarbuecher des Kommunismus*, op. cit., Vol. XII, p. 19). All mystical notions of an innate, occult quality of human labor able to produce a surplus product are nonsensical (*Das Kapital*, op. cit., Vol. I, p. 479) and only oppose to the mistake of the Physiocrats another mistake. Only the combination of both factors makes the process of labor a reality. But the process itself is not enough to produce a surplus product. To repeat: the natural basis is necessary; but it is not alone sufficient. The "favor of nature" may lead to a situation in which the direct producer does very little work because the necessary labor time is short. In this case, the favor of nature gives the producer "much leisure." A "whole series of historical circumstances," themselves the product of a long historical development, must occur for the producer to produce through surplus labor a surplus product either for himself or, in a class society and under "external constraint," for others (ibid., p. 479). Of the two conditions of every labor and especially every surplus labor, the natural factor has a *passive* quality of rest, of waiting for the activity of social action, of enduring. Marx repeatedly emphasizes this passive quality of the potential inherent in nature. In fact, Marx's formulation of the passive quality of nature has led some of the most knowledgeable Marx scholars to an opinion quite the opposite of the one expounded here, namely that the passive quality of nature makes impossible its determination of the development of history. They all overlook that the function of the passive factor can be (and in this case *is*) to allow activity the possibility of becoming effective and to give it direction. It is the "passive" tracks which determine the route of the actively-moving railroad train. It is the "passive" barrel of a gun which determines the trajectory of the bullet.

90. Georgi V. Plekhanov, *Die Grundprobleme des Marxismus*, Marxistische Bibliothek, Vol. 21 (Vienna and Berlin, 1929), p. 95.

91. In contrast to Kautsky's opinion that nature remains "almost always the same with respect to society" (*Die materialistische Geschichtsauffassung*, op. cit., Vol. I, p. 810), Marx and Engels often emphasized that it varies. Cf. "Marx und Engels ueber Feuerbach," *Marx-Engels-Archiv*, op. cit., Vol. I, p. 238; Engels, "Dialektik und Natur," *Marx-Engels-Archiv*, op. cit., Vol. II, p. 165; Idem, "Der Anteil der Arbeit," *Marxismus und Naturwissenschaft*, op. cit., p. 68; *Briefwechsel zwischen F. Engels und K. Marx*, op. cit., Vol. III, p. 349 (Marx on the historical modifications of influences emanating from the soil).

92. Engels' letter in *Sozialistischen Akademiker* (1895), p. 373.

93. Marx, *Zur Kritik der politischen Oekonomie*, op. cit., p. 15.

94. Idem, *Das Kapital*, op. cit., Vol. I, p. 316.

95. Engels, *Der Ursprung der Familie*, op. cit., p. 4. (Italics added).

96. Marx several times emphasizes the characteristic crude-

ness of feudal agriculture. Already in his critique of Feuerbach he notes the "inferior and raw culture of the soil" ("Marx und Engels ueber Feuerbach," *Marx-Engels-Archiv*, op. cit., Vol. I, p. 306); in *Capital* he points to the "crudeness of the mode of labor" (*Das Kapital*, op. cit., Vol. III, Part 2, p. 327).

