THE AMERICAN REVIEW

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EDWARD HOPPER IN COLOUR

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Editor: *Robert R. R. Brooks*

MANAGING EDITOR: SAM CASTELINO

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THE BOWSPRIT

During the six months since *Oscar Gass* wrote "China Stands Alone," a great deal has happened both within China and in its external relations. All of these events, however, have fortified the author's melancholy conclusion that China has gone a long way towards completing its own isolation.

Economists in all parts of the world, including India, are coming to have a new respect for the automatic forces of the market in which the movement of prices allocates scarce resources among producers and scarce goods among consumers.

This changing fashion in economic thought is especially apparent in the Communist countries in which it is reflected in new policies and changing institutions.

In "Rediscovery of the Market," *Professor C. E. Lindblom* explains how prices and market forces may be made to serve central planning as well as decentralized decision making.

India, to the anthropologist, is the most richly endowed country in the world. One reason for this, as *D. D. Kosambi* makes clear, is that in India it is possible to study "Living Prehistory."

The most fascinating aspect of Political Science is the anatomy of power. The combination of elements is never the same in any two political situations. The art of politics consists of finding the right combination to fit a particular effort. In "The October Coup in Indonesia," *Donald Hindley* dissects the process by which power shifted from Sukarno to Suharto.

At the time of the death of the great American painter, Edward Hopper, in May 1967, *Jack Kroll* wrote a signed article in *Newsweek* entitled "I Want to Paint Sunlight." It was so lyrical that with slight changes we have been able to convert sections of it into a prose poem. We have also been able to bring together into one portfolio reproductions of most of the paintings mentioned in Jack Kroll's eulogy.

The interrelations of people with water, air, land, and food will—within the next half century—determine the future of humanity for a millennium. Two aspects of these relationships are discussed by *George M. Woodwell* in "Toxic Substances and Ecological Cycles," and *Hugo Boyko* in "Salt-Water Agriculture."

The shocking recent events in Newark, Detroit, and other U.S. cities with large Negro populations have disclosed new and deeply disturbing aspects of race relations in America.

Explicit in the extremists' demand for Black Power is the assertion that American Negroes are more Negro than American.

Ralph Ellison, one of America's greatest Negro writers, takes issue with this position in "The American Negro Writer."

For him, as a writer, the first commitment is to the finest expressions of literary art in the entire sweep of the world's literary history. His second identification is with the American social forces which have conditioned him and his forebears for nearly two centuries. And his third concern is with the special contributions which the Negro has made to American culture. Ellison's life as an artist has been dedicated to the integration of these aspects of his personality.

Although "Student Unrest" appears to have diminished somewhat this year, both in America and India, the root causes have by no means been eradicated. In a remarkable address made in California, *Richard Hofstadter* analyses the relations between students, freedom, and responsibility. His admonitions were directed towards American educators and students, but they may have applications elsewhere.

As we were considering the writing of a memorial marking the death of Carl Sandburg, we received the following letter which, coming from an Indian, seemed more fitting than anything we might write:

Sir:

The passing away of one of America's greatest poets, Carl Sandburg, is a shock to all who love beauty. We will sorely miss both the man and his moving sentiments of the American soil and skies.

Nearly fifteen years ago as a student at Allahabad University, I first read Sandburg's poems. I was so deeply impressed that I went from library to library to learn more about him.

He is unparalleled in the history of American literature. His *Chicago Poems* is a classic. In a real sense, he was the voice of the people.

I mourn his death with his admirers in America and any part of the world.

Yours truly,

Anant
594 Mahrikhawan
Basti, U.P.

—*R.R.R.B.*

CHINA STANDS ALONE

OSCAR GASS

IN WEALTH, MILITARY POWER, AND WORLDWIDE COMMITMENT, China today is a small country. Her people still live close to hunger. She does not have anything like the relative military capacity possessed by Japan a quarter century ago. Culturally and morally, she is turning inward. China is politically isolated. No government accords her first friendship, except the government of little Albania. No foreign Communist party stands firm to the Maoist allegiance, except the tiny party of New Zealand.

What a tragic contrast to the high expectations with which the Com-

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munist leadership, on October 1, 1949, proclaimed the People's Republic of China!

In 1958, Chinese leaders told their people that determination, training, and a few years time was all that a Communist country required for the task of total industrialization.

But in 1959, after the "great leap forward" had failed, the same Maoist leadership found it necessary to tell its people:

> *That, in China, enough food to sustain life was not yet assured;*
>
> *That agriculture must be put first, though a modern agriculture might still be fifty years away;*
>
> *That an advanced industry, the basis for full communism, might be a century off.*

No Assistance for China

In human affairs, he who says "maybe fifty years," says he does not know when. He who says "perhaps a century," says maybe never.

And the Chinese leadership now tells its people another thing not to the credit of any of the sons of man: *No country helps China.*

True, in the 1950's, the U.S.S.R. made loans to China, including loans for military supplies, totalling perhaps $1,325 million. (This amount is less than the foreign aid which India received in the single year 1966.) Before the end of 1965, this debt had been entirely repaid. To pay, China shipped food to the U.S.S.R. even in 1960-61 when, as we now know, some of her own people starved.

And today, says the Chinese leadership, the U.S.S.R. and the U.S. join in threatening China and in plotting to invade China. The Chinese people must rely only on themselves—their own asceticism, comradeship, discipline, strength, and skill. They must retreat before the invading enemy, lure him on, absorb him, and cut him to pieces.

A Closed Society

China is again a closed society. Even before 1960, a gifted and alert engineer from Eastern Europe—a party member in his own country—could report that he had lived and worked in China for a year and not had a single significant human contact with a Chinese person. The usual travellers' books tell us nearly nothing.

Fortunately, two recent books of photographs are exceptions, and warmly to be recommended on that account.[1] Neither author, however, reports learning anything important in China from personal acquaintances.

One indeed writes:

> *In every other country, human contacts help. . . . This is not possible in China. . . . For the foreigner . . . direct and spontaneous communication is practically non-existent. . . . The replies . . . are usually ready-made formulas, recitals of the official viewpoint. . . . Dialogue . . ., in which the personality of those talking comes across, is almost unknown.*

What cannot be learned from persons certainly cannot be learned from statistics. In 1958, Chinese statistics became propaganda. Since 1959, almost no comprehensive statistics are published. Perhaps few are collected. One of our most discriminating authorities writes, with a candour which deserves wider emulation:[2]

> *. . . because there is no reliable data, the basic dimensions of Chinese society have not been adequately measured and cannot be known. . . . China is probably the only country in modern times which has first embraced and then repudiated statistical accountability as the basis of national planning.*

Hunger Ahead?

In this statistical blackout, one can only guess the total population of mainland China. My guess, for the beginning of 1967, is about 775 million, plus or minus 10 per cent. Apparently, more than two-fifths of this population is under age fifteen, and more than 80 per cent earns its livelihood principally in agriculture.

We shall probably not be greatly misled if we count that Chinese families containing over 600 million persons—fifty times as many as in the U.S.—work primarily at farming. Minimally, these Chinese families contain 250 million farm workers. On a national average, after including multiple cropping, each such farm worker harvests annually a crop area of under 1.7 acres. Since 1957, perhaps since 1955, the total national harvest is, at best, stagnant.[3]

By accepted convention, "grain" in China includes not only rice, wheat, and other grains but even beans and potatoes. On this basis, total "grain" production was about 185 million metric tons in 1957, and it has apparently fluctuated between 175 and 180 million since the recovery from the exceptionally bad harvests of 1960 and 1961.

The Chinese authorities purchased abroad (net) an annual average of some 4.9 million tons of grains in the years 1962-65 and perhaps 5.7 million tons in 1966. Yet Chinese grain supply for consumption in 1965-66 is estimated (by the U.S. Department of Agriculture) to have been about 16 per cent lower per capita than in 1957-58. The total present diet is estimated to supply about 85 per cent of the 2,300 calories per day calculated as the "minimum" requirement for China by the Food and Agriculture Organization of the United Nations.

Without giving full faith and credence either to such minima or to such calculations, we may recognize that this diet probably involves some malnutrition, that it comes close to hunger, and that serious crop failures would push China over to catastrophe.

Mechanization is not the remedy; in the short run China has no employment for displaced labour that would pay for the machines. Irrigation and drainage are part of the remedy, but they involve much skill, capital, and time. Chemical fertilizers also are part of the remedy, but China lacks capital to produce fertilizers or foreign exchange to import adequate supplies.

Better seed varieties might make the greatest single contribution, but such varieties have to be found, and they also characteristically require more fertilizer and water. Greater incentives to the farmer might help, but China is turning her back on that path.

In sum, the requisites for improving Chinese agriculture—whether of capital, science, skills, or incentives—are lacking. And there is no evidence that, in the past decade, China has made progress in overcoming these deficiencies.

An Industrial Dwarf

In industry, China entered the 1960's with a crisis and recession which can be compared only with the Western experience of the Great Depression of the 1930's. Having first reported a peak civilian nonagricultural employment of 56.9 million persons in 1958, the Chinese authorities also reported (in fragments) that in 1959-61 more than half were returned to agriculture. Only in December 1964 did Prime Minister Chou En-lai announce that the industrial production level of 1957 had been regained.

One may hope that by now the peaks of 1958 have also been surpassed, and that in 1967 China's aggregate industrial output will be the highest ever. But meanwhile, the population also has increased by perhaps one-fifth.

In 1966, China's workers were urged to create "Taching-type" enterprises—modelled after the Taching oil field—and China proudly announced basic self-sufficiency in crude petroleum; this self-sufficiency, however, was apparently at the tiny consumption level of about 200,000 barrels per day (U.S.: 12,000,000).

Indeed, China has now produced more rare things than petroleum—plutonium and even uranium 235. Yet in 1965, when China's exports regained the $2.2-billion level of 1959, they were still less than the exports of Denmark. Moreoever, China's exports are those of an undeveloped economy—agricultural products, textiles, a few specialties (tin, tungsten), and simple consumer goods.[4]

Such countries as France, West Germany, the United Kingdom, and Japan—with populations 7 per cent to 13 per cent of the Chinese—each has an industrial output between two and four times the output of China.

Each has also accomplished an industrial expansion, in the past ten years, much larger than China's. Less-developed countries—Taiwan, Greece, Israel, Mexico—also have been moving ahead much more rapidly than China.

Persuade, Be Persuaded, Or Perish

What the Communist regime has undeniably accomplished is to make China a functioning centralized state. Everything in this state is authoritatively organized—farm, factory, office, school, residence area. There is no private place. The governing hierarchy requires of everyone both conformity and active assent. Who errs will be patiently corrected. Who denies—or affirms another truth—will be reshaped or squashed.[5]

Very little about this government of China is known to those not members of its inner circle. Our best document[6] does not come from a high echelon; it is no substitute for a set of minutes of the Politburo. But it is impossible for an alert mind to study this document without noticing one controlling feature—the drastic divergence from Stalinism.

For Stalinite authoritarianism, the sequence of public activity is first the leader's determination, then decree, order, propaganda, and obedience—or else prison, labour camp, or firing squad. For Maoist authoritarianism, the sequence is the same through propaganda, but then comes the new stage of *persuasion*—coercive persuasion it may be, but still persuasion. *One must deal patiently with the masses.*

In the end, there is no give and take, no right to dissent, to advance one's own considerations, to reason, and to finish by disagreeing. But the Maoist official must follow "the mass-line": he must not command but persuade. And all persons must be persuaded; they must either be persuaded or die. And those who live must demonstrate their persuasion daily, actively, militantly.

Admittedly, when all is done, it is probably the Maoist authoritarianism which is the more destructive of spiritual freedom and intellectual spontaneity. Admittedly also, Stalin never exacted such servile adulation as Mao now receives. But the psyche of the society which Maoism creates is not to be identified with the psyche of Stalinism.

Conflict in the Army

To its own officers, in 1960-61, the Chinese Government acknowledged that the condition of the country was catastrophic. Many people were starving. Peasants had been in armed revolt. Simple soldiers asked for guns, to kill Communists. The militia was widely regarded as "rabid dogs, whippers, and bandits." Military officers had been guilty of extreme cruelty to starving civilians.

Nevertheless, along with these miseries, officers were invited to share large horizons. The revolution was conquering in all the world; soon it would embrace the entire continent of Africa. And, to prepare for its role in these great events, the army was instructed to rely on the trained, devoted common man, soldier or guerrilla, fighting the enemy face-to-face or at a distance of a few metres, best at night.

The army must separate itself from the error of Marshal Peng Teh-huai (Minister of Defence, dismissed in September 1959) and General Huang Ko-cheng (the army's simultaneously dismissed Chief of Staff) who had followed the "bourgeois" line of emphasizing military professionalism and advanced military equipment: ". . . If there is a war within three to five years, we will have to rely on hand weapons."

Late in 1965 or early in 1966, the Government of China dismissed another army Chief of Staff. The newly fallen was that very General Lo Jui-ching who had been appointed in 1959 to "rectify" the army in accord with "the thought of Mao Tse-tung." Nevertheless, he and several of his senior associates—many veterans of the Long March—were again found, in 1965-66, to be "taking the bourgeois, capitalist line."

In May 1965, General Lo had publicly espoused a military doctrine of ". . . pursuit to destroy the enemy at his starting point, to destroy him in his nest." And Lo had reminded his auditors that, by such pursuit, Stalin had seized the ground for the establishment of Communist states in Eastern Europe. To General Lo, as well as to scores of others of the Yenan generation who were purged in 1965-66, their accusers addressed the following admonition:

> *To devote oneself to revolution for a whole life, one must reform all one's life. Even the "old guard" officers who suffered long and hard can let non-proletarian ideas enter their heads.*

Schism in the Party

The great party schism emerged suddenly. In January 1965, the National People's Congress re-elected all the old comrades (with minor exceptions). Then outsiders could still wonder at the cohesion of this senior leadership, which had stood together through three decades, with only minor exclusions of high-ranking figures in 1937-38 and 1954-55 and 1958-59. By early 1966, however, the leadership was visibly split.

The faction around Mao speaks loudest, and raises him to godhead—apparently because it could not stand were his authority once to become questionable.

Marshal Lin Piao, the Minister of Defence, now holds the highest eminence after Chairman Mao, but this eminence is apparently not acceptable to many of the Marshal's recent equals.

The opponents of the Mao-Lin leadership—some denounced, some dismissed, some arrested—obviously continue to resist. Without Mao's support, however, it seems unlikely that these opponents could come to power during his life.

Of the highest governing body, the seven-man Standing Committee of the Politburo, as it was in January 1965 *(Mao Tse-tung,* Liu Shao-chi, *Chou En-lai,* Chuh Teh, Chen Yun, *Lin Piao,* and Teng Hsiao-ping), only the three whose names are italicized remain in position at the beginning of 1967. Of the large Central Committee of the party, the majority has also, it seems, had to be dismissed or overridden.

Unleashing the Red Guards

In China's government, there was no way to proceed against such opposition by judicial process. And it was impossible to proceed against *this* opposition through the party or the ordinary executive machinery of state: the opposition controlled the apparatus of both party and government. The Red Guards were therefore created, under the sponsorship of the Ministry of Defence, to root out the counter-revolution.

These stormtroopers were sent out to administer revolutionary justice to the enemy—to "those within the party who are in authority and are taking the capitalist road," and to "reactionary bourgeois scholar despots," and to those who favour "putting economics first, putting technique first, putting one's work first, and putting specialists first," and to "a handful of anti-party, anti-socialist, and counter-revolutionary intellectuals."

In time, the Red Guards were given names of people to fit these formulas of "Reaction." The highest enemies of socialism were the Head of State and the General Secretary of the Party, Liu Shao-chi and Teng Hsiao-ping. Comrade Peng Chen (yesterday a leading member of the Politburo and mayor of Peking) and comrade Lu Ting-yi (propaganda chief of the party since Yenan and yesterday Minister of Culture) were, it appeared, "demons and monsters" who had long held up "a big red umbrella" to shield innumerable smaller scoundrels and counter-revolutionaries.

Mao's Personalist Coterie

The new Mao-Lin leadership includes several personalist elements. Mao's wife (utilizing the name Chiang Ching), not previously active in politics, has emerged now to give authoritative speeches and to be a cultural adviser to the army. Also from Mao's entourage, now added to the Standing Committee of the Politburo, is Chen Po-ta, formerly Mao's personal political secretary.

The other new members of the Standing Committee, Tao Chu and Kang Sheng (respectively from the regional administration in the South and the secret police), were said to reflect Marshal Lin's friendship and influence. Yet Tao was being denounced as an associate of Liu Shao-chi's "black command" before the year was out. Li Hsueh-feng, who replaced Peng Chen in June, was also already being denounced by the Mao-Lin faction in December.

Clearly, if this is a conspiracy for an inside *coup d'etat*, the Mao-Lin conspirators are short of talent and cannot count on their chosen subordinates.[7]

Through the mouth of Chiang Ching, the Mao-Lin leadership has indeed indicated (November 28, 1966) that it is not a majority or was not until it "rectified" the count. Mao's wife explained she would rather not count votes but weigh them. She reprobated talk

> *. . . about minority or majority views independent of the class viewpoint. . . . It is necessary to see who has grasped the truth of Marxism-Leninism and of Mao Tse-tung's thought, who is ready to maintain the proletarian revolutionary stand, who is genuinely*

> *carrying out the correct line of Chairman Mao.*

And six days later, Chiang Ching spoke out against the municipal authorities of Peking, whom she found—even after the disgrace of Peng Chen—"as rotten as ever." And she added:

> *They are reactionary, two-faced. They insult Chairman Mao. They attack us. They must be wiped out, once and for all.*

Cultural Primitivism

It was this Mao-Lin leadership which set its Red Guard storm-troopers—all over China—to holding kangaroo courts, beating up "wolves in sheep's clothing," sacking homes, arresting whomever they were told to arrest, smashing temples, burning books, and generally doing "revolutionary justice."

Though we hear shouts of accusation and witness the self-abasement of the accused, no one in the West has cogent evidence of the substance of this struggle. We do not know the issues. We do not know the strengths of the contenders. How much is a genuine difference of policy? How much is mere contest for power?

If the Mao-Lin leadership does put forward a distinctive skein of thought for "mass-line" indoctrination, this skein is made of self-abnegation, esteem for manual labour, a model worker-soldier, cultural primitivism, Sinicism insofar as compatible with primitivism, emphasis on non-specialization, and rejection of all social distinctions based on training and skill.

But we do not know whether a skein thus spun is unacceptable to the Liu-Teng opposition, and—if unacceptable—with what nuances of differentiation they would design its replacement. It is silly to classify one side (say Mao-Lin) as "hard-line" and the other (Liu-Teng) as "soft-line."

If, in favouring income incentives for civilians and insignia of rank for army officers, Liu is closer to Stalin than is Mao, does this greater closeness make Liu a libertarian? Are we to forget that it was Peng Chen who, in 1951, led a public execution meeting in the Central Park of Peking, repeatedly calling upon the crowd to second him alternately in the sentences "Kill these men!" and the invocation "Hail Chairman Mao"?

In August 1966, the Central Committee announced that ". . . the situation is one of a new all-round leap forward emerging"; does this reminiscence of the 1958-59 economic lunacy delight the "hard" Chou

En-lai more than the "soft" Teng Hsiao-ping? In foreign policy generally, who is more "hard" than comrades Liu, Teng, and Peng? And which side emphasizes the importance of a capacity for frontier counterattack and offensive warfare?

A Compulsion to Suicide

"We want to liquidate entirely, by this great cultural revolution," said Chou En-lai in June 1966, at Bucharest, "all the old ideas, the entire old culture, all the old habits and customs . . . [We want] to build socialism and prevent the restoration of capitalism."

Primitivism apart, such statements tell us almost nothing. The accusers will say they are more socialist and their opponents more capitalist. The accusers will also say their opponents wished ". . . to usurp the leadership of the party, the army, and the government." But what does it mean to "usurp" in a Maoist society where there is no rule of law, no procedurally legitimate way to win the highest offices of state, and where legitimacy resides in possessing "correct thought"?

While the Red Guard proceeds with rectifying China's culture and administering revolutionary justice, the rest of the world can perhaps reasonably do little but look on, with compassion. There is, I suspect, for the immediate years, little ground for new, self-concerned fear. China is rending herself. She has not increased capacity for external aggression, and it may be that she has less mind for it.

For the present, the Mao-Lin rhetoric of daring puts its accent rather on how resolutely the foe will be repelled when *he* attacks. And today the young Mao-Lin stormtroopers are not being taught that they are the deprived sons of a people without room.

A Preventive First Strike

In any case, China is not in 1967 a considerable military power, beyond her own frontiers.[*] Let us provisionally set aside nuclear weapons. On the Eastern and Southern rim of Asia, China makes a distant second in military capacity: the U.S. is first. On its inner Asian frontier, China again is only second: the U.S.S.R. is first.

What a Chinese military force of lightly armed, poorly supplied infantry can do, General Lin Piao demonstrated in November-December 1950, when his armies outmanoeuvred and outfought those of General MacArthur. What such an armed force can*not* do was demonstrated in February 1951, when General Lin's "third phase" offensive was stopped dead, and in May-June 1951, when the Chinese armies were monstrously bled by the superior firepower and mobility of General Van Fleet's forces. In the intervening years, China's relative military inferiority has become more pronounced—and further so since the 1959-60 break with the U.S.S.R.

During the next few years, China's nuclear weapons will, I think, be unequivocally "counter-productive" to China's own purposes. In war, these nuclear capabilities are still too meagre to give her equality, but they may already be sufficient to do considerable damage to a reachable opponent.

China's initiative of participation in a war, where the U.S. or the U.S.S.R. was associated with the other side, would therefore today probably be a signal for immediate destruction of her nuclear production facilities, her missile bases, her airfields, and her harbours (which might house submarine-carrying nuclear missiles).

In such a destructive strike against China, I have no reason to assume that tactical nuclear weapons would be withheld. Quite naturally therefore the possession by China of a few nuclear weapons must make her—both to the U.S. and the U.S.S.R.—the standard staff college model for the exploration of the idea of a preventive "first strike." China has become a more urgent target.

To the Wretched of the Earth

When the Chinese archives of the past decade are one day opened, it will probably be demonstrable that there was an important shift in Peking's foreign policy already during 1958-59. This was a shift towards greater international militancy and away from collaboration with the U.S.S.R. However, it is not as early as 1958-59 but rather some years later, indeed after 1962, that there seems to have emerged the truly profound breach between the two great states which profess communism.

In 1958, certainly, the Maoist leadership still held that China, like the U.S.S.R., was making spectacular economic progress. But, in the subsequent years, the Chinese leaders—or some of them—seem to have come to understand that, with respect to China's economic advance, they had been quite deluded. *Going it alone, China could go ahead, at best, only very slowly.*

Then these leaders—or some of them—seem to have broken not only with the U.S.S.R. but perhaps also with the very foundations of Marxist utopianism: they apparently broke with the conviction that communism—such communism as is attainable in this life—must rest on elimination of material scarcity. They also broke with the Russian slogan that communism should attempt to displace other socio-political systems through competition in yielding greater material welfare.

In place of the Marxist ideology of a communism of abundance and freedom, the Maoists then began to put a radically different communism—a communism ascetic, primitivist, and puritan, a communism of prolonged equalitarian poverty and pervasive authoritarian discipline.

In these latter years (and here, perhaps, Marshal Lin's ambitions are a factor), the dominant slogan became that all Chinese should model themselves on the soldiers of the People's Liberation Army—in simplicity, in effort, in discipline, in performing all kinds of work, and in saturation with "the thought of Mao Tse-tung." To this morality, the calling of man is "not to be afraid of hardship, not to be afraid of death." Certainly by 1965-66, it was to such an equal sharing in a devoted and hard life, unmoved by material incentives, that the Maoist voice from Peking called out its invitation—to all the wretched of the earth.

Total Failure in the Third World

We shall not grasp the essence of the world politics of these present years unless we make clear to ourselves how totally this Chinese call has now failed. It has failed with the U.S.S.R., failed with the lesser Communist states, failed miserably in "the third world."

Among Communist states, only North Vietnam—always most influenced by the Chinese example—responds with some show of respect to Peking's doctrine. Even Albania reportedly now gives China obeisance without doctrinal concurrence. Elsewhere, even in those countries of Asia and Africa where Peking still has conventional diplomatic standing, the new voice of China is found absurd.

The Mao-Lin leadership now speaks for a China which is isolated morally in greater degree than at any time since communism took power.

So far as we know, China's general foreign policy objectives remain unchanged, not only since 1958-59 but even since 1949.[9] These objectives are to affirm China's place in the world, and to do so in the context of support for the world revolution. This affirmation and support are not envisaged as manifesting themselves in one surge towards victory, but from time to time—as opportunity and strength permit.

China's natural allies are conceived to be the other faithful Communist states, the peoples of less-developed countries, and progressives in the advanced countries. China's natural enemy is correspondingly "world imperialism, led by the U.S.," or sometimes simply "U.S. imperialism." One may parley with the imperialist camp, and arrange truces, with the purpose of disorienting the enemy the better to divide and destroy him; but one recognizes "peaceful co-existence" as a mere shamming tactic on the road to world victory.

The essential bases for the achievement of this victory are the leadership of the party and the support of the people. The instrument is combat: "Political power comes out of the barrel of a gun." The tactic of combat is the subject of endless aphoristic wisdom: to be ingenious and daring; to train well and concentrate one's strength; above all, to fight only the engagements one wins!

The over-arching Maoist style is one of revolutionary optimism, courage, and militancy:

> *Our cause is the revolutionary cause, and what we most need is revolutionary optimism. . . . We ride with the wind and march forward. Let us ride with the East wind which has overpowered the West wind, ride with the wind of communism which has overthrown the Rightists. . . .*

Deserted by "False Comrades"

This Maoist spirit finds itself, however, increasingly frustrated by the emergence of false comrades, modern revisionists, who have lost confidence in revolution. Deprived of this confidence, the revisionists become broken men—like Khrushchev and his successors, "outwardly tough as bulls, but inwardly cowardly as mice." They are afraid to "make revolution," afraid to make war. They are afraid that even the most just, most indispensable wars of national liberation will escalate to wide nuclear destruction.

Actually, the revisionists, according to Mao, are no better than Social Democrats, professing (in Italy, in France) to believe in a peaceful parliamentary transition to socialism and (in the U.S.S.R.) a peaceful worldwide victory of socialism through economic competition. Quite consequentially, these revisionists neglect the central duty of progressive man in this era—to engage in a militant, "tit-for-tat" struggle against U.S. imperialism, "the most ferocious enemy of all the peoples of the world."

The Mao Tse-tung leadership never had solid reasons for gratitude to the U.S.S.R. Stalin did not support this leadership before 1935, when it made its way to power within Chinese communism. Stalin did not believe it could defeat the Kuomintang; he correspondingly gave it almost no help from 1935 to 1945 and only minor, episodic aid from

1945 to 1949. The U.S.S.R.—whether under Stalin, Malenkov, or Khrushchev—extended to Communist China only modest assistance from 1949 to 1957.

Nevertheless, in late 1957, the two great Communist states appeared to be in fundamental accord. In November 1957, Mao is reported to have stated that every organization must have a head, and the Communist part of the Soviet Union is best fitted to be head of the international Communist movement.

The Rupture with Moscow

But this concord was transient. Some would say that by the end of 1959, surely by the end of 1960, it was quite dead. By then, the Chinese had been profoundly disappointed with Soviet unmilitancy in the Middle East (July 1958) and still more in the Taiwan straits (September-October 1958).

They had been pained to find the U.S.S.R. neutral between them and India (September 1959), seriously injured by Russia's termination of assistance to China's military development (June 1959), and greatly damaged by Soviet withdrawal from assistance to China's economic development (July 1960).

They had borne insult as well as injury. Khrushchev came to them, to Peking, fresh from Camp David, and lectured them against "testing by force the stability of the capitalist system." He separated Russians from Chinese and announced, ". . . We Communists of the Soviet Union consider it our sacred duty, our primary task . . . to utilize all possibilities to liquidate the cold war."

To the Chinese, this was revisionist betrayal and stupidity. Yet they allowed four years to elapse before proclaiming formal divorce; it took the Nuclear Test-Ban Treaty to bring that. Then the Chinese party stated, in an open letter (September 6, 1963):

> *The leadership of the Communist party of the Soviet Union has allied itself with U.S. imperialism, the Indian reactionaries, and the renegade Tito clique against socialist China and against all Marxist-Leninist parties, in open betrayal of Marxism-Leninism and proletarian internationalism. . . .*

Even before the removal of Khrushchev (October 14, 1964), Sino-Soviet polemics had acquired a rigid pattern. The Russians named the Chinese rash, romantic, and "adventurist." The Chinese called the Russians timid, opportunist, and "capitulationist."

Invective Rages . . .

The Russians charged:

> *The Chinese build communism with romantic illusions;*
> *They neglect the proletariat of the advanced countries;*
> *They are adventurist on war and peace;*
> *They are rash in the face of nuclear destructiveness;*
> *They pursue great power "special aims and interest . . . which cannot be supported by the military strength of the socialist camp";*
> *They engage in racist propaganda against whites.*

The Chinese countercharged:

> *The U.S.S.R. is restoring capitalism;*
> *It diverts the proletarian masses in advanced countries from the true road of "smashing the old state machinery [chiefly the armed forces] and establishing a new state machinery [chiefly the armed forces]";*
> *It abandons the revolutionary national liberation struggles;*
> *It propagates "nuclear fetishism," in denial of the importance of the soldier's spirit;*
> *It spreads the slogan of a Yellow Peril.*

Mao personally (July 10, 1964) challenged the territorial extent of the U.S.S.R. though he also suggested, three days later, that China might wait long for rectification. Chinese transition to communism, he said, would still require "anywhere from one to several centuries."

Charge and countercharge vied in astringency of insult—with the Chinese sustaining a consistent superiority. On July 28, 1964, Mao wrote Khrushchev[10] (in response to Khrushchev's effort to assemble a meeting of parties to condemn the Chinese):

> *You are falling into a trap of your own making and will end by losing your skin. . . . We firmly believe that the day your so-called meeting takes place will be the day you step into your grave. . . . Once again we sincerely advise you to rein in on the brink of the precipice. . . . But if you refuse to listen and are determined to take the road to doom, well, suit yourselves. Then we will only be able to say: "Flowers fall off, do what one may;/Swallows return, no strangers they." With fraternal greetings.*

. . . Unabated

Khrushchev's removal made only a transient and trival change. According to the Chinese, already on November 14, 1964, the new Soviet leadership

> *. . . told the members of the Chinese party and government delegation to their faces that there was not a shade of difference between themselves and Khrushchev on the question of the international Communist movement or of relations with China.*

The leadership which succeeded Khrushchev has shown no more willingness to help China become a modern great power and no greater indulgence of Chinese ideas of how to help "make revolution."

Though, after Khrushchev's fall as before, the Russians have suggested *some* enlargements of collaboration, both economic and political, the Chinese have uniformly rejected these advances as made in bad faith, accusing the Russians of trying "to sell horsemeat as beefsteak." Particularly after the Soviet-American cooperation in ending the Indian-Pakistani hostilities (September 1965), the Chinese rage observed no limits. Sometimes Chinese spokesmen described the U.S.S.R. as worse than the U.S. because more tricky.

The Russians, for their part, accused the Chinese of trying to precipitate war between the U.S.S.R. and the U.S., while the Chinese, in their own expression, would sit quietly on a mountain, to watch the battle of the tigers.

China Is Alone

But it would be great error to believe that there is some uniqueness in China's separation in sympathies from the U.S.S.R. On the contrary, with few qualified exceptions, China is similarly separated from other Communists and non-Communists, from Asians and Africans and Latin Americans, as well as Europeans and Americans.

Characteristically, in the Middle East, where the great powers, including the U.S.S.R., have recently used their influence to discourage grand confrontations, Mao has personally urged the Arabs to destroy Israel. Imperialism, he said, has created two bases of oppression in Asia—Formosa in the East and Israel in the West. Ahmed Shukeiry, leader of the Palestine Liberation Organization, boasted in Cairo on January 4, 1967, that it was in China that his officers were being trained and from China that his weapons were coming.

The lesser communisms rejected the idea of a world meeting to condemn the Chinese not because (with the partial exceptions of the parties of Albania, North Vietnam, and New Zealand) they share Chinese views, but because the shrewdest and most independent among them (Italians, Yugoslavs, Rumanians) do not wish to create the precedent of *any* excommunication.

Even Albania has desisted from approving the Red Guard and the "Great Cultural Revolution." North Korea has drawn closer to the U.S.S.R. The party in Japan has broken with the Chinese. The Indonesian party—after a senseless, horrible massacre—is no more.

In Africa, the Chinese have retained diplomatic relations with only fourteen out of thirty-eight independent states. Their rejection, except in Congo, Brazzaville, where their friends rule, has grown out of a fantastic record of "making revolution" by supporting plots and putsches. Even Castro has had a bitter public quarrel with them. Elsewhere in Latin America, the Chinese voice brings affirmative response only where a few desperate men assemble.

China now speaks only to itself.

OSCAR GASS, *who is a consulting economist in private practice in Washington, D.C., has served as economic adviser to various foreign governments. His experience in government also includes a five-year period as a chief economist in the office of the Secretary of the Treasury, under the Roosevelt administration (1938-1943).*

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REDISCOVERY OF THE MARKET

CHARLES E. LINDBLOM

WHAT IS THE SIGNIFICANCE of the great debate, already several years old, on the appropriate role of profits in the planned economies of Communist Europe?

One interpretation of the change in Communist thinking is that communism is turning capitalist. Many Americans are delighted to accept this interpretation. But the Communists do not see their reforms in this light.

Indeed, the significance of the reforms has little to do with the antithesis of capitalism and socialism. The new and growing use of profitability criteria in Communist enterprises can better be understood as a phase in *a worldwide rediscovery of the market mechanism.*

The Market Mechanism Is Not Capitalism

Capitalism and the market mechanism are not the same thing. They are often confused with each other, because it was under capitalist auspices that the market mechanism first became, on a vast scale, the organizer of economic life. But the market mechanism is a device that can be employed for planned as well as unplanned economies, and for socialism and communism as well as capitalism.

Today the market mechanism is a device both for the organization of the relatively unplanned sectors of the American economy and for such central planning as is practised in the United States.

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In Britain and Scandinavia, the market organizes both the private and socialized sectors of the economy. In Yugoslavia, it serves as an overall coordinator for an economy of publicly owned enterprises. In many underdeveloped countries, it is a powerful tool of development planning. It is this market mechanism rather than capitalism that the U.S.S.R. and its satellites are trying to employ, to improve their planning.

Except for a convulsive attempt between 1918 and 1921, Soviet policy has never questioned the practical usefulness of money and prices. This does not mean, however, that the Soviet Union has heretofore made much use of the market mechanism.

By the market mechanism, we mean the use of money and prices in a very particular way. Prices and price movements are employed—instead of targets, quotas, and administrative instructions—to give signals to producers with respect to what and how much they should produce; and prices of labour and materials consumed are set to reflect the relative value of these inputs in alternative uses to which they might be put.

Pricing to Evaluate Alternatives

It is the possibility of using a pricing process to evaluate alternative possibilities and to cue producers accordingly that has struck a new note in Communist economic policy, in the economic reorganization of Western Europe, and in the economic development of the nations still in early stages of growth.

The significance of the development, of which Communist reforms are only a part, can be appreciated in the light of its own history.

Adam Smith and Laissez Faire

Most people who know anything at all about the market mechanism seem not to have advanced beyond Adam Smith's view of it. He saw it as *an alternative* to government control of economic life. He was concerned about inefficiency and other defects of mercantilism; and, to speak anachronistically, he thought he had found in the market mechanism a substitute for incompetent planners. His specific insights were profound.

He saw the possibility that resources could be systematically allocated in response to human needs as a by-product of "selfish" individual decisions simply to buy or to sell.

He saw that prices established by consumers in their trading with producers could establish a set of signals that could direct the productive processes of the whole economy.

He saw that competitive bidding for inputs would establish a market value for them that would make possible a comparison of their productivities in alternative uses.

He saw that a comparison of the money cost of production with money receipts could control the flow of resources into each of their alternative possible uses.

Finally, he saw that the market mechanism was for all these reasons an extraordinarily powerful device for decentralizing economic decisions.

In all this, however, his vision was limited: the market mechanism was always a private enterprise market and always an alternative to planning.

Market Socialism

It was not until the development, over a century and a half later, of the theory of market socialism that any significant number of people perceived the possibilities of using the market mechanism in a completely socialized economy. But even today the idea of market socialism remains esoteric.

But a few socialists have known that prices could be manipulated by government in such a way as to reflect the values that consumers put on consumer goods and services, and also to reflect the values of inputs in alternative uses.

Prices under Socialism

Their discussion of the pricing process under socialism clarified the useful functions that prices can perform. If, for goods and services in short supply, prices are systematically raised by government pricing authorities, the high prices can be taken as signals for increased production, while being at the same time at least temporary deterrents to consumption. Similarly, if prices are systematically lowered for goods in overabundant supply, the low prices can be taken as signals by producers to curtail supply, and by consumers to increase consumption.

But, though the theory of market socialism made it clear that the market mechanism could serve socialism as well as capitalism, it, nevertheless, did not much interest the socialists of Western Europe or the planners of Communist Europe. For the market socialists had developed a model of a socialist economy that left very little room for central planning. Their socialist market mechanism was designed, as was the market mechanism of classical economics, to serve the preferences of individual consumers rather than the priorities of central planners.

Communism vs. Consumer Sovereignty

As in a capitalist economy, in this kind of market socialism the consumer remained sovereign—at a time when most socialists, planners, and Communists were looking for ways to effect collective purposes and national goals, rather than individual preferences.

In the Communist countries, the possibilities of market socialism were underrated for still other reasons. Communist ideology was antagonistic to the very idea of the market, hence inevitably to market socialism. Academic and professional Soviet economics was also antagonistic to the orthodox tradition in economic theory out of which the theory of market socialism sprang.

Finally, with respect to formal planning and resource allocation, the overwhelming concern of Soviet policy was "balance" rather than what economists call optimality. Optimality involves a careful evaluation of returns to production in all alternative lines. To Soviet planners, however, the need for big allocations to steel, electric power production, and national defence seemed obvious.

Speaking very roughly, all that remained to be done was to insure that allocations for the rest of the economy were approximately consistent with the crudely calculated allocations to these high priority sectors. And even this formal interest in balance was secondary to their interest in the gross growth of physical output.

The Market Mechanism for Centrally Determined Objectives

If the market mechanism was ever to be of any use for central planning, it had to be shown that prices could be set to reflect centrally determined values, and not merely individual consumer values.

In the economics of the West, it has in fact long been clear that they can do so. For example, a subsidy to maritime shipping lines or to airmail carriers is a way of raising the price received by those who provide these transport services, thus signalling them to increase their production of the services. Similarly, a tax on liquor is a way of depressing the price received by manufacturers and distributors, hence a way of signalling them to restrict output.

The result of these interventions—either subsidies or taxes—is to achieve a price that reflects both individual consumer preference *and* the preferences of governmental authorities.

A government can go even further—and in wartime often does. It can completely eliminate the effect on price of individual consumer demands so that producers respond to a price set entirely by government. This can be done either through the imposition of a legal price or by exclusive government purchase of commodities and services, after which government agencies either consume the purchased goods and services themselves or, in the case of consumer goods, redistribute them in some way to consumers.

Avoiding Administrative Controls

Using the market mechanism in this way is an alternative to direct administrative control—to targets, quotas, physical allocations, specific instructions, etc. It is not always a good alternative, but it often is, since it is a way of manipulating incentives powerfully while leaving the actual decision—to produce or consume more or less—in the hands of the agency or enterprise whose price has been altered.

Hence, a general virtue of the market mechanism as an instrument of central direction is that it permits extraordinary decentralization of detailed decision making.

To understand the possibility of subordinating the market mechanism to governmental rather than to individual choice, it is essential to distinguish between actions in which governments signal their production targets through prices, and actions in which they intervene in the market mechanism to alter the results without, however, actually using prices systematically as such a signalling device.

To raise agricultural prices, for example, in order to stimulate agricultural production is a way of employing the market mechanism for the achievement of a centrally determined goal of high agricultural production. On the other hand, to raise agricultural prices as part of a complex process of restricting farm output (as in the U.S.) is an entirely different kind of operation, in which direct administrative controls (such as acreage quotas) replace the market mechanism.

Or again: depressing the price received by a manufacturer by imposing a tax on his output is a way of implementing a central decision to discourage consumption of the commodity, whereas the general imposition of legal maximum prices to control inflation has the effect of interfering with the market's ability to reflect either collective or individual choices and will ordinarily give rise to rationing, or to some other administrative device for the allocation of goods and services.

Perhaps it is the easy confusion of miscellaneous intervention in the pricing process (which the Communist economies have always practised) with the skilful use of pricing to implement central planning of production that has contributed to Communist indifference to the latter.

In any case, the Western demonstration that the market mechanism could be used to implement central priorities did not significantly affect Communist policy until certain other developments occurred. Even as late as 1950, the model of market socialism seem to be consigned to a limbo of interesting irrelevancies. Ideological barriers were still strong.

Yugoslavia

The Yugoslav economy was the one sensational exception to Communist indifference to the market mechanism. Yugoslav communism was indigenous, not imposed by the U.S.S.R. as in the satellites generally. Political relations with the Soviet Union were such that in Yugoslavia independence in economic policy came to be valued rather than feared. Moreover, Yugoslav intellectuals and politicos had closer ties with their counterparts in the West than did any of the other Communist countries.

In 1952, recoiling from the inefficiencies of detailed administrative control over the economy, Yugoslavia brought into being a greatly decentralized market socialism. The change of direction, taken together with the rapid growth that ensued, excited much interest in the Communist world.

The significance for communism of the Yugoslav venture was greatly diminished on one score, however. For when the Yugoslavs abandoned detailed administrative control over the market mechanism they also went a long way towards consumer sovereignty as a replacement for the central direction of the economy. Hence, in the eyes of Communists elsewhere the Yugoslavs had largely abandoned central planning itself.

New Freedom for Economic Inquiry

New possibilities for economics were opened up by Stalin's death in 1953. Soviet economists, engineers, and administrators could finally look with some freedom at the lessons to be learned from foreign experience with the market mechanism. One especially noteworthy gain for economic analysis was the lifting of Stalin's capricious ban on mathematical economics (input-output analysis, and linear programming, etc.).

Soviet mathematical economics, reaching back to work originating in the 1930's but not then pursued further, demonstrated independently of Western economics that pricing can be made useful to the planning of resource allocation even in the absence of any actual exchange between a buyer and a seller.

If we consider all the alternative combinations of end products that an economy can choose from, and all the alternative combinations of inputs that might be used to produce any given output, we see that there are vast possibilities of substitution—of one end product for another, and of one input for another.

These possibilities of substitution can be represented by "substitution ratios"—and these substitution ratios can be expressed as a system of prices. (In the absence of any actual transaction in which a real price would be set, they are often called "shadow prices.") *Pricing turns out therefore to be implicit in the very logic of rational choice among alternative uses of resources.*

Pricing as Logic

This discovery clearly removes certain traditional ideological objections to market pricing, for it makes clear that pricing is not a capitalist invention but a logical aid to rational calculation even in circumstances far removed from capitalist buying and selling.

Whether in fact the discovery has yet achieved this consequence for Soviet thought is not certain, however; for Soviet mathematical economists have, on the whole, drawn the inference, not that the market mechanism might now be more openly examined, but that such pricing as might be achieved through the market mechanism can in principle now better be achieved through further mathematical analysis and electronic computation.

The "in principle" is crucial, since a prodigious amount of information needs to be gathered and processed in order to substitute computers for actual markets; and so far the accomplishment is beyond the capacity of economists, Soviet or Western.

Nor can it be said with confidence that there is any way to gather and test the required information except by putting consumers or planners in the position of actual choice in a real market. Still, the exploration of the practical mathematics of resource allocation is far from its maturity.

The Rising Concern for Allocative Efficiency

In any case, the discovery of "shadow pricing" did not of itself overcome Communist disinclination to exploit the market mechanism.

A final consideration was the growing complexity of the Soviet economy, with complexity outstripping admittedly growing Soviet competence in planning.

The economy became more complex for at least two reasons: with the rising standard in living, the demand of consumers for varied and higher-quality consumer goods came to be more pressing; and with technological advance, alternative production possibilities became more numerous and complex.

Soviet policymakers could no longer be satisfied with the simple mobilization of large quantities of capital, and the attendant mobilization of agricultural labour, for industry.

Balance Is No Longer Sufficient

It is especially noteworthy that the older Communist concern for "balance" is, in the face of this new complexity, no longer thought sufficient. It is increasingly difficult to find some clear superiority of one pattern for a few key industries over another alternative pattern. And that being so, Communist countries can no longer be satisfied with merely balancing the outputs and inputs of all other industries to satisfy a prior commitment to a few key programmes.

In short, consistency in an economic plan is no longer enough; optimality in a plan is now becoming a pressing objective. Hence, finally, the new interest in the market mechanism.

In their forthcoming study, *The Soviet Capital Stock 1928-1962,* Raymond P. Powell and Richard Moorsteen will document still another hypothesis to explain the new Soviet interest in improved resource allocation ("optimality"). The Soviet Union, they suggest, has been exhausting the possibilities for rapid growth through indefinitely larger and larger capital investment; it must now either find an alternative source of growth—i.e., a better allocation of resources—or resign itself to a lower growth rate.

Paradox of Planning

How far the Communist economics will go in employing the market mechanism, of course, remains to be seen. An ideological and traditional resistance to the market mechanism does not quickly evaporate and presumably will never wholly evaporate. Moreover, a market mechanism is not always and universally a serviceable instrument for economic organization. Even in any economy like that of the U.S., in which ideology is all on the side of the market mechanism, its use has to be constrained by the recognition of its limitations.

In the Communist case, there remains one conspicuous obstacle to extending the employment of the market mechanism, sometimes referred to as the "paradox of planning." The problem can be posed this way: if the planners intend to use prices to signal production goals for the economy, they cannot set appropriate prices for end products until they first decide what quantities of various end products they desire. But they cannot intelligently decide on appropriate quantities of end products unless they know their costs, i.e., the resources used up in their production.

Now, in a market mechanism, these costs are represented by prices; and this is to say that they cannot determine desired quantities of end products until they know prices. But we have just said that they cannot determine prices until they know what quantities of end products they desire!

This problem does not arise when the price mechanism is used to implement *any single choice,* as in a Western economy, because a decision, say, to expand the production of maritime transport services can be based on the prices already prevailing on the market.

Planning an increase in the production of no more than a few commodities or services does not so alter price relationships and production patterns for the entire economy as to invalidate prevailing prices as guide lines for the planners. But to plan, through pricing, a production pattern *for an entire economy* promises readjustments of prices that will invalidate the very set of prices that the planners depend upon for making their plans.

Planning as a Series of Choices

It follows that the fullest use of a market mechanism as an instrument for central planning would require that central planners actually operate, not directly through a master plan in which all major lines of production for the economy are simultaneously established, but through a large number of (and a series of) specific choices for each of all outputs or industries to be planned.

When a choice is made for any output or industry, the outputs and prices for other industries need to be regarded—for planning purposes—as unchanged. To make the fullest use of the market mechanism, central planners need to work out a strategy for goal-setting and pricing (against a background of the overall general plan) that proceeds through many specific *and sequential* price and production decisions.

Such a procedure, it may be the case, is already in embryo in the Communist economies—even though, for lack of understanding of its utility, it is more often hidden than openly displayed. Given the complexity of the task of comprehensive, synoptic national economic planning, and given also the inevitable limits on man's intellectual capacities, even where these capacities are extended by electronic computation, planning all over the world tends to break down into clusters and sequences of specific decisions.

The mere construction of detailed five-year plans does not prove that anyone or any organization has achieved an integrated synopsis of the elements of the plan; instead these plans are typically a collection of targets and policies from many sources.

The Rediscovery of the Market in the West

Outside the Communist orbit, an appreciation of the usefulness of the market mechanism has been most conspicuously on the rise since World War II. With good reason, the market was under great attack in the depression of the '30's, the severity of disillusionment with its usefulness nowhere more vivid than in the American NRA, an attempt at partial displacement of the market in favour of private and public administrative controls.

But in the late '30's, Keynesian economics began to hold out the promise of ending depressions by improving rather than eliminating the market mechanism; and Western governments, learning the lesson, have in recent years sustained higher levels of employment than used to be thought possible.

Similarly, taxation and transfer payments, as well as provision of subsidized public goods like education, have attacked problems of inequality in income distribution—such problems can therefore no longer motivate proposals to disestablish the market mechanism.

The result is that, in the West, the market mechanism is in better repute than ever before, as is indicated in the decline of socialist opposition to the market mechanism both on the Continent and in Britain, where after World War II socialists deliberately subjected their newly nationalized enterprises to market controls rather than to the battery of administrative controls they had once contemplated. And the great event in Western European development in recent decades has been a substantial move towards unification, not through common government, flag, army, or language, but through the Common *Market*.

The Developing Nations: Prisoners of Orthodoxy

As a group, the underdeveloped nations of the world are lagging in their understanding of the usefulness of the market mechanism. Abstractly, they should be eager to exploit every possibility for economic advance; in fact, they stand in a kind of backwater.

One reason is that their leaders and intellectuals are often prisoners of a once exciting but now stifling orthodoxy. Some of them are prisoners of early Marxian doctrine on planning, the very orthodoxy from which European communism is escaping. Others are prisoners of English socialism of the style and date of Harold Laski, or even of earlier versions of English socialism—in either case antagonistic to the market mechanism.

But times change: although Nehru was a prisoner of both, his daughter may turn out to be a prisoner of neither.

Another reason is, oddly enough, the insistence of the United States, the World Bank, and other lenders that underdeveloped countries formulate national economic plans in order to qualify for aid. They mean by a plan a balanced and consistent set of investment outlays. The effect is to divert some of the best brains in these countries away from high priority questions of growth strategy to the construction of reconciled investment programmes reminiscent of those the Communist countries are trying to leave behind as inadequate!

Balanced Investment vs. Growth Strategy

In India, for example, the question of the size and internal consistency of the five-year plans overshadows in public discussion, and in the attention it receives from experts in Indian government, many more rewarding questions of growth strategy, including such questions as how the market mechanism might be employed to hold out incentives to farmers to raise food production or how it might ration scarce foreign exchange in such a way as to raise substantially the level of economic achievement.

To be sure, just how much the developing economies should count on the market mechanism is subject to much dispute. The point being made here is only that the developing countries themselves do not well understand the issues, and have often not understood the fact that, for many of the problems they face, they can employ the market mechanism in tandem with other methods.

The prospect that the developing countries may take a new view of the market mechanism as an instrument of planning is, of course, greatly enlarged by what they now see happening in Communist Europe. For even if they do not intend to follow the Communist path, the evidence that Western and Communist economies alike are finding the market mechanism useful is certain to impress them.

The Best Use of the Market

How they can best employ the market mechanism depends upon the particulars of their circumstances. But on a few counts a general usefulness of the market mechanism for these economies can be predicted.

First, they all suffer desperately from a shortage of administrative skills and organization: they are not very competent in executing *any* kind of plan, economic or otherwise. Even the best of their civil services have developed procedures and traditions more suitable to keeping the peace than to stimulating economic development. Hence, on this score alone, they need the market mechanism more than do the advanced countries of the world.

Secondly, most of them have accumulated a mixed bag of administrative interventions in the market mechanism, such as price controls and exchange allocations, which have undercut the serviceability of the market mechanism without putting any positive administrative programme in its place.

To impose, for example, maximum prices on food grains in order to hold down the price of food in towns and cities saps the farmer's incentive to produce more. It takes away the monetary incentive and puts nothing in its place—it destroys one mechanism of development without substituting another.

Thirdly, while the development of an economy through administrative techniques furiously engages the energies of a planning elite, participation in development through the market mechanism is open to everyone and, indeed, typically engages most of the adult population. Cueing, signalling, rewarding, and penalizing through the market mechanism are methods of drawing on the largest possible number of responses—and, in addition, a method of extricating a traditional peasantry from older institutions and habits of life that retard development.

Fourthly—and here is a consideration of enromous importance to most developing countries—they need the market mechanism because they cannot take the route to rapid development that the Soviet Union took from the 1920's to the '60's.

The Soviet Route Is Closed

Forswearing in that period any hope for skilful allocation of their resources, the Soviets instead counted on achieving growth through restricted consumption and massive investment. Their strategy worked because the restriction of consumption was in fact possible.

It was possible for two reasons: the standard of living was high enough to permit forced savings, and the Soviet Government was willing and able to use compulsion.

In many underdeveloped countries, neither of these conditions holds; in some, only one does. In many cases, the surplus over and above what is essential to consumption is much smaller than in the Soviet case, where development proceeded from an already advanced stage of early industrialization and food availability. And in ever more cases neither effective systems for tax administration nor other instruments of compulsion are sufficient to gather the savings that are hypothetically available.

Hence, except to the extent that capital assistance from abroad can take the place of forced savings and investment, these underdeveloped countries cannot successfully imitate the older Soviet pattern. They need to understand, as even the Soviet Union in its new condition is coming to understand, the indispensability of a judicious use of the market mechanism for efficient use of the limited resources they can command.

Selective Planning

That the non-Communist underdeveloped nations can use the market mechanism to satisfy the individual needs of consumers is, of course, clear. But what of the usefulness of the market mechanism for implementing centrally determined social priorities—to strengthen the industrial sector, for example, or to give a special push to agriculture, or to establish a steel-producing capacity?

It follows from what was said above, about the paradox of planning, that it is just this kind of precise intervention for which the market mechanism is a demonstrably effective instrument of central planning. For this kind of *planning through selective intervention*, the paradox of planning does not arise; and no special techniques need to be devised to overcome it, as do need to be devised in the Communist countries of Europe.

Hence, it turns out that the kind of "central planning" to which these underdeveloped economies are committed is the very kind for which the market mechanism is best suited.

That the market mechanism can be serviceable to planned and unplanned economies alike, to public and private enterprise alike, to collective and individual choice alike, is a discovery the significance of which may soon dwarf what we have seen of its consequences so far.

To say this is not to take sides in the many disputes in many countries in which, for particular purposes at hand, the question has to be settled as to how far and under what circumstances market organization ought to be pushed.

It is only to take note of the fact that, although these disputes will remain, and although different countries will choose different combinations of the market and other forms of organization of economic life, the market mechanism is now everywhere coming to be recognized as a fundamental method of economic organization which no nation can ignore and which every nation can well afford to examine freshly.

CHARLES E. LINDBLOM *is Professor of Economics at Yale University. His latest book is "The Intelligence of Democracy."*

LIVING PREHISTORY IN INDIA

D. D. KOSAMBI

THE BASIC TASK of the prehistorian is to learn as much as he can about the lives of the vanished people he chooses to study. Since by definition he works with evidence other than written records, he sometimes turns for illuminating parallels to living peoples who themselves have no written history.

Perhaps nowhere in the world can such parallels be found more readily than in India. For one thing, even the written material from ancient India cannot be considered history. Scarcely a single historical figure who lived before the Moslem period (beginning in the twelfth century) can be dated with any degree of accuracy, and more general accounts show little concern for facts or common sense.

Tribals as Living Prehistory

What is perhaps more to the point, there exist in India today many tribal peoples whose customs go back to preliterate times. Representing some thirty million (about 6 per cent) of India's total population of 440 million, these peoples preserve many features—in fossilized form, as it were—of Indian prehistory.

How is it that peoples whose way of life has remained largely unchanged from prehistoric times have survived in India, which has had cities and civilization since early in the third millennium B.C.? The answer lies in the availability of food.

Abundant Natural Food

In India today food shortages are all too well known, but they are a comparatively recent development; even now they are normally limited to village farmers working marginal lands and to the nation's impoverished city dwellers. In most of India nature is so kind that for

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thousands of years it has been possible for people to live with comparative ease simply by hunting and primitive food-gathering.

This is still the case in areas where overcultivation and excessive clearing of forest have not eliminated the land's natural cover. Not only are fish and game abundant but also a variety of other natural products are enough in themselves to provide a balanced diet. Fruits, nuts, berries, leafy vegetables, tubers such as the yam, mushrooms, honey—more than 100 such natural products can be gathered in season.