97. Marx, *Das Kapital*, op. cit., Vol. I, p. 478. (Italics added).
98. "Karl Marx ueber Indien und China," *Unter dem Banner des Marxismus*, op. cit., Vol. I, p. 386.
99. Marx, *Das Kapital*, op. cit., Vol. III, Part 2, p. 327.
100. Ibid., p. 77.
101. Cf. Karl August Wittfogel, "Voraussetzungen und Grundelemente der chinesischen Landwirtschaft," *Archiv fuer Sozialwissenschaft und Sozialpolitik* (1929), No. 3, pp. 600 ff.
102. "Karl Marx ueber Indien und China," *Unter dem Banner des Marxismus*, op. cit., Vol. I, p. 386. Owing to "certain processes of labor" (of the six Marx mentions, four have to do with waterworks—land drainage, dam building, irrigation, canal constructions) it becomes necessary "to expand the spatial sphere of labor" and to advance to large-scale forms of labor (cooperation). This is of decisive importance in the consideration of concrete forms of irrigation societies in Asia (*Das Kapital*, op. cit., Vol. I, p. 293).
103. If Confucius, like the Physiocrats (cf. Marx, *Theorien ueber den Mehrwert*, op. cit., Vol. I, pp. 44 and 46) also gave his system a "feudal appearance," he nevertheless actually proclaimed a new social order on the ruins of the old. Not only did he consciously exclude the old feudal arts from his teachings, as a public official in his home state (Lu) he managed to actually break the feudal powers; above all, through his revision of the ancient cultural tradition, he either fundamentally destroyed the feudal, knightly virtues that glorified military achievements or reorganized them in such a way that their original meaning was turned into the opposite.
104. Marx, *Das Kapital*, op. cit., Vol. I, p. 476.
105. Plekhanov, *Beitraege zur Geschichte des Materialismus*, op. cit., pp. 180 ff. We particularly stress the importance of natural wealth in the material means of industrial labor for the development of England in the Middle Ages (wool) and in the manufacturing period (wool, iron and navigable water) because in both these historical phases indigenous raw material was absolutely decisive for the industrial configuration of a country. As Marx tells us: "Before the invention of machines, the industry of a country was restricted mainly to that raw material yielded by its own soil; in England, wool; in Germany, flax; in France, silk and flax . . ." (Marx, *Das Elend der Philosophie*, op. cit., p. 124). The machine age did not abolish the dependence on sources of raw material; it only reshaped it, made it more international and more complicated.
106. *Report of the Royal Commission of the Coal Industry* (1925), Vol. I (London, 1926), p. 123.
107. Ibid., p. 125. Comparative figures are given for local workers in 1905 and 1924 on page 266. Of all the workers employed underground in 1905, 57.8% were local; in 1924, only 51.3%—a number still too high according to the second estimate of 49.8%. The report consequently assumes an average of 50%, which would mean a shift of 7.8% to the disadvantage of the local workers within a span of 20 years.
108. Ibid., p. 124.
109. Ibid., p. 125.
110. *Aus dem literarischen Nachlass von K. Marx und F. Engels*, op. cit., Vol. III, p. 444 (Italics added).
111. Plekhanov, whose philosophical writings are in Lenin's words "the best in the whole international literature of Marxism" (Lenin, "Noch einmal ueber die Gewerkschaften," *Ausgewaehlte Werke*, Vienna, no date, p. 623) has dealt extensively with the fundamental historical-philosophical question of the relation between nature and society. His answer to what determines the development of the powers of production is "the geographical milieu." With full dialectical-materialist clarity, he integrates into his presentation the changes brought about in this milieu through human activity and stresses the fact that nature, even unmodified, is economically relevant for man in different ways and at different stages of production (*Beitraege zur Geschichte des Materialismus*, op. cit., pp. 154, 177, 178, 180 ff. and 225; *Die Grundprobleme des Marxismus*, op. cit., pp. 44 ff., 47, 51). Also very important is Plekhanov's review of Lev Ilich Mechnikov's *Die Zivilisation und die grossen historischen Fluesse* (*Die Neue Zeit*, Vol. 9, Part I, 1891) in which he offers an extensive elaboration of the role of the natural factor from the Marxist standpoint. The "innermost secrets of history will be revealed step by step" through the "combined efforts" of scholars researching its natural and social side. Cunow's standpoint appears to be similar to Plekhanov's; but this similarity is very superficial. Given his concern with ethnological questions, Cunow naturally had to recognize that at lower stages of historical development the natural factor was of decisive significance for the direction of development. But all the great geographical materialists also saw this. In so doing, Cunow thus does nothing more than repeat the old pre-Marxist thesis in Marxist guise. He is unable to determine the shifting emphasis of the significance of the natural factor in the age of industrialism and thus misunderstands the essence of the process of simple production and therewith also the structural core of the capitalist process of labor. In a vulgar way (whereby he again slightly distorts the thought of Marx and Engels) he approaches the standpoint of the theoreticians of the *Emancipation Perspective*. But he is too cautious to follow it completely. As he has it, in the course of development man becomes increasingly less dependent on nature but "only to a certain degree. . . . To some extent he only exchanges a part of his dependency on the natural environment for increased dependency on his social environment." (*Die Marxsche Geschichts-, Gesellschafts- und Staatstheorie*, op. cit., Vol. II, p. 168). He then proceeds to quote Engels to the effect that capitalist industry has made itself relatively independent "of the *local* limits of its raw material" and in principle managed to create the conditions for "growing independence of the mode of production from the natural conditions of geographical environment" (ibid., p. 169). It is clear from the facts offered by Engels that the dependence on sources of raw material is not in principle abolished but only a type of mediation. Despite a series of quotations from Marx or perhaps because of them (the most essential are missing), Cunow fails to correctly conceive Marx's basic formula of the elemental relation between man and nature. His own eclectic formula that both sides, man as well as nature, are active as well as passive (ibid., p.

168) was only possible because Cunow did not realize that each of the two original creators of the material wealth of society fulfill essentially different functions in the process of labor.

In his book, *Theorie des historischen Materialismus*, Bukharin pays more attention to the natural factor than most other Marxist theoreticians. He emphasizes that man will never be able to cast off nature (op. cit., p. 112) and that the social process of labor can only be effective through a material exchange with nature. But with Cunow, changes in history emanate from technology, which is "the variable factor" in contrast to "more or less unchanging" nature (ibid., p. 133). On the basis of this conception, which we have extensively debated in the text, Bukharin arrives at the thesis that "the starting-point for the analysis of social change must lie" in technology (ibid., p. 133)—a thesis based on a misunderstanding of the role of nature which, despite its passivity, nevertheless gives direction to historical development. Thus we must reject Cunow's thesis, since it contradicts Marx's and Engels' postulate that the starting-point of the writing of history must be the *conditions of nature.*

112. Plekhanov, *Die Grundprobleme des Marxismus*, op. cit., p. 95.

113. Marx, *Das Kapital*, op. cit., Vol. III, Part 2, p. 355 (Italics added).