A large number of foodstuffs that can be stored from one season to the next grow in both wild and cultivated forms. In this category are sesamum (which provides an edible oil), emmer wheat, rice, a wide variety of beans and the sorghums and millets. Indeed, in the days of Gautama Buddha (sixth and fifth centuries B.C.) the millet *Panicum frumentaceum* was gathered wild and not cultivated at all.

This abundance of vegetable resources, supplemented by the milk and other dairy products available to the herders of cattle, sheep, and goats, means that even hunting is not really crucial to survival. One can support life reasonably well in the balmy Indian climate without killing anything.

Food-Gathering, Ahimsa, *and Caste*

This is a basic reality that does more than merely account for the survival of primitive tribal groups in India today: it clarifies the origins of Indian social thought. The characteristically Indian religions—such as Buddhism and Jainism—regard the taking of life as a sin. It is scarcely conceivable that such an ethic could have developed if an economy of bloodless food-gathering had not provided prehistoric Indians with an adequate livelihood.

The Iron Age people who practised plough agriculture in India were at first limited to the plain of the Ganges. From that rich region they moved southward into the Deccan: the great forested plateau of peninsular India.

This invasion was not accompanied by the violence that marked Rome's Iron Age conquest of tribal Gaul and pacification of the forests beyond the Rhine. As the advancing ploughmen from the north met the forest herders and food-gatherers of the south, the contact seems to have initiated a process of mutual acculturation. The food-gatherers learned to adjust to agriculture and the farmers not only came to rely heavily on food-gathering to supplement their diet but also brought wild foodstuffs under cultivation.

This two-sided adjustment between gatherer and producer provides both the fabric and the pattern of India's past. It is notably reflected in today's social organization and accounts for the origin of caste and the caste system (see "The 'Untouchables' of India," by M. N. Srinivas and Andre Beteille, *Scientific American*, December 1965).

In many parts of India the names of the local tribal people are identical with those of the local agricultural castes, even though the difference in caste between tribesman and farmer prevents intermarriage and other forms of contact between them. The identity of names probably stems from an original unity, when immigrant farmers and indigenous food-gathering tribesmen at first made common cause in the forest region.

The two major characteristics of the caste system—prohibitions against marriage outside the group and against acceptance of food from the hands of a stranger—are taboos that are typical of food-gathering tribal societies. One can imagine the caste system originating as a somewhat later effort of the indigenous food-gatherers to establish themselves as being superior to the immigrant ploughmen.

Mutual Acculturation

If this is the case, one may ask why the caste of farmers is now higher than that of tribesmen. Answers are not hard to find. First, whatever their initial handicaps, the farmers, simply by practising agriculture, had a sounder economic base than the tribal people, and in India, as elsewhere, social rank corresponds closely to position on the economic scale. Second, because of their somewhat better food supply the farmers must almost from the first have multiplied faster than the tribesmen and thus would soon have outnumbered and dominated them.

Although there are caste inequalities between farmers and tribal peoples today, plentiful evidence of mutual acculturation remains, particularly in the area of religion. Many of the supposedly "Hindu" gods of the Brahman pantheon, for example, have their actual origin in tribal cults. By the same token, when tribal people abandon their aboriginal ways and take to farming for a livelihood, they abandon their ancient gods and adopt Hindu religious practices.

Much of the ritual that accompanies both the Hindu religion and the aboriginal ones seems bizarre to modern eyes. Nonetheless, to dismiss ritual as mere superstition (or worse, to follow the fad of explaining it in psychoanalytic terms) is to throw away a genuine opportunity to study both the history and the prehistory of India.

My own field work has been confined to portions of the Deccan plateau and the adjacent west coast of peninsular India, an area in which my familiarity with local dialects and customs has made detailed investigations of tribal and village life possible.

Fertility and Fire Walking

One of the first tribal groups I had a chance to study was the Ras Phase Pardhi. These people, who now live in Maharashtra, originally came from Gujarat to the north and speak a dialect of Gujarati. The Pardhi are nomadic and are accompanied on their travels by a few scrawny cattle. The men do some casual labour and are skilled at stalking and snaring birds and other small game. The basic Pardhi occupations today, however, are begging and theft—practised by men and women alike. The Pardhi consider stealing a crime only if the victim is a fellow tribesman.

Pardhi religious ritual is a mixture of adopted and aboriginal elements. The principal object of worship is a silver plaque of modern manufacture that bears the image of a Hindu goddess. Nonetheless, the major ritual—a fertility dance—gives every sign of being genuinely ancient. The performer is a male, the head of one of the small bands into which the tribe is divided. He dresses as a woman and is not merely a priest in the ritual. In his own words, "I *am* the goddess."

Part of the fertility ritual provides an interesting example of reciprocal acculturation between Hindu and aborigine. The dancer at one point plunges his hand into a pan of boiling oil, evidently without ill effect. This kind of ordeal is apparently an ancient Pardhi custom. At a Pardhi trial, for example, one proof of innocence is to walk a fixed number of steps while carrying a red-hot piece of iron.

The parallel Hindu ordeal—walking on hot coals—has no sanction in Brahman scripture; ordeals are not mentioned in the earliest Hindu sacred books. In fact, fire walking apparently did not become a part of Hindu ritual until about the beginning of the Christian era, when it was adopted primarily as a means of proving innocence in the face of strong evidence of guilt. One can scarcely avoid the conjecture that the Hindu ordeal was adopted from some aboriginal Indian rite such as the ones preserved today in the Pardhi dance and trial.

Castration with Microliths

Another primitive group in the Deccan—the Dhangars—are a caste rather than a tribe. Some of them are farmers; others specialize in the manufacture of woollen blankets. At least one Dhangar family, the Holkars, took up the military life early in the eighteenth century and rose to princely status as the maharajas of Indore.

Today, the members of one Dhangar group follow tribal ways and earn a living as itinerant herdsmen. Each Dhangar band numbers about twelve people. Leading a flock of perhaps 300 sheep, the band spends the eight dry months of the year in a round of travel that rarely covers less than 200 miles and may range as far as 400 miles.

The women of the band travel the roads, moving from one preselected campsite to another and preparing the meals. The men herd the grazing sheep cross-country and leave them in some farmer's field at night.

The sheep's overnight droppings are valuable fertilizer for which the farmer pays either in cash or in produce. These payments, together with small earnings from the sale of wool, a few skins, and occasionally an animal, provide the livelihood of these pastoral nomads.

During the four months of the rainy season the Dhangar herdsmen move from their farmland pastures to traditional campsites on the plains that are dry enough to keep the sheep safe from the hoof rot they contract on muddy ground.

At these rainy-season camps are sheep pens, solidly constructed of drystone masonry, that must have been built in prehistoric times. Some of the richest deposits of prehistoric stone tools I have found in India are close to Dhangar rainy-season camps. The same is true of many rock engravings that also appear to be prehistoric.

The stone tools are the tiny blades called microliths. It is a curious fact that although the Dhangars do not recognize the microliths as tools when they see them, they make and use similar tools themselves.

When a lamb is to be castrated, a Dhangar shepherd takes a nodule of chalcedony and shatters it, using two other rocks as hammer and anvil. He then selects a sharp flake of chalcedony to use as a castration knife. After the stone flake is used it is ritually boiled together with the lamb's testicles and thrown away.

The Digging Stick and the Plough

One of the traditional rituals in the Maharashtra region of the Deccan—the great pilgrimage to Pandharpur—may have originated in the days when everyone's life involved the kind of seasonal wandering that is still the way of the Dhangar shepherds.

At the very least, the pilgrimage is out of keeping with a settled agricultural way of life. The journey to Pandharpur can take as long as three or four months and traditionally begins at the start of the rainy season. That such a custom could have arisen in a farming society seems improbable; the rainy months are the ones during which the farmer does the larger part of his productive work.

Other seemingly illogical mixtures of old ways and new are common in peninsular India. One example I have observed combines the plough technology of later times with a much earlier form of agriculture—the "slash-and-burn" method, in which farmland is created by cutting down and burning the natural vegetation.

When the farmers of Maharashtra grow millet today, they clear hillsides by the slash-and-burn technique and plant the crop with the aid of primitive digging sticks. In the level valley fields where wheat and rice are raised, however, the same farmers plough and fertilize by modern methods.

Hook-Swinging

The most spectacular example of fossilized ritual I have encountered is *bagad*, or "hook-swinging." Both the law and public opinion discourage this practice in India today, but hook-swinging posts are still to be found near many temples throughout the Deccan.

According to historical accounts, the ritual required that a pair of sharp metal hooks be thrust into a selected victim's back, penetrating the flesh just above the hips. The hooked man was then hoisted clear of the ground and left to swing, painfully suspended only by the two hooks. This gruesome rite was conducted on one special day each year.

Foreign observers could discover no particular reason for it and rather too willingly attributed it to the savagery of the people who practised it. None of these people had told them that to be hook-swung was a signal honour and a prerogative jealously guarded by a very few of the oldest farming families in each district.

Today, hooks are still set in living flesh each year in a few remote villages. I was recently able to witness such a ceremony. I must preserve the anonymity of both the village and the participants in the ritual, but I can say that it took place at the time of the April full moon.

In this village the man to be swung must be selected from among the young married men of clan *X*, in spite of the fact that the village headman, the leading village families, and all the richest farmers are members of clan *Y*. This privilege stems from the fact that the earliest immigrants in the area were members of clan *X*, and that it was they who first heard the call of the god Mhatoba, in whose honour the ritual takes place.

In this village the two swinging posts are set up in a cart that is used only on this one day of the year. Nowadays the celebrant's weight is no longer borne by the hooks throughout the ceremony. Between swings he sits more or less comfortably astride a bar suspended from a crossbeam that is balanced between the two uprights.

A new crossbeam is ceremonially cut each year in a jungle some forty miles from the village; this jungle is said to be the place from which clan *X* originally migrated. Relays of specially chosen villagers carry the beam back to the village. They are permitted to put down their burden and rest only at specific points along the way.

Selecting the Celebrant

At the outset of the hook-swinging ceremony candidates for the honour gather with a group of electors under a specific tree outside the village. After the celebrant has been chosen, the electors and the candidates return to the village, running through a sacred course in groups of three. The man in the middle of each trio is a member of clan *X;* he is flanked by men of clan *Y*. The celebrant and his two escorts are the last to run the course.

When they have done so, the celebrant is led to the local temple. There he is ritually bathed, declared *deva* (temporarily divine), and dressed in a special costume (a red turban and red silk trousers) that leaves him naked from the waist up.

The celebrant now goes to the site of the village's annual *holi* (spring festival) bonfire. He stands on the fire's ashes as the village carpenter thrusts the two steel hooks into the small of his back. Every man in the village crowds around to watch the operation.

Procession and Sacrifice

The celebrant is then decked with garlands and led to a nearby field. There the *bagad* cart, drawn by a pair of bullocks, is waiting. A rope that is attached to each hook is looped behind the celebrant's back and tied to the crossbeam, which rests on the two *bagad* uprights. The celebrant individually blesses each child born since the last hook-swinging; when this has been done, he makes his first swing suspended by the hooks. A cheer goes up, the god-elect nimbly climbs astride his resting bar and the cart jolts off across the fields.

At prescribed points along the route the cart stops and the celebrant descends from the bar to make a predetermined number of swings. After all the village's fields have been blessed in this manner, the procession continues through the fields of a neighbouring village to the place where the god Mhatoba's temple stands. The people have gathered from miles around. A number of goats are now sacrificed, the order of their slaughter being established by the rank of the clan offering the sacrifice.

When the sacrifices are over, the hook ropes are untied from the *bagad* beam and the god-elect climbs down from his bar. He enters the temple, the hooks are removed, and his wounds are anointed with ashes from Mhatoba's sacred fire. Once this is done the god-elect reverts to human status.

During the ceremony I observed, the celebrant was in a state of exaltation and showed no trace of pain. Although he received no medical treatment other than the application of wood ash, two weeks later the marks on his back were scarcely visible.

Origins

When I asked about this village tradition, I was told that the form of the hook-swinging ceremony had originally been quite different. In the "good old days," my informants said, the god-elect from clan *X* was killed at the end of the procession, along with another god-elect annually chosen from the low-caste clan *Z*. The two men were beheaded, their heads were set on stone slabs that are still in place in front of Mhatoba's temple, and Mhatoba's ceremonial palanquin was paraded over the grisly offerings.

I was told that the original practice had been continued until only one male member of clan *Z* remained alive. At that point, it was said, Mhatoba himself appeared and declared that life need no longer be taken. It would suffice, he said, if on the sacred day the elected representative of clan *Z* had his thigh ceremonially cut and the representative of clan *X* was hooked and swung.

In fact, my informants told me, the thigh-cutting ritual is still followed each year within the temple. The representative of clan *Z* has his thigh cut at the same time the hook-swinger descends from his cart. Like the hook-swinger's wounds, the clan *Z* celebrant's wound is anointed with ashes from Mhatoba's sacred fire.

What are the prehistoric elements in this bizarre tangle of ritual and tradition? For that matter, how much of the supposed tradition is actually credible?

Human Sacrifice

As a start, I see no reason to doubt that human sacrifices really took place in the "good old days." Although human sacrifice was eliminated from formal Hindu ritual before the sixth century B.C., the custom continued in many parts of India until recently. To judge by today's police record of ritual murders, human sacrifice is still practised among a number of tribal peoples.

As recently as the 1780's the Brahman rulers of Poona, wishing to ensure the impregnability of Lohagad Fort, saw to it that a young married couple was buried alive under the fort's foundations. An unmarried man was similarly sacrificed by the Moslem builders of Chakan Fort; a cult in his honour survives to this day.

Not all the victims of human sacrifice went unwillingly to their death. Evidence is provided by the barber caste of Kurkumbh, which is proud to hold first place in worship at the shrine of the goddess Phirangai. The barbers' priority is traditionally based on a feat performed by a member of the caste who had been given the task of escorting the goddess to Kurkumbh from her former residence some 200 miles away.

The goddess agreed to make the move, with the usual kind of fairytale provision that she would travel no farther than the first place at which her escort turned his head and looked behind him. The barber resisted temptation all the way, staring fixedly before him until he reached Kurkumbh. On his triumphant arrival he volunteered on the spot to make a sacrifice of his unturned head.

Mhatoba's Two Places of Origin

Assuming that the account of Mhatoba's original bloody rites is authentic, how are these rites related to the prehistory of peninsular India? An answer to this question requires an examination of the deity's history. Mhatoba is a god to whom tradition assigns two distinct places of origin.

One is the jungle, forty miles from the hook-swingers' village, in which his worshippers procure the *bagad* crossbeam each year. Here Mhatoba has a temple, which stands on a hillock. At the base of the hill I have found a fair number of crude microliths. The presence of these stone tools is good evidence that the area supported a prehistoric population. At this place of worship Mhatoba is called Bapuji-Baba, or "Father-God," and it is dangerous for any woman to approach him.

Mhatoba's other place of origin is also about forty miles distance from the hook-swingers' village but in a different direction. The site is unmarked, but tradition states that at this place the deity first appeared and immediately made his presence known by kidnapping seven virgin sisters.

Mhatoba thereupon travelled cross-country to the vicinity of the hook-swingers' village, where he paused by a pool in the river. There, for no known reason, he drowned all seven sisters. When a passing member of the Koli tribe ventured to criticize Mhatoba's behaviour, the god drowned him as well.

Near the pool today there is a shrine to the seven sisters and the unfortunate Koli. The pool itself is considered cursed. No one bathes there, nor is its water used for farm animals. Within the shrine the crude representations of the seven sisters are coated with red lead, which is commonly used by Indian villagers as a substitute for the blood of sacrificial animals. I have found surface deposits of microliths nearby, as I did at the temple where Mhatoba is known as Bapuji-Baba.

In spite of his murder of the kidnapped maidens, Mhatoba is known in one aspect as a "married" god. Next to his statue in the hook-swingers' temple stands a statue of a goddess named Jogubai. The hilltop Mhatoba, with his reputation for being dangerous to women, has no such consort.

The Meaning of Mhatoba

Why should the god be single in one aspect and married in the other? To find the answer I undertook a survey of all the district's temples. I quickly learned that the goddess Jogubai, like Mhatoba, was worshipped in several places, although there was no tradition that she had come to the district from some other region.

I also encountered several more Mhatobas. In many places Mhatoba and Jogubai were "married," as they are at the hook-swingers' temple. In other places, however, either the god or the goddess was worshipped alone, and the worshippers knew nothing about Mhatoba or Jogubai being "married" elsewhere.

It is my belief that Mhatoba and Jogubai are a pair of deities who originally belonged to two different population groups and quite probably to different eras of prehistory as well. As I interpret the evidence, Mhatoba was at first an aggressively male god of the kind who was worshipped by the Gavalis, a late wave of pastoral invaders who entered the Deccan from northern India.

These people herded cattle but did not use the plough. They reached Raichur in the middle of the Deccan plateau by about 2000 B.C.; recently obtained carbon-14 dates indicate that they were still practising their pastoral way of life as late as 1000 B.C.

The preceding wave of pastoral invaders from the north herded sheep and goats; therefore the skins they used for various purposes were the comparatively thin sheepskin and goatskin. The Gavalis had to work with thick cattle hides, and accordingly their microlithic tools were somewhat heavier and coarser. This difference is evident in the microliths found near the Bapuji-Baba temple.

Jogubai, on the other hand, is the kind of mother-goddess I associate with the earliest inhabitants of the Deccan: the primitive food-gatherers. These are the same people who with enormous effort erected all over peninsular India hundreds of megalithic monuments consisting of large piles of boulders. After they had piled the boulders together, they also marked them with deep grooves.

It is an interesting coincidence that wherever a modern cult is associated with one of these ancient megalithic monuments it is almost without exception a mother-goddess cult.

Mother-Goddess Sometimes Married Father-God

If it is correct to assume that the mother-goddess was first in the area and that the father-god was a pastoralist intruder, how do the traditions of the hook-swingers' village fit such a sequence? In their temple, goddess and god are joined in "marriage"; I take this to be symbolic of a situation in which conflict between food-gatherer and pastoralist was resolved by peaceful fusion.

The virgins drowned by Mhatoba might represent a sacred college of priestesses dedicated to the worship of the mother-goddess. The fact that Mhatoba is now married to Jogubai shows that even the destruction of her priestesses was not enough to suppress her worship.

The conflict between mother-goddess and father-god could not have been resolved peaceably everywhere. Throughout Indian theological art, from the earliest representation of a horned "proto-Shiva" on Harappan seals of the third millennium B.C. to gaudy pictures sold in Indian bazaars today, runs a theme of conflict between a female deity and a "buffalo demon," in which the goddess is the victor. In Kalighat paintings, for example, Shiva's wife Parvati tramples him. The goddess Durga-Parvati is called "she who tramples the buffalo demon."

In this connection Jogubai appears in another temple in the district not in the role of consort to Mhatoba but as consort to the more primitive male deity Maskoba, who is recognized as the counterpart of the buffalo demon. Just as the union of Jogubai and Mhatoba in the hook-swingers' temple can be taken to symbolize conflict resolved, so perhaps this marriage to the buffalo demon symbolizes conflict perpetuated.

Two Societies in Fusion and Conflict

This much is certain: The prehistoric fusion of two distinctly different socieites has left marks that remain to this day. Indeed, in some parts of the countryside both the buffalo demon and the goddess who tramples him are worshipped by the same believers but in separate shrines. Two points, however, should be made clear.

First, although instances of goddess-worship are still to be found all over India, there is no reason to believe the country's prehistoric food-gatherers were worshippers of a universal mother-goddess. To attribute any universal custom to primitive and segregated peoples is obviously hazardous.

Second, it is important to emphasize that even when some ancient monument is found to be a centre of goddess-worship today, there is little possibility that the modern cult represents a survival from prehistory. The early food-gatherers had no fixed abode and the early pastoralists were constantly on the move; accordingly, any continuity of worship at a single site is implausible.

Nonetheless, coincidence can sometimes achieve what piety cannot. At the village of Theur the goddess of child-birth is worshipped at a megalithic monument that stands on the summit of a prehistoric mound. This goddess—Satvai, or "Mother Sixth"—takes her name from the fact that sacrifices are made to her on the sixth day after the birth of a child.

The boulders that compose the monument at Theur are of a stone so hard that it will turn the edge of a modern mason's chisel. Yet every one of them bears smooth grooves with a semicircular cross section, some over an inch in depth, that were evidently produced by patient rubbing in prehistoric times. Prominent among the grooved designs is a representation of a cowrie shell, the traditional symbol of the female.

It appears certain that the deity worshipped at the Theur mound thousands of years ago was a goddess, just as the deity is today. Here, with the Pardhi snarers, the Dhangar shepherds, and the hook-swinging devotees of Mhatoba, is further evidence that the prehistory of India is still alive.

D. D. KOSAMBI, *who died as his article was being prepared for publication in "Scientific American," was a mathematician and historian. Educated in India and at Harvard University, he began a career in mathematics. His writings include two historical books: "An Introduction to the Study of Indian History" and "The Culture and Civilisation of Ancient India in Historical Outline."*

THE OCTOBER COUP IN INDONESIA

DONALD HINDLEY

PRIOR TO OCTOBER 1, 1965, the leaders of the Indonesian Communist Party (PKI) controlled the largest Communist organization in any non-Communist state. The Party itself, with some three million members, was the centre of a web of mass organizations claiming fifteen million members and seeking to mobilize specific segments of the population: workers, peasants, youth, women, students, cultural workers, university teachers, and even village officials.

D. N. Aidit, M. H. Lukman, and Njoto, the triumvirate that had led the Party since January 1951, were honoured by President Sukarno at home and by the major Communist parties abroad. A Djakarta-Peking axis was the base of a vociferous confrontation against the West, and Communist youths spearheaded government - sponsored demonstrations against "neo - colonial" establishments within the country.

Meanwhile, several non-Communist politicians and military officers appeared to be plotting their own opening to the left in preparation for a Communist takeover.

Today, the situation is radically different. The massive PKI organization has been rapidly and bloodily dismantled. Among the 300,000 to

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500,000 dead are Aidit, Lukman, and Njoto along with, apparently, a large percentage of the lesser cadres. Many former Party activists are imprisoned, their ranks continually thinned by further killings.

In March 1966 the PKI and its mass organizations were formally banned, and in July the People's Consultative Congress proposed the prohibition of the teaching of Marxism-Leninism.

Communists and those suspected of Communist sympathies have been purged from government ministries, state enterprises, and the many semi-representative councils that proliferated under Guided Democracy. Most government ministers who before the coup attempt had shown a tendency to move close to the PKI, such as former Foreign Minister-First Deputy Prime Minister Subandrio, have been replaced. Several have been put in "protective custody."

And President Sukarno, the PKI's chief protector in the past, has been relegated to a minor political role, at least for the present.

The Sources of Power

The ease with which the central army command and its allies broke the PKI should give rise to a re-examination of political power and the sources of power in Indonesia, the more so as not only some Indonesians but also several Western observers believed a PKI victory to be imminent.

The sources of power that political actors may call upon differ from one political system to another and, to a degree, between states having a similar political system. Indonesia underwent a drastic change in its political system between late 1956 and July 1959, from a variation of parliamentary democracy to what was called Guided Democracy.

The objective of this essay is to explain why the army was able to decimate the PKI so readily, and why the PKI did not fight back. This objective is pursued through an examination of the major sources of power available to the chief political actors under, first, parliamentary democracy and, then, Guided Democracy, and of the power alignment that followed immediately upon the October coup attempt.

The Parliamentary Democracy

From very shortly after the declaration of independence in August 1945, the great majority of Indonesian political leaders were at least publicly dedicated to the creation of a parliamentary democracy; that is, the composition and policies of the government were to be determined by the members of parliament, and the composition of parliament was to reflect the numerical balance of political interests in the country.

Until the general elections of September 1955, the members of parliament were appointed: most as representatives of political groupings that took part in the military phase of the revolution from 1945 to 1949, and part as the representatives of the Dutch semi-puppet federal states that were merged into the unitary republic between late 1949 and August 1950. Then, in 1955, parliament was elected on a system of proportional representation which reflected accurately the number of votes obtained by the various political parties.

It would be hazardous to generalize about political power during the lengthy period of parliamentary democracy prior to late 1956. In order to demonstrate the contrast with the later period of Guided Democracy, I shall therefore concentrate on the period around the elections of September 1955, the only parliamentary elections so far held in Indonesia.

During the period of "purest" parliamentary democracy, power was largely the ability to mobilize voters in order to win seats in parliament, for it was the parliamentarians who were dominant in determining the composition and policies of the government.

The Major Parties

Four major parties emerged from the elections: the PNI (secular nationalist), Masjumi (Moslem), the Nahdatul Ulama (NU, Moslem), and the PKI. Each had access to considerable funds or patronage: from control over the personnel in government employ, from the misappropriation of government funds, from the "national businessmen" who had been placed in lucrative positions by pre-election governments often with the express purpose of creating wealth for party coffers, from the resident Chinese business community, from small donations, and, it was widely rumoured, from foreign Communist states.

Such financial power was used to build a system of paid party workers around the election period, to ensure the voluntary labour contributions of those owing employment or other privileges to government leaders, and to make the party visible to a wide section of the electorate. Each major party had an extensive organizational network which was, however, only in part the product of financial assets.

Masjumi and NU depended largely upon the Moslem religious teachers (*kiajis*) to bring the devout to the polls, while the PNI used the government bureaucracy down through the rural civil service (*pamong pradja*) to the village headmen to persuade the non-devout but traditional population to vote as required. Only the PKI was forced to build painstakingly an organization that was not basically reliant on existing traditional authorities—and was greatly facilitated in this task by the failure of any other party to attempt the same.

Once the non-Communist parties had attained financial and/or patronage resources and had developed a wide, if loose, organizational network, the votes came in almost automatically from major sociocultural groupings in the electorate.

The NU, as the representative of orthodox Islam, gained the votes of the orthodox Moslems; Masjumi drew most of the remaining Moslem voters. Non-devout or nominal Moslems voted for the PNI because it was opposed to theocratic rule and either because they were government employees or businessmen dependent upon the party for patronage, or because they were following the leadership of traditional but non-devout rural authorities.

The PKI alone had to seek voters through the formulation of programmes designed to arouse and fulfil the aspirations of major socioeconomic groupings—that is, to persuade the poorer sections of the tradition-oriented population that their basic interests were distinct from those of the traditional religious and secular authorities and could not be met by continued traditional loyalties.

To summarize: political power under parliamentary democracy, and especially around the period of the elections, was closely related to ability to mobilize voters. And it was the PKI which was successfully eroding the sources of power of the other parties, most notably the PNI, by taking advantage of and at the same time working to hasten the decay of traditional loyalties and attitudes.

It appeared from the 1957 local elections in Java and several provinces in the Outer Islands that the PKI might eventually obtain even a majority of total votes: the 40 per cent or so of devout Moslem votes were still being cast for Masjumi and the NU, but the PNI's vote was crumbling before the effects of detraditionalization and the organizational and propaganda skills of the PKI.

Sukarno's Power

As in any parliamentary democracy, Indonesia possessed extraparliamentary forces with considerable political power. While organizations, such as the trade unions, veterans' organizations, business associations, bureaucratic associations, and even peasant groups, were largely creatures of the political parties, President Sukarno and the army officer corps were major autonomous political entities.

Sukarno's power was the product of the application of his personality and political skills in a particular environment. Sukarno possesses high intelligence, a magnetic personality, and deep conviction that he is destined to lead his nation.

His political skills are numerous, at times awesome. He is a moving orator who combines various appeals to the major segments of the population—frequent reference to Allah, allusions to Javanese history and heroes, quotations from Jefferson balanced by others from Lenin, loving concern for the *marhaen* (the common people), emotional nationalism that emphasizes the greatness and potential of Indonesia, political concepts couched in terms of the traditional values of village life: Islam and secularism, modernity and tradition, democracy and leadership, nationalism and a world crusade against imperialism-colonialism, pride in history and pride in the future.

Sukarno: Old and New

In his effort to become the symbol of the Indonesian nation, Sukarno united elements of traditional and modern leadership, though this was to become more apparent in the post-parliamentary period. As a grand sultan, he inhabited numerous luxurious palaces, appeared in the company of large entourages, notoriously enjoyed the favours of countless women, built a mosque on the grounds of the Djakarta palace, and entertained or was entertained by the potentates of foreign states. As a modern leader he urged the welding of a nation out of the disparate peoples of the archipelago, the creation of a "just and prosperous" society, and a crusade against the imperialists.

Apart from his skills at symbol creation and manipulation, Sukarno was, and is, unrivalled at political manoeuvre and intrigue. He played party against party, factions within parties, military service against military service, and individual officers and cliques against others.

Sukarno's character, intelligence, and political skills only begin to explain how he was able to acquire significant political power under the parliamentary regime even though he was not affiliated with any political party or mass movement. The remainder of the explanation lies in his position as of August 1945, when independence was declared, and in characteristics of the general political environment between 1945 and 1956.

In August 1945 Sukarno was already the foremost figure in Indonesian nationalism. He was the most eminent graduate of Dutch political confinement; he was also, in part, the creation of the Japanese. The Japanese had given him the freest rein of any nationalist, first to persuade the Indonesians to aid the war effort, and then, as the war turned against Japan, to arouse Indonesian nationalism as a weapon against an anticipated Allied invasion.

Sukarno: Divide and Rule

Three major characteristics of the period of parliamentary democracy were to enable him, as an individual without his own organization, to maintain and increase his personal authority.

First, both the civilian and military leaders were deeply divided and warring among themselves, which provided Sukarno with the opportunity to use the divisions for his own benefit.[1] Not only were there basic inter-party rivalries, but each party, with the exception of the PKI after 1950, was divided into rival factions; the officer corps was likewise deeply disunited.

Second, many political leaders seemed to lack confidence in their own ability to govern. This was no doubt largely the result of the multi-party situation and factional disputes within the parties; it may also have been in part the result of their inexperience with governing (due to Dutch colonial policy) as well as the overwhelming problems that faced the new state.

Third, a large part of the Indonesian population could not conceive of itself as participating in the determination of policies; it looked to the government for paternal leadership; and it expected the leader to have the behaviour and appearance of a largely traditional nature.

Sukarno used his skills to exploit, widen, and increase the divisions within the political parties and the officer corps; he grasped opportunities with boundless self-confidence; and he filled a widely felt need for a monarch-like and paternal leader of the people.

The Officer Corps

The officer corps, too, was an important extra-parliamentary political force.[2] Its power depended upon its ability to command the disciplined loyalty of its men. During the period of parliamentary democracy, the officers were unable to exert a dominant or even major influence on government policies for the simple reason that the officer corps was divided within itself, with some factions and individuals loosely allied with political forces outside the military.

No officer or group of officers could rely on the active loyalty of sufficient numbers of other officers and men to give them the confidence to intervene significantly in national politics. The only attempt to seize far-reaching influence failed in the "October 17 Affair" of 1952. Otherwise, the officers could agree only on limiting civilian interference in military affairs.

In brief, the general outline of power under parliamentary democracy was as follows: party leaders as the main holders of power, that power dependent in large part in their ability to muster votes and hence representation in the parliament which played the major role in deciding government composition and policies; the military leaders holding an important source of power, which was dissipated by internal divisions; and Sukarno as an individual exercising power on the basis of his intelligence, skills, and personality employed to exploit the particular Indonesian political environment.

Guided Democracy

Between late 1956 and 1960 the parliamentary system was swept aside, to be replaced by what was called Guided Democracy. For a system to survive it must receive acceptance from the masses or the political elite, and/or it must possess the means to control forces wishing to replace it. Acceptance might be either automatic-traditional or conscious, or a combination of the two.

In Indonesia, parliamentary democracy was a new creation; acceptance could not be automatic-traditional. Nor could the performance of the system produce conscious acceptance by any but the small number of politicians and their proteges who were benefiting personally: the governments were not only corrupt, but were quite ineffective in resolving the urgent economic, social, and political problems that faced the new state. Further, the system had produced a large and growing Communist party which persuaded civilian and military leaders to seek, or be prepared to accept, a new system that could contain this development.

As disillusionment with parliamentary democracy became general, the system's leaders were themselves demoralized, not least because they were unable to control those armed forces that would be necessary to suppress or intimidate opposition. The armed forces were opposed to the system, and could count on President Sukarno's agreement since he was dissatisfied with his own role within it.

A Limited Dictatorship

Guided Democracy was a euphemism for a presidential form of limited dictatorship. The elected parliament was replaced by a fully appointed one; the government was nominated by Sukarno, who himself became Prime Minister. General elections were indefinitely postponed. Several parties, including Masjumi and the Socialist Party (PSI), were dissolved by the President because they rejected his guidance.

Under Guided Democracy the ability to mobilize voters or parliamentarians was no longer a source of political power—as the quiet demise of Masjumi readily demonstrated. Power was now the product of three distinct capabilities.

Power under Guided Democracy

The first was the ability (or the appearance of the ability) to command the militant support of a significant number of people; that is, the ability to call a larger number of people to take such actions as armed struggle, strikes (especially in the more vital economic areas, as transportation), sabotage, and control of the bureaucracy.

The second was the ability to manipulate competing forces and to intrigue within political forces in order to increase one's own relative power.

The third was the ability to influence those who possessed either the first or second capability. Such influence could be gained by personal friendship, by established loyalty, or by the possession of skills that others considered useful—political, economic, diplomatic, organizational, bureaucratic, and so on.

In short, power under Guided Democracy was the product of the ability to call upon militant action, to play off or weaken by intrigue those political actors who could call upon militant action, and to influence those with either or both of the first two abilities.

Before examining the major political actors of Guided Democracy and their bases of power, three relevant observations must be made.

First, the capabilities which produce power vary depending upon circumstances; for example, the ability to manipulate and intrigue depends in large part on a multi-actor situation in which no one actor feels strong enough to eliminate his competitors. Those without independent power bases but who acquire power through influence must retain powerful patrons or face political oblivion; political leaders may be able to call upon the militant action of a considerable number of supporters only under certain circumstances, being unable to do so under others.

Second, political actors do not necessarily maximize the political use of their real power, that is, they do not necessarily employ their full power capability to influence or control government policies.

Third, until a crisis occurs in which militant action is actually used, each political actor may be uncertain as to the relative power available to himself and to the other actors—which gives scope for bluff under non-crisis situations, and miscalculation both then and in a crisis.

Three Groups of Actors: Sukarno

From 1959 to October 1965 three main political actors or groups of actors wielded significant power as a result of autonomous (or apparently autonomous) bases of power: President-Prime Minister Sukarno, the central army leadership, and the PKI. Several individuals possessed a certain degree of power because they could influence one or more of these three.

President Sukarno was the linchpin of the system. His power, as in the earlier period, was derived from several sources. It was generally believed among the political elite that he could command the personal loyalty, and perhaps (even probably) the militant loyalty of vital sectors of the population, ranging from the bureaucracy, important elements in the officer corps, and many political party leaders to workers, peasants, and the masses in general.

There was the belief that any attempt to oust him would lead to at least a major civil war, with the outcome likely in favour of Sukarno; while assassination would lead to a civil war of unknown outcome between the other political forces.

Sukarno constantly reiterated that he alone was capable of holding the disparate political forces together in peace if not in harmony.

By intrigue within the political parties, most notably the PNI and NU, and within the armed forces he sought to make the party and army leaders unsure of the extent of militant support they could command. By a subtle policy of domestication he sought to prevent the PKI leaders from developing the militant and exclusive loyalty of their supporters. And by manipulation of the various political forces, he sought to prevent any one of them from developing a position which could permit it to seize control of the government.

He also sought to provide sufficient rewards to the other major political forces to bind them to the system: the army officers were given enormous budget outlays and positions in the cabinet, regional government, and state enterprises; the PKI leaders gained cabinet posts, public praise from the President, a virulent anti-Western and pro-Chinese foreign policy, the liquidation of Masjumi and PSI, large representation in the appointed parliament and provincial, *kabupaten*, and city councils, and protection from army oppression; leaders of the PNI, NU, and lesser parties received positions that provided material and status satisfaction.

The Army

The central army command of 1965 was far stronger than that of a decade earlier. Its control of the army was far more firm: Nasution, appointed Chief-of-Staff in 1955, had had ten years to consolidate control, and the relatively easy defeat of the 1958 PRRI-Permesta rebellion had increased his prestige as well as eliminated much of the regional insubordination that had preceded it.

Further, the campaign to liberate West Irian had netted the armed forces over $1 billion of Soviet military equipment as well as over 80 per cent of the 1962 state budget. By 1965 the army consisted of over 300,000 troops. The far smaller air force and navy were suffering from disputes within their officer corps. The police were armed but were not acting as an independent political force, though their reaction in a relatively evenly balanced crisis could have been decisive.

The power of the central army command rested firmly on its control of disciplined, armed men, some 60,000 of whom were located close to Djakarta. The officer corps as a group had always been concerned with politics because the army itself was a creation of the war of independence against the Dutch. Men had entered the army because of their concern for the fate of Indonesia, and the results of parliamentary democracy had instilled no loyalty to civilian rule.

But before October 1965, the central army command did not attempt to gain sole control of the government, or full control of government policy, for a variety of reasons. Two were perhaps the most important: the pre-1959 divisions within the officer corps, combined with Sukarno's continuous exploitation of them, meant that Nasution and his successor as army chief, Achmad Yani, were not sure which of their officers would be loyal in a confrontation with Sukarno; and, as we have seen, the officer corps was well provided for under Guided Democracy so that it preferred the enjoyment of privilege without full governmental control to the uncertain fate of an attempt to seize control in its own name.

The Communists

The power of the PKI leadership lay in its mass support and its influence upon Sukarno. Beginning in 1951, Aidit and his colleagues had built a party of over three million members; party branches were established in virtually every village in Java as well as in many regions of the Outer Islands. Mass organizations claimed a further fifteen million or so members among peasants, youth, workers, and other sections of the population.

Communist trade unions dominated in the harbours, plantations, factories, oil fields, transportation (including the railroads), and electricity and gas, with a numerous membership, too, among civil aviation and telegraph and telephone workers. Sukarno considered an alliance with this network to be imperative in his competitive coalition with the army.

He and the army leaders appeared to have believed that should the army attempt to remove the President, then the Communists would react militantly in his support. The dual loyalties of the Communists to the Party and to the President were thought to be sufficently strong, when united, to elicit such militant action if a crisis developed along the lines of the army versus Sukarno.

Many observers, Indonesian and foreign, were uncertain as to the ability of the PKI leaders to call upon the militant action of their followers if the Party were in isolation against both the President and the army.

Several individuals or groups exercised a certain influence on policy through their contacts with either Sukarno or the central army command. Members of the dissolved Masjumi and PSI retained circuitous contact with certain leading officers, and the Socialists in particular may have alerted officers to the tactics and danger of the PKI. Individuals such as Subandrio, Djuanda, Chairul Saleh, Leimena, and a few NU leaders had some influence on Sukarno. But lacking their own independent control of militant action, this influence was slight, and they were of even less significance once a crisis erupted.

The Coup: Why?

In the early hours of October 1, 1965, several leaders of the central army command were murdered. By October 2, the survivors were in full control, and eager to use the opportunity to decimate the PKI. They have succeeded. Sukarno, whose complicity in the coup attempt is debated but uncertain, has been relegated to a minor role.

That this profound change in the Indonesian political situation could be effected so easily may be understood if the power situation is examined.

Guided Democracy was a temporary arrangement if only because Sukarno is in his sixties, ailing and mortal. The other political forces were quite aware that upon his demise, at the latest, they would have to fight for survival, with the loser being very probably obliterated.

While Sukarno lived, the army feared to attempt to replace him, for reasons outlined above. The PKI leaders, unsure of the nature of their own support, preferred to retain their alliance with the President while they expanded their organization and, presumably, attempted to increase what little support they had in the armed forces. During 1965, however, four developments made a showdown likely before Sukarno's physical disappearance.

Firstly, Sukarno's health was believed to have deteriorated, and each of the two main contenders for succession sought an opportunity to strike the first blow at the other.

Secondly, it was rumoured that perhaps the history-conscious Sukarno was preparing a Communist succession as only the Communists were likely to exalt his memory. Certainly he gave approval to the PKI request for a people's militia, which, if implemented, would have gravely weakened the army relative to the Communists.

Thirdly, during 1965 the PKI showed increasing militancy in demonstrations and other forms of popular pressure not only against the "neo-imperialists" but also the government.

And fourthly, some prominent civilians, of whom Subandrio was the most notable, were beginning to seek Communist support in order to protect their positions against an uncertain future.

The Army Reaction

While it is still unknown if the PKI was directly involved in the October coup attempt, the coup and its failure gave the army command the opportunity to strike at the Party on terms most favourable to itself. Naked force, or militant action, had been employed against the central army command with the approval of *Harian Rakjat*, the Communist newspaper; the army would now use naked force against the Communists.

The army, threatened or believing itself threatened by the PKI, acted with great unanimity. Troops were moved rapidly against the few military rebels in Central Java, who either surrendered or fled into hiding. But for help in killing a half-million Communists, the army called upon a major source of crisis power: the devout Moslems.

The devout Moslems (*santris*) comprise perhaps 40 per cent of the Indonesian population. Their political organization and discipline have been generally poor, both Masjumi and the NU being loose associations that have depended primarily upon a commitment to Islam (and the *kiajis,* who are the local leaders of Islam) for mobilizing voters. But against what they consider to be enemies of their religion, they have demonstrated a militancy that is rare among the non-devout population.[3]

When Masjumi was dissolved by the President in 1960, there was no militant reaction, perhaps because Islam itself was not gravely threatened, especially as the army, which included many *santri* and anti-Communist officers, was one of the two chief members of the ruling coalition. But between 1960 and 1965 the atheistic spectre of the PKI had loomed ever larger as the Party received presidential encouragement and assistance.

Along the boundary of Central and East Java, Moslems awaited revenge for their many coreligionists murdered in the Communist rebellion at Madiun in 1948. Furthermore, if the Moslems hated the PKI, their feelings towards Sukarno ranged from suspicion to hostility: his Islamic fervour was doubted, he had been a bitter enemy of the Darul Islam rebels, he had dissolved Masjumi, he had relegated devout Moslems (other than army officers) to minor positions in the cabinet, he had forced all Indonesians to give public approval to unity with the Communists, he was a close ally of the PKI, and his "Socialism-a-la-Indonesia" appeared likely to hurt the indigenous businessmen and large landowners, many of whom were *santris.*

In October 1965 therefore the army could and did call upon the *santris* to express demonstrative support for the army, to denounce the Sukarno nominees in the cabinet, and to assist in the eradication of the PKI. The butchery commenced.

Sukarno: Found Wanting

As the army-PKI balance was shattered, Sukarno at once lost a major source of power: his ability to play off the one against the other. But the immediate aftermath of the coup attempt also raised grave doubts about other of his bases of power. His claim to speak for the entire nation was negated by the increasingly open criticism levelled against him, especially by *santris,* students, and intellectuals.

The inference that he could arouse the masses to violent action in his own defence was questioned by the obvious passivity of those very masses in the face of other authorities; anyway, he was denied free access to the mass media, the only channel by which he could communicate with the people. No longer could he claim to be the only force capable of keeping Indonesia's major political groups from fighting one another.

And the hitherto unquestioned loyalty of civilian politicians and the bureaucracy was in fact questioned and found wanting. Many of those politicians who had clung to the coattails of the President and the PKI were now outspokenly anti-Communist and pro-army. Lacking control over their own instruments of violence, they understandably went where power appeared to reside; the bureaucracy did likewise.

The bureaucracy lacked cohesion. Its individual members had largely been associated with political parties during parliamentary democracy because that was the way to ensure a position, promotion, and jobs for members of the family. Under Guided Democracy they had dutifully mastered the slogans and propaganda of the regime, and marched and counter-marched in preparation for attacks on or from the neo-colonialists. Their concern, however, was security, which meant that at a time of crisis they would obey whoever commanded force.

The Army: Overwhelming Power

In October 1965 it was the army that commanded force, and the bureaucracy obeyed. This does not imply that the bureaucrats had emotional bonds with the parties, the President, or the army. Their actions were, nonetheless, obedient. They would have been obedient to a Communist government, whatever their private opinions of communism.

The army leaders, then, found themselves in command of overwhelming power. Two questions, however, remain to be answered: Why did they not remove Sukarno, and why did the Communists refuse to fight once the butchery began, if not before?

The army could have assassinated the President (blaming the PKI if necessary), removed him from office, or retained him while ignoring his attempts to protect the PKI.

To have assassinated Sukarno at the time of the coup attempt might have given the Communists a rallying symbol with which to mobilize far more than their own supporters; it could also have split the officers, many of whom are thought to be loyal to the President if not to his policies; it would have set an uncomfortable precedent for dealing with the head of state; and it would have forced the army to take full responsibility for the government and the disastrous economic situation.

To have ousted Sukarno would have produced several of these undesirable results and would have left him alive to continue his intrigues.

The third alternative was the most attractive. The power of the army could be entrenched and that of its major enemy broken. Whatever authority remained with the President could be used in support of the army-controlled government and, however unwillingly given, in support of the purge of Communists and their sympathizers; Sukarno, continuing as head of state, could then share responsibility for government policies and actions.

The Army: Indirect Ruler

Presumably the army leaders believed they could keep the President's skills of manipulation and intrigue within manageable limits, the more so as his other sources of power were deeply eroded.

It is also apparent that the army leaders are reluctant in general to assume the responsibilities of direct rule. They already possess high status, considerable material rewards, the recognized right to deal with their enemies very much as they please, and a veto power and ultimate control over the civilian members of the government, at the very least in those fields that affect the army's position.

Direct rule would not only bring direct responsibility for the government's past, present, and future failures and inadequacies; it would also require, unless there were to be inter-service disputes, a united concept within the army leadership of the form of society they desired for Indonesia—and there is as yet little evidence of such a united vision.

The Communists Isolated

Regardless of whether or not the PKI was a part of the October coup attempt, the almost immediate failure of the coup left the Party with little choice of action. The cadres could try to take to the hills, or they could go into hiding, or they could continue at their work awaiting the actions of other political forces and trusting to Sukarno's protection.

To go into the hills was an unappealing alternative. The cadres had no arms, no military training; the reasonably good guerrilla areas of Java, Borneo, and Celebes are settled by devout Moslems. The failure of the PRRI's guerrilla warfare in Sumatra, 1958 to 1961, had set no propitious example there, and after the 1948 Madiun rebellion the Communists had been quickly hunted out of the isolated volcanoes of Central-East Java.

And so the Party decided to try to weather out the crisis by denying complicity in the plot, by removing some leaders into hiding, and by leaving others at their posts—as they had done successfully under roughly similar circumstances during the *razzia* of August 1951. This time, however, the army was strong and determined enough to prevent the PKI's riding out the storm.

It has surprised some observers that the PKI did not choose to call on the militant action of its massive body of supporters. Fifteen, or even three, million determined Communists should have been able to halt the transportation system, block the economy, seize weapons from police and isolated army posts, and overwhelm the army, or at least lead it into widespread guerrilla warfare. The Aidit leadership rejected rebellion for two main reasons: the lines of cleavage along which the crisis broke and the nature of the Party's support.

By October 2, the central army leadership controlled the great majority of the army; it had control of Sukarno, and therefore it commanded the obedience of all non-Communist political leaders, the air force, the navy, and the bureaucracy. In addition, it had the willing allegiance of the devout Moslems.

Were the PKI to fight under such circumstances, it would be in isolation, apart from certain elements of the Diponegoro (Central Java) division which were, anyway, fast to surrender once the coup failed. Even with a militant and disciplined backing, the Communists would have faced at least a major blood-letting and a prolonged civil war of doubtful outcome for themselves. But Aidit did not command the militant and disciplined support of his Party and mass organizations.[4]

Communist Weaknesses

When the Aidit leadership won control of the PKI in January 1951 it found no possibility for an early victory. As a result of the Madiun rebellion, the Party had lost most of its support within the armed forces. The bureaucracy was resistant to Party advances. The Party itself was reduced to about 5,000 dispirited members.

Non-Communist nationalists were entrenched in power, their nationalism well attested. The masses, both urban and rural, were largely politically passive, bound by traditional values, beliefs, and loyalties. But the non-Communists were divided and warring, there was a parliamentary democracy, and the material interests of the poorer masses were largely ignored by the other political parties.

In order to exploit this situation to the utmost, the Aidit leadership sought to garner the support of the non-devout masses and to win the friendship of certain non-Communist parties. Mass support would mean votes, votes in turn gave representation in parliament, and significant representation in parliament provided a strong lever in the multiparty bargaining for coalition government—a major step towards a Czechoslovak-type coup.

The friendship of certain other parties would bring government tolerance of Communist organization work, the opportunity to isolate and exclude from office the more militant anti-Communist groups, and the enhanced possibility of entry into a coalition government.

The chief ally sought was the PNI; a secondary one was the NU. In order to pursue its friendship policy as well as to attract the traditional masses, the PKI was compelled to take on a particular character: opposed to the use of violence, sympathetic to religion, reasonable in demands, and solicitous of the interests of its allies. The alliances were won, as was a mass following.

The peasants and urban poor generally accepted their underprivileged condition as preordained. They were poor, but poverty was eternal; others were wealthy, but that was how society always had been and always would be. They gave deference to traditional authorities or "betters": wealtheir persons, village headmen, *kiajis*, the *pamong pradja*.

Dissension and argument were considered worse than distasteful; a person sought to reach harmony with himself and his environment, not to change the world. And how could a diminutive, poor Indonesian ever conceive that he should have any right to another person's property, let alone decide the personnel and policies of the distant and awesome government?

The Communists laboured hard to win the support of the poor by acting as their protector and aid. And the poor responded with votes, but could not envision more militant action. The ingrained attitudes, values, and behaviour of centuries are slow to change in times of peace.

Communist Dependence on Sukarno

Between 1956 and 1959, the PKI forged an alliance with Sukarno, reluctantly accepting mutual protection against the army when parliamentary democracy was discarded. Aidit was aware that the Party's strategy and tactics were designed primarily for a situation of multiparty parliamentary democracy, and the PKI was the most vocal of any party in attempting to defend the system against the Sukarno-army attack. But he also recognized that his Party was too weak to challenge the determined coalition.[5]

Given the need for the Sukarno alliance to prevent the army's implementation of its desire to ban the PKI, and given the non-militant nature of the Party's support, Aidit entered the new era unable to alter the Party's basic character. Sukarno was eulogized, as the Party sought to ensure his protection, win influence through sycophancy and mutual need, and exploit his authority among the non-devout.

Organizational work continued, but the Sukarno-army coalition was adamant in preventing the masses from gaining experience in militancy of a domestic political nature. Demonstrations against the neo-colonialists and their stooges were sponsored by the government and often led by Communists; but strikes were forbidden, and the few examples of peasant militancy against landlords or local authorities were met with force.

In short, the nature of the Indonesian masses and the alliance requirements of the Party prevented the PKI from developing among its supporters a militant loyalty focused solely on itself, and a militantly aggressive attitude towards the other actors of Guided Democracy. It is certain that the degree of domestically oriented militancy among cadres and followers was slowly rising, despite government attempts to stifle it, but it was still relatively little advanced by October 1965.

Apart from a small number of cadres, the Indonesian Communists were politically trained to cooperate with the non-Communists, to join with them in nationalist demonstrations against the Dutch, the British, the Indians, the Malaysians, and the United States, to give considerate attention to the interests of national businessmen and landowners, and to look to President Sukarno for national leadership.

It is not surprising, then, that in October 1965 the Aidit leadership decided that once the coup had failed and the army controlled Sukarno's access to the public, the Party could not attempt to move into general insurrection or guerrilla warfare. Some cadres stayed at their jobs until arrested or killed, while others went into hiding, from where they were soon ferreted. Today, many cadres are dead, and almost all the remainder are in prison or hiding, awaiting an uncertain future.

Was It Inevitable?

This essay should not lead to the conclusion that the decimation of the PKI and the victory of the central army command were inevitable. A question will be discussed for many years: What if the coup leaders, with President Sukarno in their hands, had killed Generals Nasution and Suharto?

If this had happened, and if Sukarno had then appointed a new, pro-Communist central army command, there might well have been a very different situation today.

A new central army command using the authority of Sukarno and with the demonstrative support of the PKI could well have succeeded in controlling the country. The cabinet and PNI and NU leaders would have fallen into line; the bureaucracy would have functioned loyally.

Regional army commanders would probably not have dared to oppose, since they would not have known which of their officers would actually war against the President and his government, and they would have recalled the pathetic response to the PRRI-Permesta's anti-Sukarno civil war. The PKI, acting in the name of the state and Sukarno, would probably have been able to sabotage rebellion in Java and several regions in the Outer Islands.

As chance had it, Suharto was left off the murder list, Nasution eluded his would-be assassins, and the army quickly confined Sukarno to protective custody. The subsequent and bloody dismantling of the PKI brought to a close the era of Guided Democracy. A new structuring of political power was in the making.

DONALD HINDLEY *is Associate Professor of Politics at Brandeis University, Waltham, Massachusetts.*

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[2] Information on the officer corps is to be found in Guy J. Pauker, "The Role of the Military in Indonesia," in John J. Johnson (ed.), *The Role of the Military in Underdeveloped Countries* (Princeton, New Jersey, 1962).

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[4] For an account of the development of the PKI under Aidit's leadership, see the author's *The Communist Party of Indonesia*, 1951-1963 (Berkeley and Los Angeles, 1964).

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TOXIC SUBSTANCES AND ECOLOGICAL CYCLES

GEORGE M. WOODWELL

THE VASTNESS OF THE EARTH has fostered a tradition of unconcern about the release of toxic wastes into the environment. Billowing clouds of smoke are diluted to apparent nothingness; discarded chemicals are flushed away in rivers; insecticides "disappear" after they have done their job; even the massive quantities of radioactive debris of nuclear explosions are diluted in the apparently infinite volume of the environment.

Such pollutants are indeed diluted to traces—to levels infinitesimal by ordinary standards, measured as parts per billion or less in air, soil, and water. Some pollutants do disappear; they are immobilized or decay to harmless substances. Others last, sometimes in toxic form, for long periods.

Biological Concentration of Toxins

We have learned in recent years that dilution of persistent pollutants even to trace levels detectable only by refined techniques is no guarantee of safety. Nature has ways of concentrating substances that are frequently surprising and occasionally disastrous.

We have had dramatic examples of one of the hazards in the dense smogs that blanket our cities with increasing frequency. What is less widely realized is that there are global, long-term ecological processes that concentrate toxic substances, sometimes hundreds of thousands of times above levels in the environment.

These processes include not only patterns of air and water circulation but also a complex series of biological mechanisms. Over the past

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decade detailed studies of the distribution of both radioactive debris and pesticides have revealed patterns that have surprised even biologists long familiar with the unpredictability of nature.

Major contributions to knowledge of these patterns have come from studies of radioactive fallout. The incident that triggered worldwide interest in large-scale radioactive pollution was the hydrogen-bomb test at Bikini in 1954 known as "Project Bravo." This was the test that inadvertently dropped radioactive fallout on several Pacific islands and on the Japanese fishing vessel *Lucky Dragon*.

Several thousand square miles of the Pacific were contaminated with fallout radiation that would have been lethal to man. Japanese and U.S. oceanographic vessels surveying the region found that the radioactive debris had been spread by wind and water, and, more disturbing, it was being passed rapidly along food chains from small plants to small marine organisms that ate them to larger animals (including the tuna, a staple of the Japanese diet).

International Research

The U.S. Atomic Energy Commission and agencies of other nations, particularly Britain and the U.S.S.R., mounted a large international research programme, costing many millions of dollars, to learn the details of the movement of such debris over the earth and to explore its hazards.

Although these studies have been focused primarily on radioactive materials, they have produced a great deal of basic information about pollutants in general. The radioactive substances serve as tracers to show the transport and concentration of materials by wind and water and the biological mechanisms that are characteristic of natural communities.

One series of investigations traced the worldwide movement of particles in the air. The tracer in this case was strontium 90, a fission product released into the earth's atmosphere in large quantities by nuclear-bomb tests.

Two reports in 1962—one by S. Laurence Kulp and Arthur R. Schulert of Columbia University and the other by a United Nations committee—furnished a detailed picture of the travels of strontium 90. The isotope was concentrated on the ground between the latitude of 30 and 60 degrees in both hemispheres, but concentrations were five to ten times greater in the Northern Hemisphere, where most of the bomb tests were conducted.

It is apparently in the middle latitudes that exchanges occur between the air of upper elevations (the stratosphere) and that of lower elevations (the troposphere). The larger tests have injected debris into the stratosphere; there it remains for relatively long periods, being carried back into the troposphere and to the ground in the middle latitudes in late winter or spring.

The mean "half-time" of the particles' residence in the stratosphere (that is, the time for half of a given injection to fall out) is from three months to five years, depending on many factors, including the height of the injection, the size of the particles, the latitude of injection, and the time of year. Debris injected into the troposphere has a mean half-time of residence ranging from a few days to about a month.

Worldwide Dispersion

Once airborne, the particles may travel rapidly and far. The time for one circuit around the earth in the middle latitudes varies from twenty-five days to less than fifteen. (Following two recent bomb tests in China, fallout was detected at the Brookhaven National Laboratory on Long Island respectively nine and fourteen days after the tests.)

Numerous studies have shown further that precipitation (rain and snowfall) plays an important role in determining where fallout will be deposited. Lyle T. Alexander of the Soil Conservation Service and Edward P. Hardy, Jr., of the AEC found in an extensive study in Clallam County, Washington, that the amount of fallout was directly proportional to the total annual rainfall.

It is reasonable to assume that the findings about the movement and fallout of radioactive debris also apply to other particles of similar size in the air. This conclusion is supported by a recent report by Donald F. Gatz and A. Nelson Dingle of the University of Michigan, who showed that the concentration of pollen in precipitation follows the same pattern as that of radioactive fallout.

This observation is particularly meaningful because pollen is not injected into the troposphere by a nuclear explosion; it is picked up in air currents from plants close to the ground. There is little question that dust and other particles, including small crystals of pesticides, also follow these patterns.

From these and other studies it is clear that various substances released into the air are carried widely around the world and may be deposited in concentrated form far from the original source. Similarly, most bodies of water—especially the oceans—have surface currents that may move materials five to ten miles a day. Much higher rates, of course, are found in such major oceanic currents as the Gulf Stream.

These currents are one more physical mechanism that can distribute pollutants widely over the earth.

Plant and Animal Pathways

The research programmes of the AEC and other organizations have explored not only the pathways of air and water transport but also the pathways along which pollutants are distributed in plant and animal communities. In this connection we must examine what we mean by a "community."

Biologists define communities broadly to include all species, not just man. A natural community is an aggregation of a great many different kinds of organisms, all mutually interdependent. The basic conditions for the integration of a community are determined by physical characteristics of the environment such as climate and soil.

Thus a sand dune supports one kind of community, a freshwater lake another, a high mountain still another. Within each type of environment there develops a complex of organisms that in the course of evolution becomes a balanced, self-sustaining biological system.

Such a system has a structure of interrelations that endows the entire community with a predictable developmental pattern, called "succession," that leads towards stability and enables the community to make the best use of its physical environment. This entails the development of cycles through which the community as a whole shares certain resources, such as mineral nutrients and energy.

For example, there are a number of different inputs of nutrient elements into such a system. The principal input is from the decay of primary minerals in the soil. There are also certain losses, mainly through the leaching of substances into the underlying water table. Ecologists view the cycles in the system as mechanisms that have evolved to conserve the elements essential to the survival of the organisms making up the community.

Food Chains

One of the most important of these cycles is the movement of nutrients and energy from one organism to another along the pathways that are sometimes called food chains. Such chains start with plants, which use the sun's energy to synthesize organic matter; animals eat the plants; other animals eat these herbivores; and carnivores in turn may constitute additional levels feeding on the herbivores and on one another.

If the lower orders in the chain are to survive and endure, there must be a feedback of nutrients. This is provided by decay organisms (mainly microorganisms) that break down organic debris into the substances used by plants. It is also obvious that the community will not survive if essential links in the chain are eliminated; therefore the preying of one level on another must be limited.

Ecologists estimate that such a food chain allows the transmission of roughly 10 per cent of the energy entering one level to the next level above it, that is, each level can pass on 10 per cent of the energy it receives from below without suffering a loss of population that would imperil its survival. The simplest version of a system of this kind takes the form of a pyramid, each successively higher population receiving about a tenth of the energy received at the level below it.

Actually, nature seldom builds communities with so simple a structure. Almost invariably the energy is not passed along in a neatly ordered chain but is spread about to a great variety of organisms through a sprawling, complex web of pathways. The more mature the community, the more diverse its makeup and the more complicated its web. In a natural ecosystem the network may consist of thousands of pathways.

Man as Consumer of Toxics

This complexity is one of the principal factors we must consider in investigating how toxic substances may be distributed and concentrated in living communities. Other important basic factors lie in the nature of the metabolic process. For example, of the energy a population of organisms receives as food, usually less than 50 per cent goes into the construction of new tissue, the rest being spent for respiration. This circumstance acts as a concentrating mechanism: a substance not involved in respiration and not excreted efficiently may be concentrated in the tissues twofold or more when passed from one population to another.

Let us consider three types of pathway for toxic substances that involve man as the ultimate consumer. The three examples, based on studies of radioactive substances, illustrate the complexity and variety of pollution problems.

The first and simplest case is that of strontium 90. Similar to calcium in chemical behaviour, this element is concentrated in bone. It is a long-lived radioactive isotope and is a hazard because its energetic beta radiation can damage the mechanisms involved in the manufacture of blood cells in the bone marrow. In the long run, the irradiation may produce certain types of cancer.

The route of strontium 90 from air to man is rather direct: we ingest it in leafy vegetables, which absorbed it from the soil or received it as fallout from the air, or in milk and other dairy products from cows that have fed on contaminated vegetation. Fortunately, strontium is not usually concentrated in man's food by an extensive food chain. Since it lodges chiefly in bone, it is not concentrated in passing from animal to animal in the same ways other radioactive substances may be (unless the predator eats bones!).

Quite different is the case of the radioactive isotope cesium 137. This isotope, also a fission product, has a long-lived radioactivity (its half-life is about thirty years) and emits penetrating gamma rays. Because it behaves chemically like potassium, an essential constituent of all cells, it becomes widely distributed once it enters the body. Consequently, it is passed along to meat-eating animals, and under certain circumstances it can accumulate in a chain of carnivores.

Lichens to Caribou to Man

A study in Alaska by Wayne C. Hanson, H. E. Palmer, and B. I. Griffin of the AEC's Pacific-Northwest Laboratory showed that the concentration factor for cesium 137 may be two or three for one step in a food chain.

The first link of the chain in this case was lichens growing in the Alaskan forest and tundra. The lichens collected cesium 137 from fallout in rain. Certain caribou in Alaska live mainly on lichens during the winter, and caribou meat in turn is the principal diet of Eskimos in the same areas. The investigators found that caribou had accumulated about fifteen micromicrocuries of cesium radioactivity per gram of tissue in their bodies.

The Eskimos who fed on these caribou had a concentration twice as high (about thirty micromicrocuries per gram of tissue) after eating many pounds of caribou meat in the course of a season. Wolves and foxes that ate caribou sometimes contained three times the concentration in the flesh of the caribou. It is easy to see that in a longer chain, involving not just two animals but several, the concentration of a substance that was not excreted or metabolized could be increased to high levels.

Thyroid Troubles

A third case is that of iodine 131, another gamma ray emitter. Again the chain to man is short and simple: The contaminant (from fallout) comes to man mainly through cows' milk, and thus the chain involves only grass, cattle, milk, and man. The danger of iodine 131 lies in the fact that iodine is concentrated in the thyroid gland.

Although iodine 131 is short-lived (its half-life is only about eight days), its quick and localized concentration in the thyroid can cause damage. For instance, a research team from the Brookhaven National Laboratory headed by Robert Conard has discovered that children on Rongelap Atoll who were exposed to fallout from the 1954 bomb test later developed thyroid nodules.

The investigations of the iodine 131 hazard yielded two lessons that have an important bearing on the problem of pesticides and other toxic substances released in the environment. In the first place, we have had a demonstration that the hazard of the toxic substance itself often tends to be underestimated. This was shown to be true of the exposure of the thyroid to radiation. Thyroid tumours were found in children who had been treated years before for enlarged thymus glands with doses of X rays that had been considered safe.

As a result of this discovery and studies of the effects of iodine 131, the Federal Radiation Council in 1961 issued a new guide reducing the permissible limit of exposure to ionizing radiation to less than a tenth of what had previously been accepted. Not the least significant aspect of this lesson is the fact that the toxic effects of such a hazard may not appear until long after the exposure; on Rongelap Atoll ten years passed before the thyroid abnormalities showed up in the children who had been exposed.

The second lesson is that, even when the pathways are well understood, it is almost impossible to predict just where toxic substances released into the environment will reach dangerous levels.

Even in the case of the simple pathway followed by iodine 131, the eventual destination of the substance and its effects on people are complicated by a great many variables: the area of the cow's pasture (the smaller the area, the less fallout the cow will pick up); the amount and timing of rains on the pasture (which on the one hand may bring down fallout but on the other may wash it off the forage); the extent to which the cow is given stored, uncontaminated feed; the amount of iodine the cow secretes in its milk; the amount of milk in the diet of the individual consumer; and so on.

Pesticide Problems

If it is difficult to estimate the nature and extent of the hazards from radioactive fallout, which have been investigated in great detail for more than a decade by an international research programme, it must be said that we are in a poor position indeed to estimate the hazards from pesticides.

So far the amount of research effort given to the ecological effects of these poisons has been comparatively small, although it is increasing rapidly. Much has been learned, however, about the movement and distribution of pesticides in the environment, thanks in part to the clues supplied by the studies of radioactive fallout.

Our chief tool in the pesticide inquiry is DDT. There are many reasons for focusing on DDT: it is long-lasting, it is now comparatively easy to detect, it is by far the most widely used pesticide, and it is toxic to a broad spectrum of animals, including man. Introduced only a quarter-century ago and spectacularly successful during World War II in controlling body lice and therefore typhus, DDT quickly became a universal weapon in agriculture and in public health campaigns against disease-carriers.

Not surprisingly, by this time DDT has thoroughly permeated our environment. It is found in the air of cities, in wildlife all over North America, and in remote corners of the earth, even in Adelie penguins and skua gulls (both carnivores) in the Antarctic. It is also found the world over in the fatty tissue of man. It is fair to say that there are probably few populations in the world that are not contaminated to some extent with DDT.

DDT by Wind and Water

We now have a considerable amount of evidence that DDT is spread over the earth by wind and water in much the same patterns as radioactive fallout. This seems to be true in spite of the fact that DDT is not injected high into the atmosphere by an explosion. When DDT is sprayed in the air, some fraction of it is picked up by air currents as pollen is, circulated through the lower troposphere, and deposited on the ground by rainfall.

I found in tests in Maine and New Brunswick, where DDT has been sprayed from airplanes to control the spruce budworm in forests, that even in the open, away from trees, about 50 per cent of the DDT does not fall to the ground. Instead it is probably dispersed as small crystals in the air. This is true even on days when the air is still and when the low-flying planes release the spray only fifty to 100 feet above treetop level.

Other mechanisms besides air movement can carry DDT for great distances around the world. Migrating fish and birds can transport it thousands of miles. So also do oceanic currents. DDT has only a low solubility in water (the upper limit is about one part per billion), but as algae and other organisms in the water absorb the substance in fats, where it is highly soluble, they make room for more DDT to be dissolved into the water. Accordingly, water that never contains more than a trace of DDT can continuously transfer it from deposits on the bottom to organisms.

DDT is an extremely stable compound that breaks down very slowly in the environment. Hence with repeated spraying the residues in the soil or water basins accumulate.

Working with Frederic T. Martin of the University of Maine, I found that in a New Brunswick forest where spraying had been discontinued in 1958 the DDT content of the soil increased from half a pound per acre to 1.8 pounds per acre in the three years between 1958 and 1961. Apparently, the DDT residues were carried to the ground very slowly on foliage and decayed very little. The conclusion is that DDT has a long half-life in the trees and soil of a forest, certainly in the range of tens of years.

Location	Organism	Tissue	Concentration (Parts Per Million)
Israel	Man	Fat	19.2
India			12.8-31.0
Hungary			12.4
U.S. (Average)			11
Canada			5.3
France			5.2
Alaska (Eskimo)			2.8
West Germany			2.3
England			2.2

Concentrations of DDT

Doubtless there are many places in the world where reservoirs of DDT are accumulating. With my colleagues Charles F. Wurster, Jr., and Peter A. Isaacson of the State University of New York at Stony Brook, I recently sampled a marsh along the south shore of Long Island that had been sprayed with DDT for twenty years to control mosquitoes. We found that the DDT residues in the upper layer of mud in this marsh ranged up to 32 pounds per acre!

We learned further that plant and animal life in the area constituted a chain that concentrated the DDT in spectacular fashion. At the lowest level, the plankton in the water contained .04 part per million of DDT; minnows contained one part per million; and a carnivorous scavenging bird (a ring-billed gull) contained about seventy-five parts per million in its tissues (on a whole-body, wet-weight basis). Some of the carnivorous animals in this community had concentrated DDT by a factor of more than 1,000 over the organisms at the base of the ladder.

A further tenfold increase in the concentrations along this food web would in all likelihood result in the death of many of the organisms in it. It would then be impossible to discover why they had disappeared. The damage from DDT concentration is particularly serious in the higher carnivores. The mere fact that conspicuous mortality is not observed is no assurance of safety. Comparatively low concentrations may inhibit reproduction and thus cause the species to fade away.

Catastrophes Ahead

That DDT is a serious ecological hazard was recognized from the beginning of its use. In 1946 Clarence Cottam and Elmer Higgins of the U.S. Fish and Wildlife Service warned in the *Journal of Economic Entomology* that the pesticide was a potential menace to mammals, birds, fishes, and other wildlife, and that special care should be taken to avoid its application to streams, lakes, and coastal bays because of the sensitivity of fishes and crabs.

Because of the wide distribution of DDT the effects of the substance on a species of animal can be more damaging than hunting or the elimination of a habitat (through an operation such as dredging marshes). DDT affects the entire species rather than a single population and may well wipe out the species by eliminating reproduction.

Within the past five years, with the development of improved techniques for detecting the presence of pesticide residues in animals and the environment, ecologists have been able to measure the extent of the hazards presented by DDT and other persistent general poisons. The picture that is emerging is not a comforting one.

Pesticide residues have now accumulated to levels that are catastrophic for certain animal populations, particularly carnivorous birds. Furthermore, it has been clear for many years that because of their shotgun effect these weapons not only attack the pests but also destroy predators and competitors that normally tend to limit proliferation of the pests. Under exposure to pesticides the pests tend to develop new strains that are resistant to the chemicals. The result is an escalating chemical warfare that is self-defeating and has secondary effects whose costs are only beginning to be measured.

No Safety in the Vastness of the Earth

One of the costs is wildlife, notably carnivorous and scavenging birds, such as hawks and eagles. There are others: destruction of food webs aggravates pollution problems, particularly in bodies of water that receive mineral nutrients in sewage or in water draining from heavily fertilized agricultural lands. The plant populations, no longer consumed by animals, fall to the bottom to decay anaerobically, producing hydrogen sulfide and other noxious gases, further degrading the environment.

The accumulation of persistent toxic substances in the ecological cycles of the earth is a problem to which mankind will have to pay increasing attention. It affects many elements of society, not only in the necessity for concern about the disposal of wastes but also in the need for a revolution in pest control.

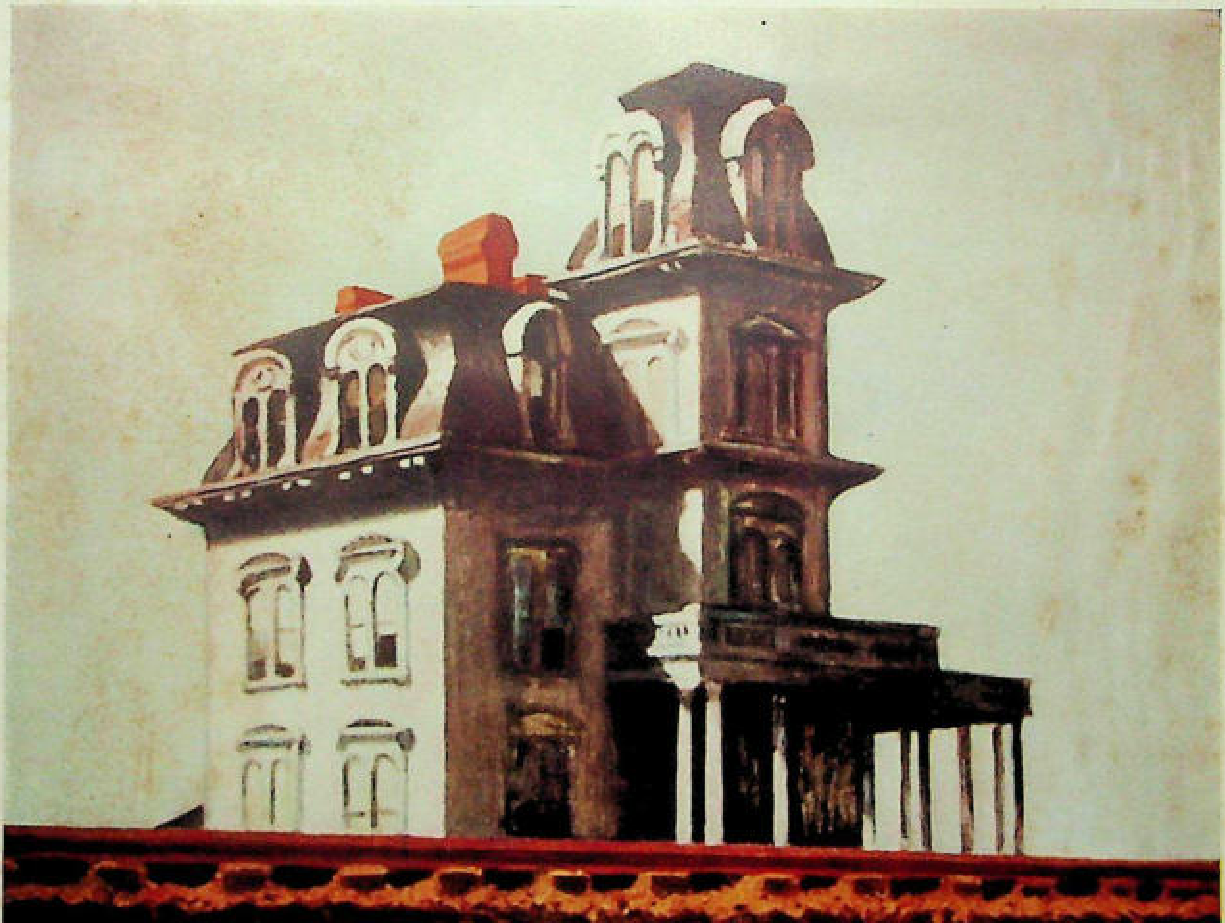
We must learn to use pesticides that have a short half-life in the environment—better yet, to use pest-control techniques that do not require applications of general poisons. What has been learned about the dangers in polluting ecological cycles is ample proof that there is no longer safety in the vastness of the earth.

GEORGE M. WOODWELL *is an ecologist at the Brookhaven National Laboratory. He notes that his article in no way reflects an official attitude of the U.S. Atomic Energy Commission or Brookhaven National Laboratory.*

"I WANT TO PAINT SUNLIGHT"

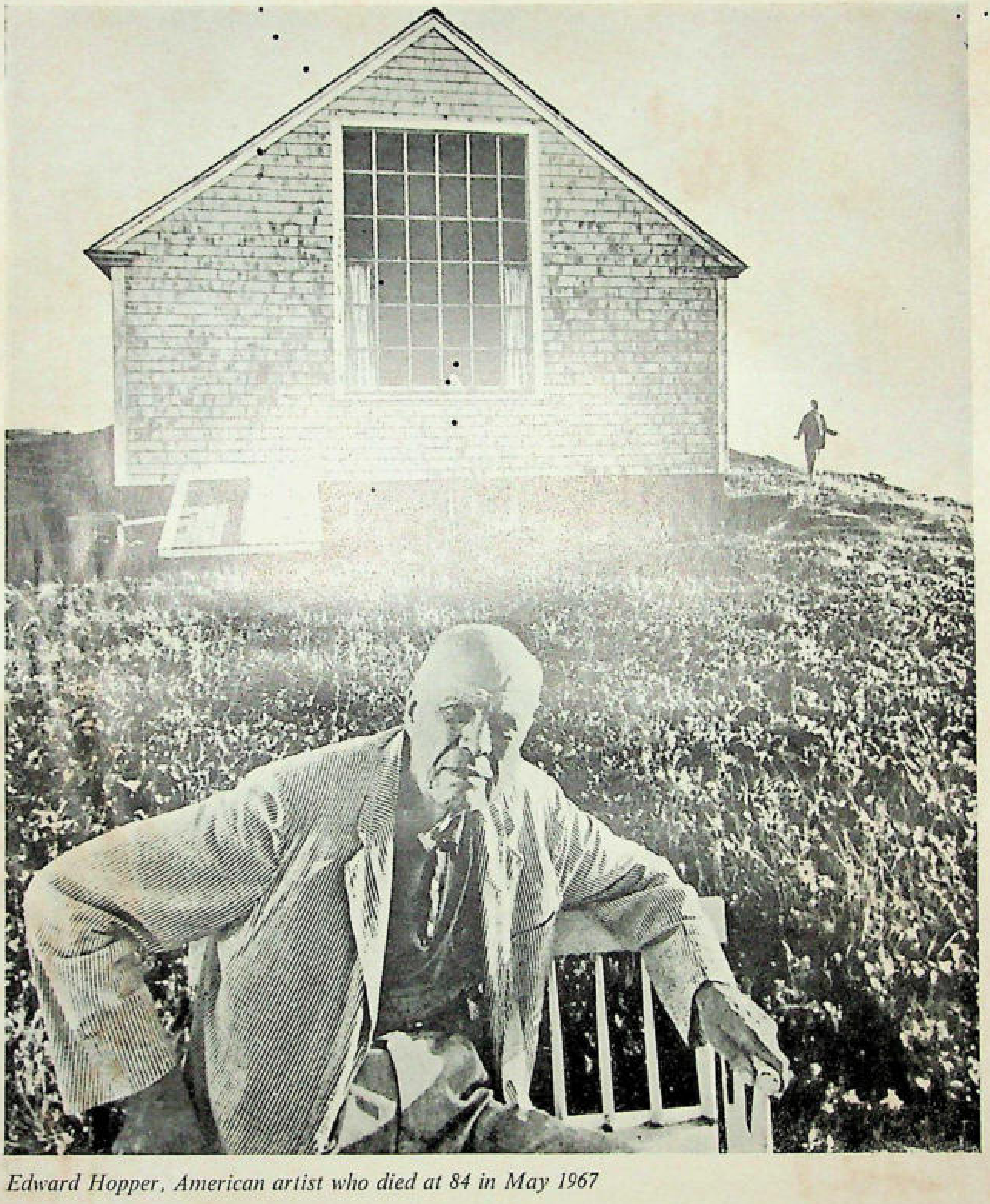
JACK KROLL

A Portfolio of Edward Hopper's Paintings



HOUSE BY THE RAILROAD, 1925 The Museum of Modern Art

Our home, half shelter and half exile,
with fear breathing through the windowed curtains



Edward Hopper, American artist who died at 84 in May 1967

EDWARD HOPPER, who died at 84 in May of this year,
left behind his silence, his light, his vital vacuums,
the immense intimacies of his unforgettable images,
touchstones for the American consciousness.

Matter of factly, Hopper got to the heart of the matter. Do we live
in the country? Hopper painted
our house, half home and half dream,
drenched by a light half sun, half moon—
the house where the human spirit hangs its hat.

Do we live in the city? Hopper painted
our home, half shelter and half exile,
with fear breathing through the windowed curtains
and a piano touched by one sad finger.

Do we, dead or desperate, live nowhere? Hopper painted
our absence—the waiting wall, the empty room,
the light intercepted by no flesh.

Was he a realist, a modernist, a romantic, a structuralist,
a poet? Yes, all of them. Like all real art, Hopper's vision can
be used again and again, and the future will enjoy doing it.

Today's jittery young artists are itching with sharp, bright ideas,
but Hopper was one of those masterly misers
whose compulsion is both character and cognition,
like Ryder endlessly igniting his moons,
or Giacometti rubbing his nudes
down to the nerves.

JACK KROLL *is a senior editor of "Newsweek" in charge of The Arts, which includes the Art, Music, Movies, Theatre, and Books sections of the magazine. He is also a frequent contributor of articles on contemporary art and literature to various U.S. and foreign periodicals.*

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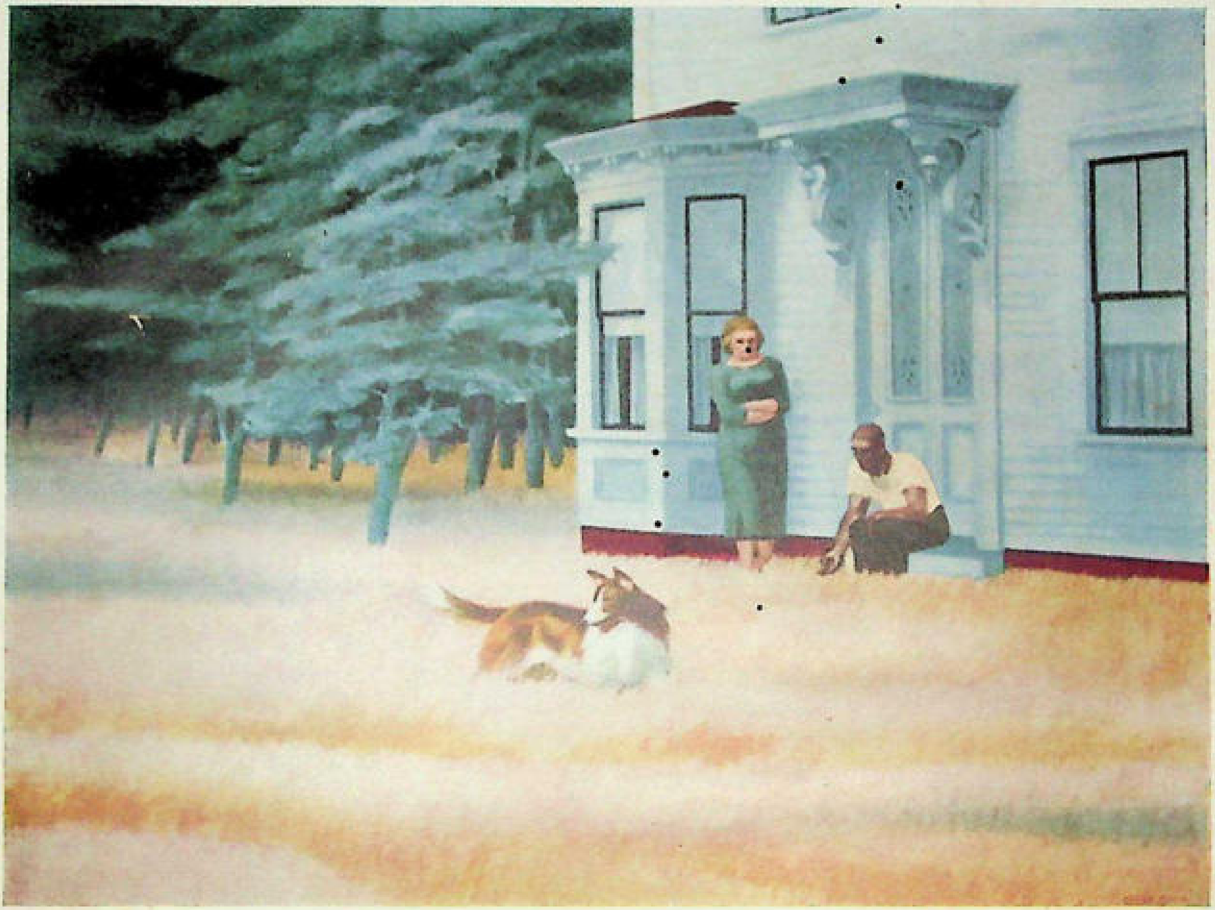
"What I wanted to do," said Hopper, "was to paint sunlight on the side of a house," a statement of such tricky modesty that one tends to forget that it means: "I want to paint the human soul."

In this, Hopper was very American, very pragmatic, very practical. You can't paint the human soul, even if you're a big strong 6-foot-5 English-Dutch-Welsh-Danish Yankee born in Nyack, N.Y., and you've been to Paris and everywhere and you've studied with Robert Henri and the pioneer American modernists.

So of course you paint
sunlight on a wall;
or three gas pumps glowing eerily in a rural twilight;
or the velvet-and-brass hush of a nearly empty movie house:
or a man, a woman, and a dog,
nursing the evening silence by their house,
floating in a sea of grass;
or two ladies with red lips and white necks,
over a silent tea at a Chinese restaurant.

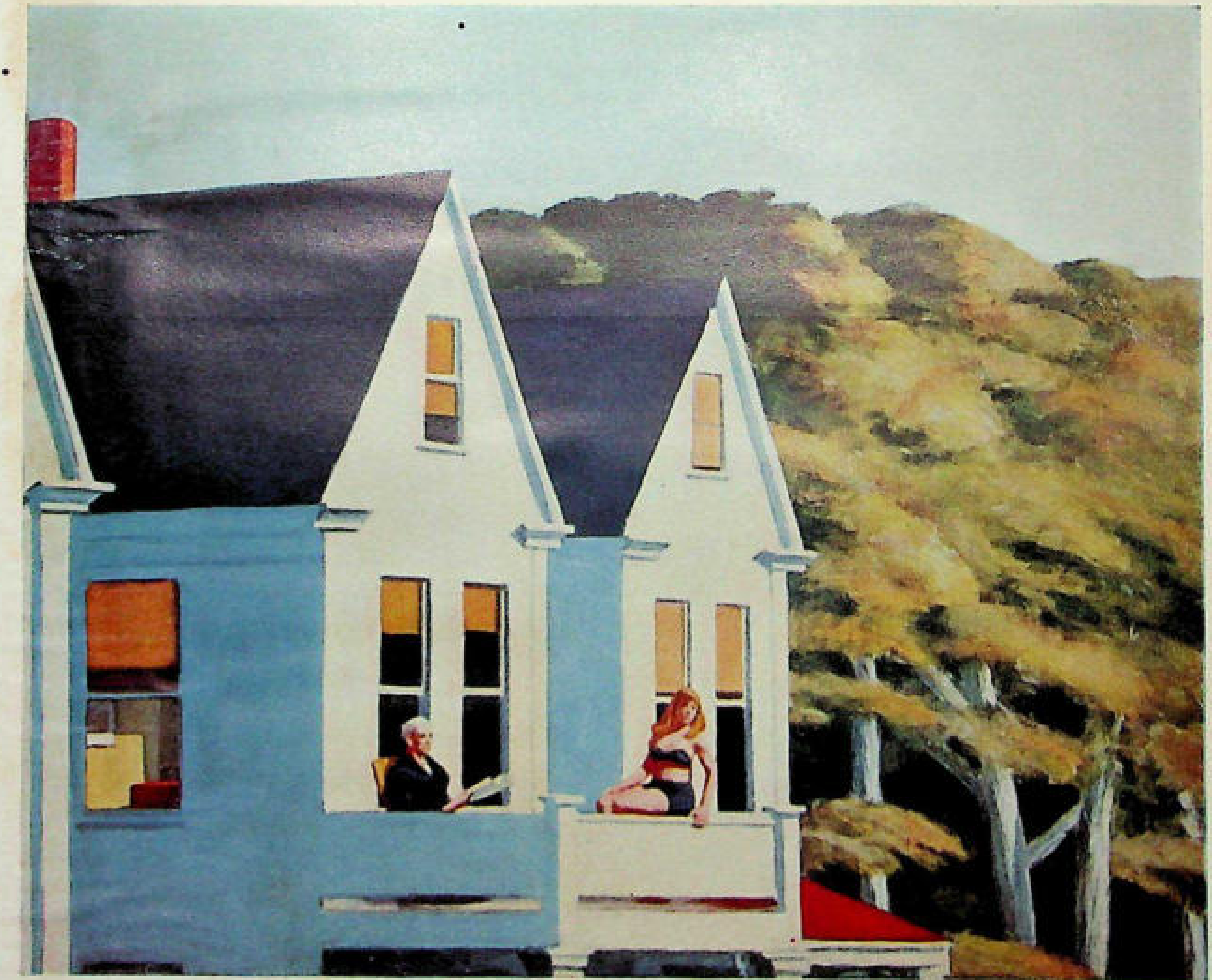


CAPE COD EVENING, 1939 Collection of the Honourable and Mrs. John Hay Whitney

A man, a woman, and a dog,
nursing the evening silence by their house...

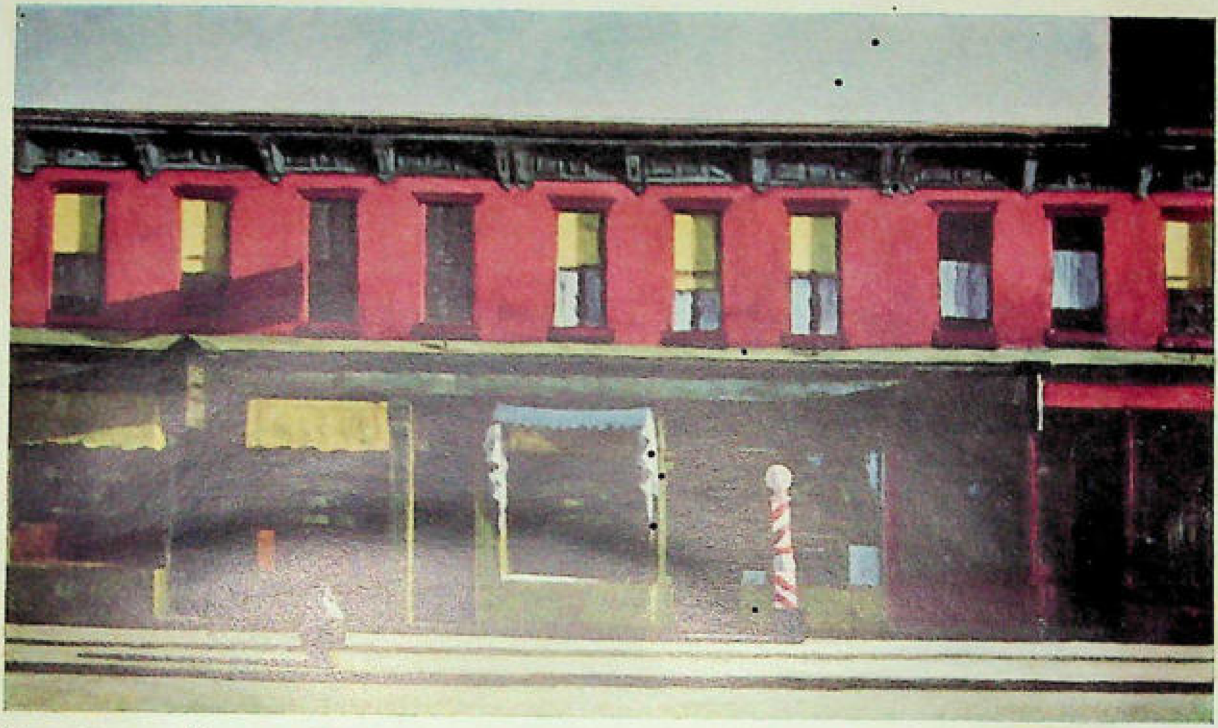
Or you paint
the complicated loneliness
of the limbo hours in a coffeeshop,
like a glass-hulled boat
trapped in the black ice of the city,
lit by a slice of yellow light like stale lemon pie,
and full of the sadness
of a gray fedora,
a red dress,
and a clean coffee urn.

Not many artists seize something quintessential; Hopper was one of them. His white wooden houses,
baking brightly in the American noon,
are like rhythms in the poems of Robert Frost.



SECOND-STORY SUNLIGHT, 1960 Whitney Museum of American Art

Our house, half home, half dream...

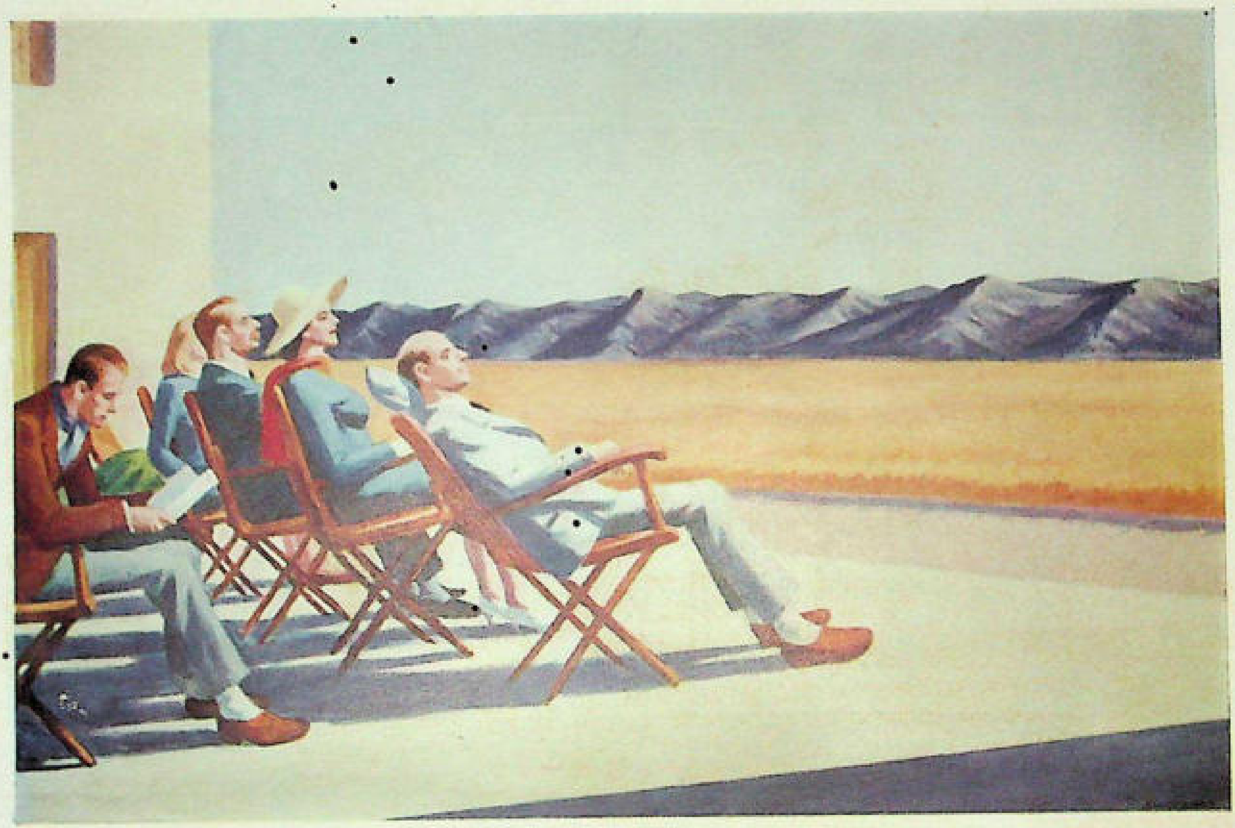


EARLY SUNDAY MORNING, 1930 Whitney Museum of American Art

. . . Barber poles, and fire hydrants . . .

His chimneys, barber poles, and fire hydrants are like
the images in William Carlos Williams
wrung out of the world's clutter
and sluiced to a shine
in the rhythmic single-mindedness of the artist.

It's pleasing to think how old-fashioned and modern Hopper is—
his pictures have the dramatic morality of Eugene O'Neill,
but they also look startlingly like Michelangelo Antonioni,
with those solitary citizens
lost in a world that seems
like the backstage of oblivion.



People in the Sun, 1960

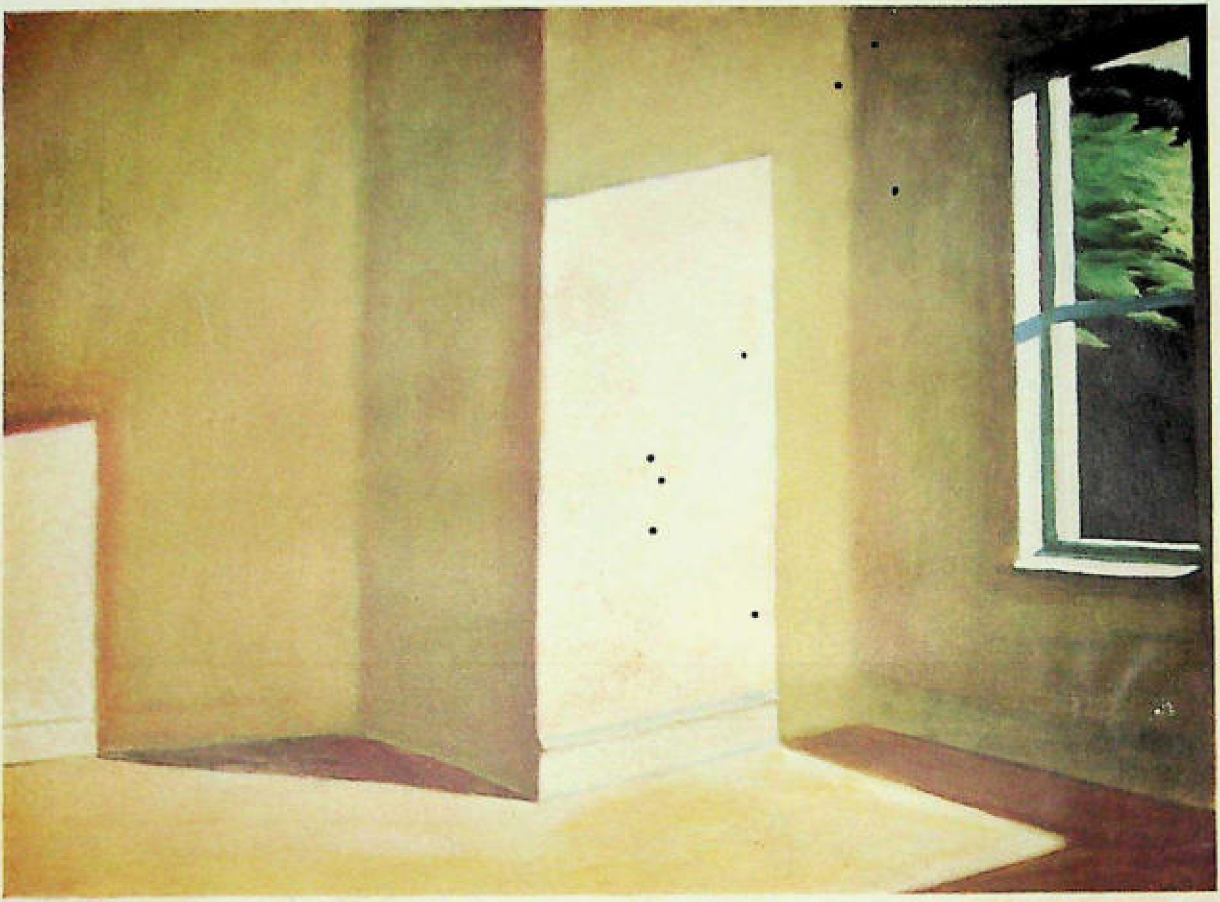
. . . Baking brightly in the American noon . . .

Hopper, the Dutch Yankee, captured the Puritan pathos of America's crowded loneliness.

One mustn't think of Matisse or Picasso when looking at these stooped, stolid figures, any more than one should think of Tolstoi while reading Dreiser.

Hopper paints
a secretary and her boss in an office at night.
He at his desk, she at the filing cabinet,
her sumptuous bottom swelling her prim dress.

He paints
an usherette standing by
in her blue trousered uniform,
her thonged shoes,
her blond pageboy bob,
gleaming under the dim bulbs.



SUN IN AN EMPTY ROOM, 1963 Whitney Museum of American Art

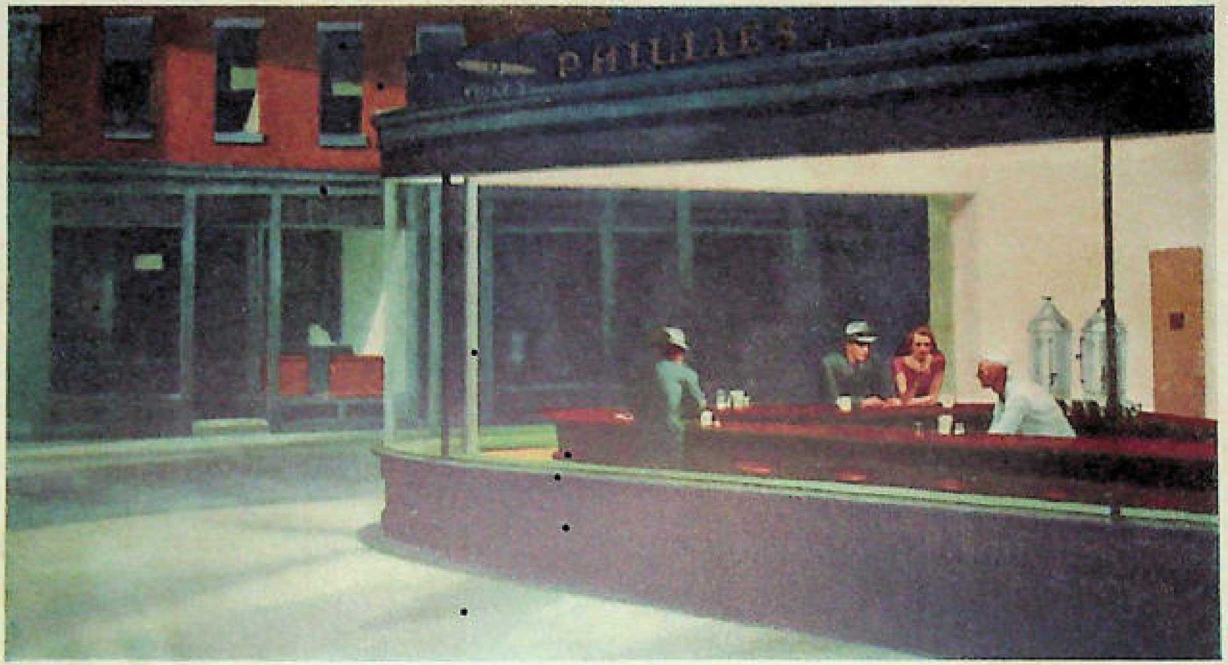
. . . Sunlight on a wall . . .

Hopper's women have
that American ache
made out of love, desire, fear, and compassion;
It's in Hawthorne, Poe, Dreiser, Faulkner,
and the lacerated females of Willem de Kooning.

It is the burning chastity of romantic realists who see anguish in the forms of things.

Hopper saw this so early and so clearly that he had no trouble rejecting the temptations to aesthetic flashiness that came with this century.

That sort of thing, he said, "has no place in this writing down of life;



NIGHTHAWKS, 1942 The Art Institute of Chicago

The limbo hours in a coffee shop

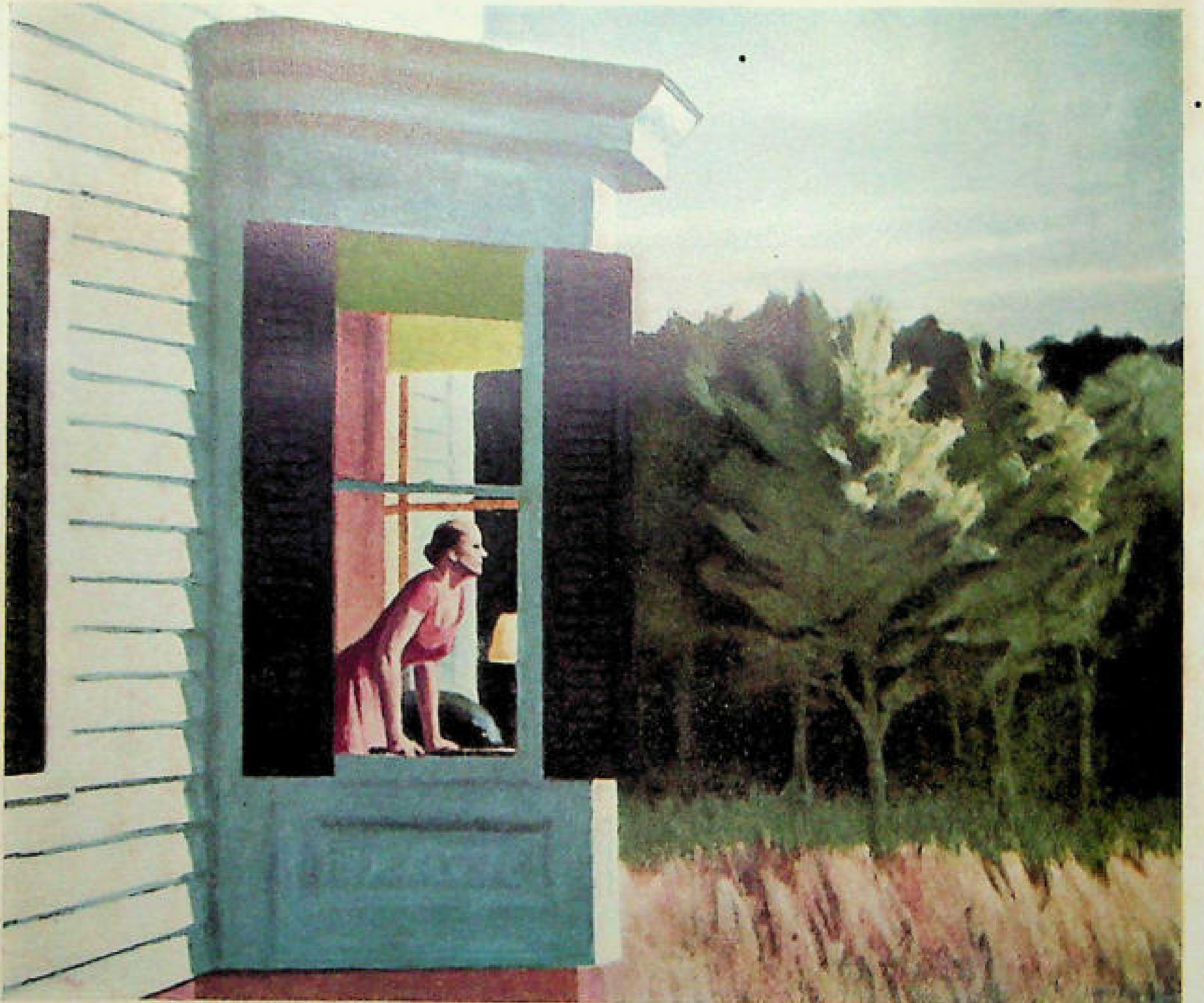
the concentration is too intense to allow the hand to flourish playfully about."

He married in 1924 and he and his wife, Jo, lived on Cape Cod and in New York, seventy-four steps up the red-brick house at 3 Washington Square North until he left her in May.

All that time he spent in the "writing down of life," working with powerful slowness in oils, water colours, and etchings.

He hardly spoke; he would contemplate an empty canvas-stretcher for hours, watching the fact of his own feeling building itself a solid form out of nothing.

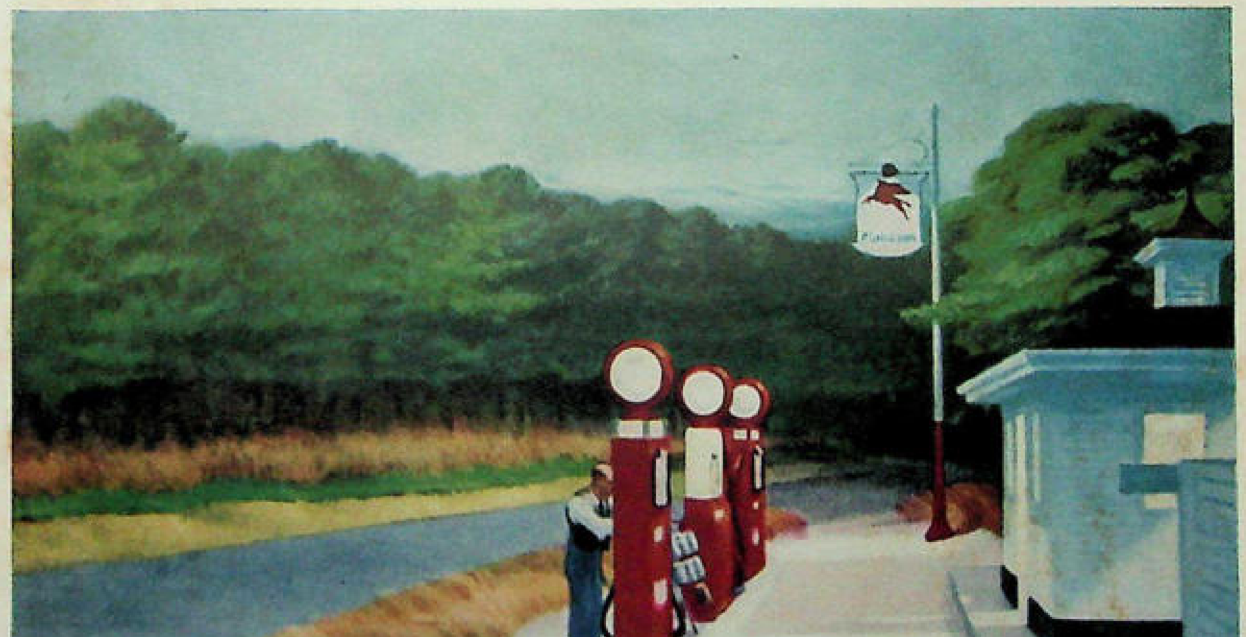
And then he would put that form down, stark, and clean, and humming with his unnamable emotion. He is one of the few Americans in any art who has achieved the virtue and honour of the master.



CAPE COD MORNING, 1950

The Sara Roby Foundation

. . . That American ache made out of
love, desire, fear, and compassion



GAS, 1940 The Museum of Modern Art

Three gas pumps glowing eerily in a rural twilight

SALT-WATER AGRICULTURE

HUGO BOYKO

ARID AND SEMIARID AREAS occupy fully a third of the earth's land surface. Within them are extensive regions of sand dunes, largely in deserts and along the coasts. The dune lands have a total area about twice the size of the U.S.

Much of the sandy soil in arid areas could be made agriculturally productive with irrigation, but relatively little irrigation has been undertaken in such regions because the importation of fresh water is usually too expensive and the use of local water, which is often salty, has been avoided in the belief that few land plants can tolerate much salt.

Experiments have demonstrated, however, that many plants can thrive in sandy soil even when they are irrigated with water that is quite salty. Indeed, under the right conditions irrigation can be done with seawater.

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Melons in the Negev

One of the experiments I shall describe has transformed six acres of land in the Negev desert of Israel from a barren waste into a flourishing garden. As a result of the experiment, other parts of the Negev, irrigated solely with saline water, have been made to produce such crops as melons and tomatoes, and the crops have become valuable articles of export for the desert settlements.

Experiments in India with wheat, in West Germany with a fodder crop, and in Italy with cereals, vegetables, and flowers have similarly yielded encouraging results.

I need scarcely dwell on the potential significance of the work with sandy soil and salty water. Any advance in making sandy soils productive adds to the resources available for the production of food. And any such addition can be a factor in the effort to keep the production of food abreast of the growth of population.

Salty and Desalted Water

In September 1965, 104 investigators representing twenty-three nations and a wide spectrum of disciplines attended a symposium in Rome titled "Irrigation with Highly Saline Water and Seawater with and without Desalination."

The symposium was organized by the World Academy of Art and Science in cooperation with the United Nations Educational, Scientific and Cultural Organization, the National Research Council of Italy, and the Italian Academy of Agriculture. UNESCO also contributed to the financing of the symposium.

A few weeks later, another international symposium was held in Washington. The problem was the same: how to use the saline waters of the oceans. The approach, however, was just the opposite of the one taken in Rome. The participants in Rome were interested in the direct use of saline water and seawater in agriculture; the main subject in Washington was desalination.

Both approaches will doubtless be needed in the campaign against hunger. The water won expensively by desalination will most likely be used in large cities, in industry, and in the cultivation of particularly valuable plants. In any case, the production of desalinated seawater can be expected to save large amounts of fresh water for agriculture.

The direct use of saline water will find its application in converting sandy areas into rich agricultural lands, pastures, and forests. It is with this approach that I shall be concerned here. For more than thirty years, in ecological work in the sandy regions of many nations, I have made it my task to develop the geophysical and biological principles underlying the use of salty water in agriculture. Practical experiments to test the principles were first undertaken in 1949, when I was ecological adviser to the Ministry of Agriculture of Israel and my wife, Elisabeth Boyko, was horticulturist for the ministry.

The basic principle of saline agriculture is that salty water can be used only on sand and sandy or gravelly soil if the objective is to grow plants on an economic basis. In other kinds of soil the salt soon accumulates, destroying the plants and making the soil unfit for agriculture. In sand, however, such accumulation does not occur. Moreover, one can help the sand rid itself of salt by growing plants that tend to accumulate salt. In this way one achieves what could be called biological desalination.

Four Principles

Underlying the basic postulate that saline agriculture is restricted to a sandy or gravelly environment are a number of other principles. Four of them have long been known, but their applicability to irrigation with highly saline water and seawater has been overlooked because the other principles were not obvious. The four familiar principles arise from the permeability of a soil consisting mainly of sand or gravel compared to the permeability of the more usual type of agricultural soil, which contains a fairly high percentage of clay and silt particles.

The first principle is that water percolates quickly through sand and gravel.

The second is that the root systems of plants are well aerated in such an environment. The reason is that sand and gravel afford more space between particles of soil than clay and silt do.

The third principle is that sodium chloride and magnesium chloride—the components of salt water that are most harmful to plants—have little opportunity to affect plants in sand or gravel. Both are easily soluble, and in addition they are among the first components of salt water to be washed down into deeper layers when soil is watered.

If the movement of the solution is upward because of evaporation or capillary action, sodium chloride and magnesium chloride tend to form crystals on the surface of sand or gravel rather than to remain below the surface, where they can harm plants. In either case the sodium chloride and magnesium chloride are not taken up in dangerous amounts by the selective feeder roots, or root hairs, of plants in sand and gravel.

The fourth principle is that the sodium ion is not adsorbed on particles of sand, whereas it is easily adsorbed on particles of clay. The adsorption of sodium on particles of clay is the main cause of salination in normal agricultural soils. Clay particles swell when they adsorb sodium. As a result, the soil becomes impermeable, salts accumulate, and plants die.

Partial Root Contact

Of the newer principles, the first is what I call partial root contact. It is based on the fact that in sand the space between particles is usually many times larger than the feeder root of a plant can occupy. The concept can best be explained by following the events that occur when plants on a sandy plot are irrigated with salty water.

Immediately after irrigation, the tiny feeder roots of the plant—200 to 500 of them per square millimetre of root—are entirely immersed in the water. Most plants can stand only a brief immersion in salty water.

In sand, however, the water percolates quickly, so that soon the surface of the feeder roots is only partly in contact with the salty water. By then the feeder roots are also partly in contact with air. The oxygen in the air considerably increases the plant's activity and available energy, so that the plant is more able to be selective in the uptake of the nutrient components of the seawater.

The air surrounding the feeder roots remains moist even after percolation. From time to time the moisture condenses, mostly in the cool morning hours. Condensation occurs particularly in continental deserts, where the temperature differences both between night and day and between different layers of sand are substantial.

Subterranean Dew and Viscosity

The condensation is decisive in saline agriculture, because it produces a subterranean dew. The dew, of course, is fresh water. Hence the roots can have a source of fresh water even when chemical analysis of the soil reveals the presence of considerable salt. Any salt thus revealed is adhering to the particles of sand, and the feeder roots are either not in contact with it or only in partial contact. The next irrigation, whether it is done the following day or several months later, washes away any possible accumulation of sodium chloride and magnesium chloride. This, then, is the second of the newer principles, which I call the principle of subterranean dew.

The third principle is closely related to the second and is called the viscosity principle. The film of brine remaining on the surface of feeder roots and the surface of sand particles after the percolation of saline irrigation water is about .000001 millimetre thick. The viscosity of saline water is such that a film so thin is readily broken. Hence the film on the sand particles and the feeder roots cannot be coherent and leaves enough space for aeration.

Biological Desalination

I have already touched on the fourth principle, which is biological desalination. It lies in the ability of certain plants to accumulate salt in their green parts. With each harvest of the crops the salt content of the soil is diminished.

Many investigators have been sceptical of this process. I had long suspected that biological desalination would be effective, and eventually I was able to demonstrate its effectiveness in an experiment my wife and I conducted south of the Dead Sea. The experiment showed that the soil's content of both sodium and chlorine was reduced significantly by two harvests of *Juncus maritimus,* a rush plant, grown on a sandy field and irrigated with saline water.

The Balance of Ionic Environment

For the next principle I am indebted to Hugo Heimann of the Israel Institute of Technology. Heimann became curious about contradictions between farming experience and the widely held view that the damage to plants from salt arises from the excessive osmotic pressure connected with high concentrations of salt.

The view is evidently attributable to the experimental procedures followed by investigators in this field. They grew plants in a culture solution, adding salts one at a time. The concentrations and the correlated osmotic pressures were noted at the point where the plants began to show damage. The damage always appeared at about the same osmotic pressure, regardless of the type of salt used. The experimenters concluded that it resulted from high osmotic pressure, which made it difficult for the plants to take up water.

Heimann pointed out that such experiments failed to duplicate conditions in nature. All organized systems of living cells in an aqueous environment charged with the ions characteristic of salts owe their well-being to a balanced ratio between the ions. Plants in physiologically balanced solutions can stand much higher osmotic pressures than plants in a solution of a single salt or in unbalanced mixtures.

Such findings led Heimann to the principle he has termed the balance of the ionic environment. It holds that with the proper ratio of ions plants can be grown at surprisingly high levels of salinity. Indeed, seawater has a singularly well-balanced ratio of salts, to which all forms of life were once adapted. It is hardly surprising that plants irrigated with seawater in sand show a higher tolerance for salt than plants irrigated with any other water of the same salt concentration.

Enhanced Vitality

Another principle I have called enhanced vitality. A better term, "enhanced vigour," has been suggested to me by Pierre Dansereau, curator of ecology at the New York Botanical Garden. In German, my native language, I would say *lebenskraft,* which is literally translated as "life strength." At any rate, the principle suggested itself after some experiments we carried out at the Negev Institute for Arid Zone Research in Beersheba.

Five species of plants that had been irrigated with various kinds of water were withdrawn from irrigation and left untended in that arid region. Plants that had been irrigated with seawater and various dilutions of seawater survived two long dry periods of about nine months each better than control plants that had been irrigated with fresh water.

The most vigorous were those irrigated with seawater of the Caspian Sea type, containing between 1 per cent and 1.3 per cent total dissolved solids, and of the North Sea type, containing between 2 per cent and 2.7 per cent. The reason for enhanced vigour may be that the salty waters provided a larger quantity of nutrients than the fresh water.

Global Salt Circulation

The final principle I shall put forward is the principle of global salt circulation. One can perceive this principle most readily by considering the state of affairs along a seacoast. There large quantities of salt are constantly being deposited on the land by wind blowing in from the sea. At the same time, rainfall, runoff, percolation, and the flow of water underground work to carry the salt back to the sea. The result is that coastal regions do not accumulate deposits of salt.

The same factors are at work, although more slowly, in inland areas. The principle indicates that no dangerous accumulation of salt is to be feared on sandy soil irrigated with saline water. Indeed, the principle accounts for the fact that salination of normal agricultural soils can be overcome in regions of regular rainfall by occasionally letting land lie fallow and by providing appropriate drainage. The Jewish religion's *smittah* year, which is a fallow year every seven years, was probably introduced to allow a season's rains to wash away the salts deposited by irrigation.

All these principles figure in the success of the various experiments that have been conducted in saline agriculture. The first was "The Desert Garden of Eilat," laid out and planted by my wife starting in 1949. This is the six-acre tract in the Negev desert to which I have referred. We were given the task of introducing vegetation in this barren area, where the building of a Red Sea port under the ancient name of Eilat was planned because the Suez Canal was closed to Israel.

A Desert Garden

The climatic features of the area include meagre rain (about an inch a year, falling erratically during the winter), strong winds, and high temperatures. At first the only water available for irrigation was highly saline water from a well eleven miles to the north; we had to bring the water to the garden by command car over the roadless desert. Later we were able to use other water, also saline, which was brought to Eilat by pipeline from an oasis twenty-six miles to the north. The water from the oasis had a total salt content fluctuating between .2 and .6 per cent; the latter percentage corresponds to that of brackish water from the Baltic Sea.

We deliberately chose the gravel hills of the region because of the good percolation there. The soil had a composition of 96.3 per cent stones and sand, 2.7 per cent silt, and 1 per cent clay. In this soil and with such water we have successfully grown some 180 species of plants.

Most of them are not halophytic, or salt-tolerant, under normal conditions. Among them are a blue-leaved acacia, potentially useful as wood or fodder; a sisal that could yield fibre; a silk oak capable of producing hardwood; mulberry, which yields both fruit and leaves to feed silkworms; an oleander that is ornamental and has medicinal uses; and a pomegranate that yields fruit and is also useful in tanning and medicine.

Another of the species is the *Juncus maritimus* that I mentioned in connection with biological desalination. This wild rush, which we cultivated for the first time, could be developed as a raw material for a printing paper of high quality. After the material had been used successfully by a paper mill in Scotland, an American group undertook to produce the crop commercially on a 2,000-acre tract in the sandy desert of Wadi Araba in Israel. The project, in which saline irrigation will be used, is now in the planting stage.

Direct Seawater Irrigation

Our results in the garden at Eilat led us to undertake some experiments in direct irrigation with seawater. Our objectives were to ascertain the limits of salt tolerance in certain plants and to test experimentally the principles I have described. Our technique was to grow plants in bottomless barrels placed on sand and filled with sand.

We irrigated with four types of seawater: the Caspian Sea type, the North Sea type, an oceanic concentration containing between a 3 and a 4 per cent total of dissolved solids, and an eastern Mediterranean or Red Sea type with a 4 to 5 per cent total of dissolved solids. For control plants we used fresh water.

The experiments involved ten species of plants. Four of them survived irrigation with seawater of the oceanic type, containing more than a 3 per cent total of dissolved solids.

One was *Agropyrum junceum*, a dune grass that is sometimes called wheat grass. It is excellent for holding sand in place and also for animal fodder. Moreover, it is suitable for hybridization with wheat and hence opens up the possibility of breeding salt-tolerant cereals. Another plant was *Calotropis procera*, a desert succulent with many possible uses in the textile and chemical industries. The third was *Hordeum vulgare*, a barley. We used a strongly drought-resistant Bedouin strain, planting seeds from plants we had grown ourselves in highly saline water. The fourth was *Juncus maritimus*.

Our results indicated that the other six species would succeed economically only if they were irrigated with saline water no more concentrated than the Caspian Sea type (1 to 1.3 per cent).

The six included two species of *Agava*, known on the world market as a source of rope fibre; *Rottboellia fasciculata*, a fodder grass; *Ammophila arenaria*, a beach grass used in many countries to prevent the shifting of dunes; another species of *Juncus*; and finally *Beta vulgaris*, the sugar beet, which is known to be salt-tolerant but which had not been grown in water as salty as the water we used for irrigating it.

International Experiments

After obtaining these results, I asked a number of investigators in other countries if they would be interested in undertaking such experiments. Similar projects have been successfully started with seawater in

India, Spain, and West Germany, and with brackish water in Israel, Italy, Spain, Tunisia, Morocco, Sweden, the U.S., and the U.S.S.R. The number of species of plants grown in highly saline water from the sea or from underground sources runs to many dozens.

We have taken only the first tentative steps in this new direction. An extensive international effort will be needed if deserts are to be transformed into agricultural areas by saline irrigation. The participants in the symposium in Rome formulated an appeal for such an effort, adopting a resolution declaring their firm belief "that results already achieved by irrigation with highly saline water indicate clearly that those areas at least where such a water supply is available can be rendered capable of crop production."

I foresee the possibility that the efforts now under way to achieve economical and large-scale desalination of seawater will contribute significantly to the success of saline agriculture. Pumping water from the sea to inland deserts for irrigation will require large amounts of energy. Big nuclear reactors for desalination might serve a dual purpose: supplying fresh water for cities and industries and at the same time generating electricity to pump salt water from the sea or from desert aquifers for use in saline agriculture.

Another possibility lies in the use of electrolytic methods of desalination. Using only a fraction of the energy required for other methods, this technique can yield water of a concentration too salty for drinking but excellent for growing plants. Whatever the approach to saline agriculture, success on a large scale will be achieved only if research in this new field is adequately supported.

HUGO BOYKO *is President of the World Academy of Art and Science. An ecologist by training and experience, he retired in 1961 as ecological adviser to the Government of Israel but has continued his activity in this area. He received a doctorate in botany and zoology from the University of Vienna in 1930 and taught there for five years before moving to Palestine.*

THE AMERICAN NEGRO WRITER

AN INTERVIEW WITH RALPH ELLISON

The Interviewers were James Thompson,
Lennox Raphael, and Steve Cannon

INTERVIEWERS: *Do you think that one of the faults of the Negro writer is that he is unable to come to terms with the human condition—particularly that of the Negro in America?*

ELLISON: The conception of the human condition varies for each and every writer just as it does for each and every individual. Each must live within the isolation of his own senses, dreams, and memories; each must die his own death.

Notes on the Interview

Thomas C. Dent of New Orleans, founding editor of the magazine Umbra, *writes:*

None of us had known or even seen Ralph Ellison when we asked to talk

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For the writer the problem is to project his own conception eloquently and artistically. Like all good artists, he stakes his talent against the world. But if a Negro writer is going to listen to sociologists—as too many of us do—who tell us that Negro life is in keeping with certain sociological theories, he is in trouble because he will have abandoned his task before he begins.

If he accepts the cliches to the effect that the Negro family is usually a broken family, that it is matriarchal in form and that the mother dominates and castrates the males, if he believes that Negro males are having troubles with their sexuality, or that Harlem is a "Negro ghetto," he'll never see the people of whom he wishes to write. He'll never learn to use his own eyes and his own heart, and he'll never master the art of fiction.

I don't deny that sociological formulas are drawn from life, but I do deny that they define the complexity of Harlem. They only abstract it and reduce it to proportions which the sociologists can manage. I simply don't recognize Harlem in them. And I certainly don't recog-

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with him. We also knew that he was not aware of our workshop of young black writers on the Lower East Side in New York City, or of our magazine, Umbra, *which contained our work and the work of other young writers sharply at odds with white America.*

A character in his novel was the source of numerous inside jokes which we delighted in springing on unaware outsiders. We would say, "Man, look at that Rinehart," *or, "The Rinehart in that cat is* too much," *and if you hadn't read* Invisible Man *and hadn't loved it you were just out of luck. It is only natural, then, that we looked upon a discussion with Ellison with unusual anticipation.*

Ellison greeted us courteously, but seemed extremely reserved. We commented on the stunning view of the Hudson River from his apartment on Riverside Drive. It looked like a quiet place, where orderly things happen. He looked like any professor or lawyer, only, in his polo shirt, more relaxed.

He was then, in 1965, a man of about fifty, slightly balding but, I thought, surprisingly youthful. He answered our questions with short, well-formed statements; everything he said had the ring of knowledge, of scholarship.

The second interview followed a few months later. We could not get our tape machine working, so Ellison, who is facile at these things, worked it for us. We talked for almost an hour past our allotted time.

The product of this effort was an absolutely inadequate tape, whereupon we requested a third interview, at which I was not present but which must have lasted, from the length of the transcription, three hours. This is the one you will read. It was both ours and Ellison's firm hope that the interview could be published in Umbra, *a hope not realized because the group has since dissolved.*

nize the people of Harlem whom I know. Which is by no means to deny the ruggedness of life there, nor the hardship, the poverty, the sordidness, the filth.

But there is something else in Harlem, something subjective, wilful, and complexly and compellingly human. It is "that something else" that challenges the sociologists who ignore it, and the society which would deny its existence. It is that "something else" which makes for our strength, which makes for our endurance and our promise. This is the proper subject for the Negro American writer.

He doesn't have to spend the tedious time required to write novels simply to repeat what the sociologists and certain white intellectuals are broadcasting. If he does this, he'll not only go begging, but worse, he'll lie to his people, discourage their interest in literature, and emasculate his own talent.

One of the saddest sights currently to be seen is that provided by one of our most "angry" Negro writers who has allowed himself to be enslaved by his acceptance of negative sociological data. He rants and raves against society, but he's actually one of the safest Negroes on the scene. Because he challenges nothing, he can only shout "'taint" to some abstract white "'tis," countering lies with lies. The human condition? He thinks that white folks have ruled Negroes out of it.

Yes, we do have a terrible time in dealing with the human condition.

One critic has said that the Jewish writer went through a similar period. I think he was trying to say that the Negro writer would very soon get over this and become the major strength in American literature.

I hope he's right, but I wouldn't want to make a prediction. I think, however, that the parallel is much too facile.

Jewish writers are more familiar with literature as a medium of expression. Their history provides for a close identification with writers who were, and are, Jewish even when they wrote or write in languages other than Yiddish or Hebrew; and this even when that identification rests simply on a shared religious tradition and hardly on any other cultural ground whatsoever. It reminds me of our attempts to claim Pushkin and Dumas as Negroes.

By contrast, neither Negro American expression nor religion has been primarily literary. We are by no means, as is said of the Jews, "people of the Book"—not that I see this as a matter for regret. For we have a wider freedom of selection. We took much from the ancient Hebrws and we do share, through Christinity, the values embodied in the literature of much of the world. But our expression has been oral as against "literary."

And when it comes to the question of identifying those writers who have shaped American literature—the framers of the Declaration, the Constitution, and Lincoln excepted—we tend to project racial categories into the areas of artistic technique, form, insight; *areas where race has no proper place.* We seem to forget that one can identify with what a writer has written, with its form, its manner, techniques, while *rejecting* the writer's beliefs, his prejudices, philosophy, values.

The Jewish American writers have, on the other hand, identified with Eliot, Pound, Hemingway, and Joyce *as writers* while questioning and even rejecting their various attitudes towards the Jews, towards religion, politics, and many other matters. They have taken possession of that which they could use from such writers and converted it to express their own personal and group sense of reality; they have used it to express their own definitions of the American experience.

But we Negro writers seem seldom to have grasped this process of acculturation. Too often we've been in such haste to express our anger and our pain as to allow the single tree of race to obscure our view of the magic forest of art.

If Negro writers ever become the mainstay of American literature, it will be because they have learned their craft and used the intensity, emotional and political, of their group experience to express a greater area of American experience than the writers of other groups.

What the Jewish American writer had to learn before he could find his place was the American-ness of his experience. He had to see himself as American and project his Jewish experience as an experience unfolding within this pluralistic society. When this was done, it was possible to project this variant of the American experience as a metaphor for the whole.

However, I don't believe that any one group can speak for the whole experience—which isn't, perhaps, desirable. They can only reduce it to metaphor, and no one has yet forged a metaphor rich enough to reduce American diversity to form.

Certainly the current group of Jewish writers—among whom there are several I admire—do not speak adequately for me or for Negroes generally. But during the 'thirties Jewish writing, although more skilful, was as provincial as most Negro American writing is today. That's the way it was and we don't solve problems of history by running away from them.

And what I mean by provincial is an inability to see beyond the confines, the constrictions, placed upon Jewish life by its religious and cultural differences with the larger society; by its being basically the experience of an immigrant people who were, by and large, far less cultured than their more representative members.

It took long years of living in this country, long years of being a unique part of American society and discovering that they were not *forced* to live on the East Side, of discovering that there *was* a place for the Jews in this society which did not depend upon their losing their group identity.

They discovered that they possessed something precious to bring to the broader American culture, on the lowest as well as on the highest levels of human activity, and that it would have a creative impact far beyond the Jewish community. Many had not only to learn the language but, more wonderful, they had to discover that the Jewish American idiom would lend a whole new dimension to the American language.

How do the situations of the Negro and Jewish writers differ?

I think that Negro Americans as *writers* run into certain problems which the Jews don't have. One is that our lives, since slavery, have been described mainly in terms of our political, economic, and social conditions as measured by outside norms, seldom in terms of our *own* sense of life or our *own* sense of values gained from our *own* unique American experience. Nobody bothered to ask Negroes how they felt about their own lives.

Southern whites used to tell the joke about the white employer who said to a Negro worker, "You're a good hand and I appreciate you. You make my business go much better. *But*, although you work well every day, I can never get you to work on Saturday night, even if I offer to pay you overtime. Why is this?"

Of course, you know the answer: "If you could just be a Negro one Saturday night you'd never want to be a white man again."

Now this is a rather facile joke, and a white Southern joke on Negroes; nevertheless, it does indicate an awareness that there is an internality to Negro American life, that it possesses its own attractions and its own mystery.

The pathetic element in the history of Negro American writing is that it started out by reflecting the styles popular at the time, styles uninterested in the human complexity of Negroes. These were the styles of dialect humour transfused into literature from the *white* stereotype of the Negro minstrel tradition. This was Dunbar and Chestnutt. It helped them get published, but it got in the way of their subject matter and their goal of depicting Negro personality. And these were times when white publishers and the white reading public only wished to encounter certain types of Negroes in poetry and fiction.

Even so, it was not a Negro writer who created the most memorable character in this tradition, but Mark Twain, whose Nigger Jim is, I think, one of the important characters in our literature. Nevertheless, Jim is flawed by his relationship to the minstrel tradition. Twain's drawing of Jim reflected the popular culture of the 1880's, just as the Negro characters you get in much of current fiction are influenced by the stereotypes presented by the movies and by sociology—those even more powerful media of popular culture.

The Negro writers who appeared during the 1920's wished to protest discrimination; some wished to show off their high regard for respectability; they wished to express their new awareness of the African background, and, as Americans trying to win a place as writers, they were drawn to the going style of literary decadence represented by Carl Van Vechten.

This was an extremely ironic development for a group whose written literature was still in its infancy—as incongruous as the notion of a decadent baby. More ironic, this was a time when Eliot, Pound, Hemingway, and Stein were really tearing American literature apart and reshaping its values and its styles in the "revolution of the word."

We always picked the moribund style. We took to dialect at a time when *Benito Cereno, Moby Dick,* and *Leaves of Grass* were at hand to point a more viable direction for a people whose demands were revolutionary, and whose humanity had been badly distorted by the accepted styles.

During the 1930's we were drawn, for more understandable reasons, to the theories of proletarian literature. So during the twenties we had wanted to be fashionable and this insured, even more effectively than the approaching Depression, the failure of the "New Negro" movement. We fell into that old trap by which the segregated segregate themselves by trying to turn whatever the whites said against us into its opposite.

If they said Negroes love fried chicken (and why shouldn't we?), we replied, "We *hate* fried chicken." If they said "Negroes have no normal family life," we replied, "We have a staider, more refined, more puritanical family life than you."

With few exceptions, our energies as writers have too often been focused upon outside definitions of reality, and we've used literature for racial polemics rather than as an agency through which we might define experience as we ourselves have seen and felt it.

Indeed, it's very difficult, even today, for younger Negro writers to overcome these negative tendencies. Far too often they have been taught to think in Jim Crow terms: "I can do thus and so—not because human beings express themselves in these ways, but because such and such a *Negro* dared to do so." And if no other Negro has involved himself in the activity in question, then we tend to draw back and doubt that we might do well even as pioneers.

And so the younger writer tries to use the models of other Negro writers rather than the best writers regardless of race or class—completely ignoring the fact that all other writers try to pattern themselves on the achievements of the greatest writers, regardless of who they were.

This is how the Jim Crow experience has gotten into our attitudes and set us back. We have been exiled in our own land and, as for our efforts at writing, we have been little better than silent because we have not been cunning.

I find this rather astounding, because I feel that Negro American folklore is powerful, wonderful, and universal. And it became so by expressing a people who were assertive, eclectic, and irreverent before all the oral and written literature that came within its grasp. It took what it needed to express its sense of life and rejected what it couldn't use.

But what we've achieved in folklore has seldom been achieved in the novel, the short story, or poetry. In folklore we tell what Negro experience really is. We back away from the chaos of experience and from ourselves, and we depict the humour as well as the horror of our living. We project Negro life in a metaphysical perspective and we have seen it with a complexity of vision that seldom gets into our writing.

One reason for this lies in the poor teaching common to our schools and colleges, but the main failure lies, I think, in our simple-minded attempt to reduce fiction to a mere protest.

I notice that you mentioned, quite some time ago, that you learned a lot of skill under Richard Wright. Do you find that he gauged his craft to the great writers of the world?

He certainly tried to do so. He was constantly reading the great masters, just as he read the philosophers, the political theorists, the social and literary critics. He did not limit himself in the manner that many Negro writers currently limit themselves. And he encouraged other writers—who usually rebuffed him—to become conscious craftsmen, to plunge into the world of conscious literature and take their chances unafraid. He felt this to be one of the few areas in which Negroes could be as free and as equal as their minds and talents would allow. And like a good Negro athlete, he believed in his ability to compete.

In 1940 he was well aware that *Native Son* was being published at a time when *The Grapes of Wrath* and *For Whom the Bell Tolls* would be his main competition. Nevertheless, he looked towards publication day nervously but eagerly. He wished to be among the most advanced artists and was willing to run the risk required.

Earlier you referred to the minstrel as a stereotype. Is it possible to treat such stereotypes as Sambo, or even Stepin Fetchit, as archetypes or motives instead of using them in the usual format?

In fiction stereotypes partake of archetypes. And to the extent that stereotypes point to something basically human, they overlap. In literary form stereotypes function, as do other forms of characterization, as motives. But the point is that they act as *imposed* motives which treat reality and character arbitrarily. Thus to redeem them as you suggest, the writer is challenged to reveal the archetypical truth hidden within the stereotype.

Here archetypes are embodiments of abiding patterns of human existence which underlie racial, cultural, and religious differences. They are, in their basic humanity, timeless and raceless; while stereotypes are malicious reductions of human complexity which seize upon such characteristics as colour, the shape of a nose, an accent, hair texture, and convert them into emblems which render it unnecessary for the prejudiced individual to confront the humanity of those upon whom the stereotype has been imposed.

So in answer to your question as to whether it is possible to use such stereotypes as Sambo and Stepin Fetchit, I'd say that it depends upon the writer's vision. If I should use such stereotypes in fiction, I'd have to reveal their archetypical aspects because my own awareness *of,* and identification *with,* the human complexity which they deny would compel me to transform them into something more recognizably human. To do less would be to reveal a brutalization of my own sense of human personality.

On the other hand, consider Faulkner. When Lucas Beauchamp first appears in Faulkner's work he appears as a stereotype, but as he was developed throughout the successive novels, he became one of Faulkner's highest representatives of human quality.

Or again, when Ned in the last book, *The Reivers,* is seen superficially he appears to be the usual head-scratching, eye-rolling Negro stereotype. But beneath this mask, Ned is a version of John, the archetypical Negro slave of Negro folklore, who always outwits and outtalks his master. Ned masterminds the action of the novel and in so doing he is revealed as Faulkner's own persona. He is the artist disguised as Negro rogue and schemer.

This suggests that attempts to approach stereotypes strictly in racial terms is, for the Negro writer, very dangerous. We must first question what they conceal, otherwise we place ourselves in the position of rejecting the basic truth concealed in the stereotype along with its obvious falsehood. Truth is much too precious for that.

What's inside you, brother; what's your heart like? What are your real values? What human qualities are hidden beneath your idiom?

Do you think the reason for this is that Negroes in the U.S. are caught, if they allow themselves to be, in a bind? Do you think that the Negro writer then is forced, sometimes, to go away to gain a perspective? Or can he transcend his situation by remaining in it?

Well, again, I say that the individual must do that which is necessary for him individually. However, I also say that it is not objectively necessary to go away. He might solve his problem by leaving the Village or by leaving Harlem. Harlem has always been a difficult place for Negroes to gain perspective on the national experience, because it has sponsored a false sense of freedom. It has also sponsored a false sense of superiority regarding Negroes who live elsewhere.

One frees oneself, as a writer, by actually going in and trying to get the shape of experience *from the writer's perspective.* I see no other way. But this, unfortunately, requires a writer's type of memory—which is strongly emotional and associative—and a certain amount of technique.

You must pay the Negro community the respect of trying to see it through the enrichening perspectives provided by great literature—using your own intelligence to make up for the differences in economy, in class background, in education, in conscious culture, in manners, and in attitude towards values. Human beings are basically the same and differ mainly in life style. Here revelation is called for, not argument.

How do you mean, "argument"?

I mean that it's futile to argue our humanity with those who wilfully refuse to recognize it, when art can reveal in its own terms more truth while providing pleasure, insight, and, for Negro readers at least, affirmation and a sense of direction. We must assert our own sense of values, beginning with the given and the irrevocable, with the question of heroism and slavery.

Contrary to some, I feel that our experience as a people involves a great deal of heroism. From one perspective, slavery was horrible and brutalizing. It is said that "Those Africans were enslaved, they died in the 'middle passage,' they were abused, their families were separated, they were whipped, they were raped, ravaged, and emasculated." And the Negro writer is tempted to agree. "Yes! God damn it, wasn't that a horrible thing!"

And he sometimes agrees to the next step, which holds that slaves had very little humanity because slavery destroyed it for them and their descendants.

But despite the historical past and the injustices of the present, there is from *my* perspective something further to say. I have to *affirm* my forefathers and *must* affirm my parents or be reduced in my own mind to a white man's inadequate—even if unprejudiced—conception of human complexity. Yes, and I must affirm those unknown people who sacrificed for me.

I'm speaking of those Negro Americans who never knew that a Ralph Ellison might exist, but who by living their own lives and refusing to be destroyed by social injustice and white supremacy, real or illusory, made it possible for me to live my own life with meaning. I am forced to look at these people and upon the history of life in the U.S. and conclude that there is another reality behind the appearance of reality which they would force upon us as truth.

Any people who could endure all of that brutalization and keep together, who could undergo such dismemberment and resuscitate itself, and endure until it could take the initiative in achieving its own freedom is obviously more than the sum of its brutalization. Seen in this perspective, theirs has been one of the great human experiences and one of the great triumphs of the human spirit in modern times. In fact, in the history of the world.

Some might say to your argument that you are expressing your own hopes and aspirations for Negroes, rather than reporting historical reality.

But hope and aspiration are indeed important aspects of the reality of Negro American history, no less than that of others. Besides, it's one of our roles as writers to remind ourselves of such matters, just as it is to make assertions tempered by the things of the spirit. It might sound arrogant to say so, but writers, poets, help create or reveal hidden realities by asserting their existence. Otherwise they might as well become social scientists.

I do not find it a strain to point to the heroic component of our experience, for these seem to me truths which we have long lived by but which we must now recognize consciously. And I am not denying the negative things which have happened to us and which continue to happen, but I am compelled to reject all condescending, paternalistic interpretations of Negro American life and personality from whatever quarters they come, whether white or Negro. Such interpretations would take the negative details of our existence and make them the whole of our life and personality.

But literature teaches us that mankind has always defined itself *against* the negatives thrown it by both society and the universe. It is human will, human hope, and human effort which make the difference. Let's not forget that the great tragedies not only treat of negative matters, of violence, brutalities, defeats, but they treat them within a context of man's will to act, to challenge reality and to snatch triumph from the teeth of destruction.

You said it's unnecessary for one to leave the country to get a perspective. We notice in some of your older writings that after having come back from Rome you went to New Hampshire and wrote Invisible Man.

No, I started *Invisible Man*—that novel about a man characterized by what the sociologists term "high visibility"—in Vermont, during the few months before the war came to an end. I was cooking on merchant ships at the time and had been given shore leave, so I accepted the invitation of a friend and went there. I had no idea that I was going to start a book.

But maybe I should add this: It isn't *where* you are that's important, but what you seek to depict, and most important of all is perspective. And the main perspective through which a writer looks at experience is that provided by literature—just as the perspective through which a physician looks at the human body is the discipline of medicine; an accumulation of techniques, insights, instruments, and processes which have been slowly developed over long periods of time.

So when I look at my material I'm not looking at it simply through the concepts of sociology—and I do know something about sociology. I look at it through literature: English, French, Spanish, Russian—

especially nineteenth-century Russian literature. And Irish literature, Joyce and Yeats, and through the international literature of the 'twenties. And through the perspective of folklore.

When I listen to a folk story I'm looking for what it conceals as well as what it states. I read it with the same fulness of attention I bring to *Finnegans Wake* or the *Sound and the Fury* because I'm eager to discover what it has to say to me personally.

Living abroad is necessary for those Negro writers who feel that they've been too cramped here and who wish to discover how it feels to live free of racial restrictions. This is valid.

I should also say this: I came to New York from Tuskegee with the intention of going back to finish college. I came up to work. I didn't earn the money so I stayed. But while I lived at the Harlem YMCA I did *not* come to New York to live in Harlem—even though I thought of Harlem as a romantic place.

I'm pointing to an attitude of mind; I was not exchanging Southern segregation for Northern segregation, but seeking a wider world of opportunity. And, most of all, the excitement and impersonality of a great city. I wanted room in which to discover who I was.

So one of the first things I had to do was to enter places from which I was afraid I might be rejected. I had to confront my own fears of the unknown. I told myself, "Well, I might be hurt, but I won't dodge until they throw a punch." Over and over again, I found that it was just this attitude (which finally became unself-consciously non-defensive) which made the difference between my being accepted or rejected, and this during a time when many places practised discrimination.

This requires submitting oneself to personal ordeals, especially if one grew up in the South and Southwest. Nor is this because you are afraid of white people so much as a matter of not wishing to be rebuffed.

What do you consider the Negro writer's responsibility to American literature as a whole?

The writer, *any* American writer, becomes basically responsible for the health of American literature the moment he starts writing seriously. And this regardless of his race or religious background. This is no arbitrary matter.

Just as there is implicit in the act of voting the responsibility of helping to govern, there is implicit in the act of writing a responsibility for the quality of the American language—its accuracy, its vividness, its simplicity, its expressiveness—and responsibility for preserving and extending the quality of the literature.

How do you regard President Johnson's statement that "Art is not a political weapon"? He made it at the White House in 1965.

I don't think you've got it complete; let's read it. He said, "Your art is not a political weapon, yet much of what you do is profoundly political, for you seek out the common pleasures and visions, the terrors and cruelties of man's day on this planet. And I would hope you would help dissolve the barriers of hatred and ignorance which are the source of so much of our pain and danger."

You think that he is far ahead of many people?

He is far ahead of most of the intellectuals—especially those Northern liberals who have become, in the name of the highest motives, the new apologists for segregation. President Johnson's speech at Howard University spelled out the meaning of full integration for Negroes in a way that no one, no President, not Lincoln nor Roosevelt, no matter how much we loved and respected them, has ever done before. There was no hedging in it, no escape clauses.

Do you think that writers, generally, band together for the added stimulation or appreciation that they need? Or do you think that it is a lack, on their part, of a certain kind of intelligence?

It depends upon their reason for coming together. I think it very important for writers to come together during the early stages of their careers, especially during the stage when they are learning their techniques, when they are struggling for that initial fund of knowledge upon which they form their tastes and upon which artistic choices are made. And it's good for artists to get together to eat and drink—for social activities. But when they get together in a political effort it usually turns out that they are being manipulated by a person or group of persons who are not particularly interested in art.

Do you see a parallel between the 'thirties and the 'sixties, with this new resurgence of young Negro writers, with this turning towards Africa and, shall we say again, the resurgence of a particular kind of provincialism in New Negro writing?

I think that we should be very careful in drawing parallels. This is a period of affluence as against the poverty of the Depression. During that period a lot of Negroes had the opportunity to work in WPA at clerical jobs and so on, so that for us the Depression represented in many ways a lunge forward. We were beneficiaries of the government's efforts towards national recovery.

Thanks to the national chaos, we found new places for ourselves. Today, our lunges forward are facilitated by laws designed precisely to correct our condition as a group—by laws which start at the very top and which have the Supreme Court, the Executive branch, and Congress behind them. This is quite different from the 'thirties.

As to Africa, I think it probably true that more of the present crop of writers are concerned with Africa than was true during that period. In fact, quite a number who were concerned with communism are now fervid black nationalists.

Oddly enough, however, their way of writing hasn't changed significantly. Of course, I might not know what I'm talking about, but there seem to be fewer Negro writers around who seem publishable at the moment. Surely there are fewer than the more favourable circumstances of today warrant.

Some people think that you should play a larger part in civil rights.... This is similar to Sartre's rebuttal to Camus in Situations, *this idea of "engagement."*

Well, I'm no Camus and they're no Sartres. But literature draws upon much deeper and much more slowly changing centres of the human personality than does politics. It draws mainly from literature itself, and upon the human experience which has abided long enough to have become organized and given significance through literature. I think that revolutionary political movements move much too rapidly to be treated as the subjects for literature in themselves.

When Malraux drew upon revolution as the settings for his novels he drew for his real themes upon much deeper levels of his characters' consciousness than their concern with Marxism; and it is to these deeper concerns, to the realm of tragedy, that they turned when facing death.

Besides, political movements arise and extend themselves, achieve themselves, through fostering myths which interpret their actions and their goals. And if you tell the truth about a politician, you're always going to encounter contradiction and barefaced lies—especially when you're dealing with left-wing politicians.

If I were to write an account of the swings and twitches of the U.S.

Communist line during the 'thirties and the 'forties, it would be a very revealing account, but I wouldn't attempt to do this in terms of fiction. It would have to be done in terms of political science, reportage.

You would have to look up their positions, chart their moves, look at the directives handed down by the Communist International—whatever the overall body was called. And you would be in a muck and a mire of dead and futile activity—much of which had little to do with their ultimate goals or with American reality. They fostered the myth that communism was twentieth-century Americanism, but to be a twentieth-century American meant, in their thinking, that you had to be more Russian than American and less Negro than either. That's how they lost the Negroes.

The Communists recognized no plurality of interests and were really responding to the necessities of Soviet foreign policy, and when the war came, Negroes got caught and were made expedient in the shifting of policy. Just as Negroes who fool around with them today are going to get caught in the next turn of the screw.

Do you think there is too much pressure on the Negro writer to play the role of politician, instead of mastering his craft and acting as a professional writer?

Yes, and if he doesn't resist such pressure he's in a bad way. Because someone is always going to tell you that you can't write, and then they tell you *what* to write.

Resisting these warnings is important. And if you deflect this particular pressure, there will always be people who will tell you that you have no talent.

We understand the psychological dynamics of it. If a Negro threatens to succeed in a field outside the usual areas of Negro professionals, others feel challenged. It's a protective reaction, a heritage from slavery. He has a nerve to do that—I don't have the nerve to do that; what does he think he's doing, endangering the whole group? Nevertheless, the writer must endure the agony imposed by this group pessimism.

Why do you think this exists?

Because our sense of security and our sense of who we are depend upon our feeling that we can account for each and every member of the group. And to this way of thinking any assertion of individuality is dangerous. I'm reminded of a woman whom I met at a party. We were discussing Negro life and I uttered opinions indicating an approach unfamiliar to her. Her indignant response was, "How do you come talking like that? I never even heard of you!"

In her opinion I had no right to express ideas which hadn't been certified by her particular social group. Naturally, she thought of herself as a member of a Negro elite and in the position to know what each and every Negro thought and should think. This is a minority group phenomenon, and I won't nail it to Negroes because it happens in the Jewish community as well.

In the interview that you had in Robert Penn Warren's Who Speaks for the Negro? *he addressed a question to you that has something to do with Negroes being culturally deprived, and you answered that many of the white students whom you'd taught were also culturally deprived. They were culturally deprived, you said, because while they might have understood many things intellectually, they were emotionally unprepared to deal with them. But the Negro was being prepared emotionally, whether intellectually or not, from the moment he was placed in the crib. Would you expand that a bit?*

I am tired of critics writing of me as though I don't know how hard it is to be a Negro American. My point is that it isn't *only* hard, that there are many, good things about it.

But they don't want you to say that. This is especially true of some of our Jewish critics. They are upset when I say: *I like this particular aspect of Negro life and would not surrender it. What I want is something else to go along with it.*

And when I get the other things, I'm not going to try to invade the group life of anybody else. And, of course, they don't like the idea that I reject many of the aspects of life which they regard highly.

But white people can get terribly disturbed at the idea that Negroes are not simply being restricted from many areas of our national life, but are also judging certain aspects of American culture and rejecting white values. That's where assumptions of white superiority, conscious or unconscious, make for blindness and naivete. For in fact Negroes rejected many white values from the days before there were Jim Crow laws.

Only a narrowly sociological explanation of society could lead to the belief that we Negroes are what we are simply because whites would refuse us the right of choice through racial discrimination. Frequently Negroes are able to pay for commodities available in the stores, but we reject them as a matter of taste—not economics.

There is no *de facto* Jim Crow in many areas of New York, but we don't frequent them, not because we think we won't be welcome—indeed many Negroes go to places precisely because they are unfairly and illegally rejected—but because they simply don't interest us.

Negro Americans had to learn to live under pressure—otherwise we'd have been wiped out, or put on a reservation and rendered powerless by the opposing forces.

Fortunately, our fate was different. We were forced into segregation, but within that situation we were able to live close to the larger society and to abstract from that society enough combinations of values—including religion and hope and art—which allowed us to endure and impose our own idea of what the world should be and of what man should be, and of what American society should be. I'm not speaking of power here, but of vision, of values and dreams. Yes, and of will.

What is missing today is a corps of artists and intellectuals who would evaluate Negro American experience from the inside, and, out of a broad knowledge of how people of other cultures live, deal with experience, and give significance to their experience. We do too little of this. Rather we depend upon outsiders—mainly sociologists—to interpret our lives for us.

It doesn't seem to occur to us that our interpreters might well be not so much prejudiced as ignorant, insensitive, and arrogant. It doesn't occur to us that they might be of shallow personal culture, or innocent of the complexities of actual living.

It's ironic that we act this way, because over and over again when we find Negroes enjoying themselves, when they're in a mood of communion, they sit around and marvel at what a marvellous human being, what a confounding human type the Negro American really is.

This is the underlying significance of so many of our bull sessions. We exchange accounts of what happened to someone whom the group once knew. "You know what that so-and-so did," we say; and then his story is told. His crimes, his loves, his outrages, his adventures, his transformations, his moments of courage, his heroism, buffooneries, defeats, and triumphs are recited with each participant joining in. And this catalogue soon becomes a brag, a very exciting chant celebrating the metamorphosis which this individual in question underwent within the limited circumstances available to us.

This is wonderful stuff; in the process the individual is enlarged. It's as though a transparent overlay of archetypal myth is being placed over the life of an individual, and through him we see ourselves.

This, of course, is what literature does with life; these verbal jam sessions are indeed a form of folk literature and they help us to define our own experience.

But when we Negro Americans start *"writing,"* we lose this wonderful capacity for abstracting and enlarging life. Instead we ask, "How do we fit into the sociological terminology? Gunnar Myrdal said this experience means thus and so. And Dr. Kenneth Clark, or Dr. E. Franklin Frazier, says the same thing...." And we try to fit our experience into their concepts.

You have said that Hemingway tells us much more about how Negroes feel than all the writings done by those people mixed up in the Negro Renaissance.

What I meant was this: Hemingway's writing of the 'twenties and the 'thirties—even of the 'forties—evoked certain basic, deeply felt moods and attitudes within his characters which closely approximated certain basic attitudes held by many Negroes in regard to their position in American society, and in regard to their sense of the human predicament.

And he did this not only because he was a greater writer than the participants in the Negro Renaissance, but because he possessed a truer sense of what the valid areas of perplexity were and a more accurate sense of how to get life into literature. He recognized that the so-called "Jazz Age" was a phoney, while most Negro writers jumped on that illusory bandwagon when they, of all people, should have known better.

I was also referring to Hemingway's characters' attitude towards society, to their morality, their code of technical excellence, to their stoicism, their courage or "grace under pressure," to their scepticism as to the validity of political rhetoric and all those abstractions in the name of which our society was supposed to be governed, but which Hemingway found highly questionable when measured against our actual conduct.

Theirs was an attitude springing from an awareness that they lived outside the values of the larger society, and *I* feel that their attitudes came close to the way Negroes felt about the way the Constitution and the Bill of Rights were applied to us.

Further, I believe that Hemingway, in depicting the attitudes of athletes, expatriates, bullfighters, traumatized soldiers, and impotent idealists, told us quite a lot about what was happening to that most representative group of Negro Americans, the jazz musicians—who also lived by an extreme code of withdrawal, technical and artistic excellence, rejection of the values of respectable society. They replaced the abstract and much-betrayed ideals of that society with the more physical values of eating, drinking, copulating, loyalty to friends, and dedication to the discipline and values of their art.

Now I say all this while fully aware that Hemingway seldom depicted Negroes and that when he did they were seldom the types we prefer to encounter in fiction. But to see what I mean one has only to look upon the world of Hemingway's fiction as offering a valid metaphor not only for the predicament of young whites, but as a metaphor for the post-World War I period generally. Seen in this inclusive light, he tells us a hell of a lot about the way Negroes were feeling and acting.

At any rate, this is how I use literature to come to an understanding of our situation. It doesn't have to be *about* Negroes in order to give us insights into our own predicament.

Faulkner tells us a great deal about many different groups who were not his immediate concern because he wrote so truthfully. If you would find the imaginative equivalents of certain civil-rights figures in American writing, you don't go to most fiction by Negroes, but to Faulkner.

You have said that you don't accept any theory which implies that culture is transmitted through the genes. What, then, is your reaction to the concept of "negritude"?

To me it represents the reverse of that racism with which prejudiced whites approach Negroes. As a theory of art it implies precisely that culture is transmitted through the genes. It is a blood theory.

There are members of my family who are very black people, and there are some who are very white—which means that I am very much Negro, very much Negro American, and quite representative of that racial type with its mixture of African, European, and indigenous American blood.

This is a biological fact; but recognizing this, and loving my family, and recognizing that I'm bound to them by blood and family tradition is by no means to agree with the proponents of negritude. Because even while I affirm our common blood line I recognize that we are bound less by blood than by our cultural and political circumstances.

I've been reading the classics of European and American literature since childhood, was born to the American tongue and to the language of the Bible and the Constitution; these, for better or worse, shaped my thought and attitudes and pointed the direction of my talent long before I became a conscious writer. I also inherited a group style originated by a "black" people, but it is Negro American, not African. And it was taught to me by Negroes or copied by me from those among whom I lived most intimately.

What advice would you give to a young person of eighteen who is setting out to be a writer?

My first advice would be to make up his mind to the possibility that he might have to go through a period of depriving himself in order to write. I'd remind him that he was entering into a very stern discipline, and that he should be quite certain that he really wanted to do this to the extent of arranging his whole life so that he could get it done. He should regard writing very much as a young physician is required to regard his period of training.

Next, I'd advise him to read everything, all the good books he can manage, especially those in the literary form in which he desires to become creative. Because books contain the culture of the chosen form and because one learns from the achievements of other writers. Here is contained the knowledge which he must have at his fingertips as he projects his own vision. And because without it, no matter how sensitive, intelligent, or passionate he is, he will be incomplete.

Beyond that, he shouldn't take the easy escape of involving himself exclusively in *talking* about writing, or carrying picket signs, or sitting-in as a substitute activity. Because while he might become the best picket in the world, or the best sitter-inner, his writing will remain where he left it.

Finally, he should avoid the notion that writers require no education. Very often Hemingway and Faulkner are summoned up to support this argument, because they didn't finish college. What is overlooked is that these were very gifted, very brilliant men. And very well-read men of great intellectual capacity.

So no matter how you acquire an education, you must have it. You must know your society and know it beyond your own neighbourhood or region. You must know its manners and its ideals and its conduct. And you should know something of what's happening in the sciences, in religion, in government, and in the other arts.

I suppose what I'm saying is that he should have a working model of the society and of the national characteristics present within his mind. The problem of enriching that model and keeping it up to date is one of the greatest challenges to the Negro writer, who is, by definition, cut off from firsthand contact with large areas of the society—especially from those centres where power is translated into ideas and into manners and into values.

Nevertheless, this can be an advantage, because in this country no writer should take anything for granted, but must use his imagination to question and penetrate the facade of things. Indeed, the integration of American society on the level of the imagination is one of his basic tasks. It is one way in which he is able to possess his world and, in his writings, help shape the values of large segments of the society which otherwise would not admit his existence, much less his right to participate or to judge.

RALPH ELLISON'S *memorable first novel,* Invisible Man, *winner of the National Book Award for 1952, brought him immediately to the front rank of American writers. His essay, "Harlem Is Nowhere," appeared in* Harper's *in 1964, and was included in his book of essays and reviews,* Shadow and Act.

Ellison is a native of Oklahoma City. In 1933 he went to the Deep South to Tuskegee Institute in Alabama, where he majored in music. Later he came to New York City to study sculpture, but he turned to writing and since 1939 his stories and articles have been widely published.

STUDENTS AND FREEDOM

RICHARD HOFSTADTER

WE STAND AT A DECISIVE MOMENT in the demand for student freedoms. The current crisis stems, in part, from the vast extension of higher education and the response of students to bigness.

But in greater measure it comes from our moral crisis—a moral crisis stemming from the issue of racial justice and from the war in Vietnam. We are in a period of student agitation in which the limits of student freedoms will be tested and in which, if we are wise and fortunate, their proper nature will be defined.

To Grow in Mind and Spirit

The basic justification for student freedoms is very much like that invoked to justify faculty freedoms. It is not the promise that freedom for students will reform our society. Social reform is not the fundamental business of universities, even though they contribute to it.

Students do not come to the university solely to be instructed in vocational skills. They come to grow in mind and spirit, to develop their questioning and critical faculties, to develop independence and individuality in life and belief.

For the student, freedom in the classroom means:

The right to be spared ruthless indoctrination;

The right to differ from an instructor in a reasonable and orderly manner on matters of opinion;

The right to have his work evaluated without prejudice;

The right to have his opinions treated as confidential.

His rights as a citizen include:

Freedom of association;

Free choice in speakers;

Freedom from unreasonable and arbitrary limitations on student publications;

The right, if his activity brings him into conflict with the law, not to have civil penalties compounded by academic penalties;

The right, when charged with punishable infractions of academic rules, to due process of academic law.

Freedom and Responsibility

It will be less difficult to win general endorsement for these principles than to apply them on the campuses of the country. Conflict in application is inevitable, and if it is not carried to unproductive lengths by those who value conflict for its own sake, its costs will be borne with patience.

On campuses where there is a genuine feeling of community and of obligation, it will be possible to apply these principles without disastrous wrangling. Patience and tenacity are required of university officials and staffs; a sense of restraint in students. And restraint does not mean superhuman self-control, but only the assumption of the responsibilities that go with freedom.

The academic freedom of the student, like that of the instructor, has its boundaries, which do not limit the content of his thought but may limit his lines of action. The freedom of the student as a citizen, for example, does not embrace the right to involve the university either openly or by indirection, in his personal political commitments.

His rights certainly extend, if he so chooses, to protesting in an orderly way against the policies of the university itself, or against its rules, or the procedures by which these rules are made and enforced. They do not embrace the right to break the rules, which he implicitly promises to observe when he enters the university community.

He may hope for—and I trust he will normally receive—generous treatment if he strays into a single, impulsive infraction; but he can hardly expect that repeated and planned violations will carry no penalties.

Freedom Is Self-Imposed Restraint

The delicate thing about freedom is that while it requires restraints, it also requires that many of these restraints be self-imposed. The delicate thing about the university is that it has a mixed character. It is suspended between its position in the real world, with its corruptions and evils and cruelties, and the splendid world of our own imagination.

I.

The university does in fact perform services to society—and there are those who think it should aspire to do nothing else. It does in fact constitute a political forum—and there are those who want to convert it primarily into a centre of political action.

But above these aspects of its existence stands its essential character as a centre of free inquiry and criticism—a thing not to be sacrificed for anything else. A university is not a service station; nor a political society; nor a meeting place for political societies.

It is, with all its limitations and failures, its fragile and compromised professors, its equivocal administrators, its tumultuous and self-righteous students, its classified research, its instruction that does not instruct, and all the other ills that academic life is heir to, the best and most benign embodiment of our society—insofar as that society aims to cherish the human mind.

To realize its essential character, the university has to be dependent upon something less precarious than the momentary balance of forces in society. It has to pin its faith not merely upon critical intelligence but upon self-criticism and self-restraint.

There is no group of professors, or administrators, or taxpayers, or alumni, or students; there is no class or interest in our society, that ought to consider itself exempt from bearing the costs of the university and patiently enduring its conflicts and trials. Nor is there anyone who should want to do other than rally to its generous support.

RICHARD HOFSTADTER, *Pulitzer Prize winner, is Professor of History at Columbia University. He was one of three main speakers who appeared at the "extraordinary convocation" of the University of California Academic Senate in the Greek Theatre on April 28. The article is a portion of Dr Hofstadter's address.*

BOOK WORLD

SOCIAL CHANGE IN MODERN INDIA

by M. N. Srinivas

xv plus 194 pp. University of California Press,
Berkeley and Los Angeles, 1966. $5.00

Reviewed by I. P. Desai

Social Change in Modern India was the theme of the Tagore lectures delivered by Professor Srinivas at Chicago in 1963. The theme is of importance to the policymakers in India and the social scientists interested in the problems of change. Srinivas asks the question: What are the orientations of change in India? As is generally agreed, these are two—(1) Indian and (2) exogenous, in this case Western.

The Indian orientations are towards India's past or what is generally called traditional Indian society and culture. The Western orientations are towards the contemporary and recent Western society, particularly the nineteenth-century British society. Srinivas calls them Sanskritization and Westernization respectively. He defines them by delimitation of their behavioural aspects, the former rather strictly or less vaguely than the latter.

Sanskritization, according to him, is the "process by which a low Hindu caste or tribal or other group changes its customs, ritual, ideology, and way of life in the direction of a high and frequently twice-born caste." His focus is stratification and mobility, and the behaviour pertaining to these two remains his empirical referent.

By Westernization, he means that which characterizes "the changes brought about in Indian society and culture as a result of over

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150 years of British rule and the term subsumes changes occurring at different levels—technology, institutions, ideology, or values." Srinivas is aware that the term is vague and omnibus.

But the differences in the points and areas of observation of these two terms create difficulty for "the complex and intricate interrelations between Sanskritization and Westernization," which he correctly says is a fertile field for analysis and speculation. Sanskritization and Westernization do not move on parallel roads. At every point they cut each other, and the resultant pattern may be neither one nor the other. If this pattern is to be identified and analysed, much more refinement and precision are necessary.

Srinivas characterizes the resultant pattern in cultural terms as "one of the results of a century of Westernization—Secularization is subsumed under Westernization—is reinterpreted Hinduism in which Sanskritic elements are predominant."

According to him, the most important value preference in Westernization was humanitarianism which subsumes several other values such as equalitarianism and secularism. Srinivas's position is that the Hindu "tradition of tolerance, syncretism, and self-criticism" received the value of Western humanitarianism and began to embody it in the "legal, political, educational, and other institutions" in India in the late nineteeth century.

This was done through the agency of the Westernized Indian intellectual elite. Srinivas supports this position with a wealth of behavioural material. At this point, one thinks that the social-psychological study of personality would be a fruitful area of research.

The emerging pattern of a social system, according to Srinivas, is not Western though influenced by the whole gamut of forces of Westernization. His focus is on the stratificatory system as required by his definition of Sanskritization. The traditional stratificatory system—the caste system—was more mobile and less rigid than is generally believed. This is a contention with which many will not quarrel today.

The question is: Is it being replaced by an open stratificatory system due to the forces of Westernization? Srinivas's answer is that "changes of fundamental kind are occurring. But it cannot be described as a simple movement from a closed to an open system of stratification" and "caste continues to be relevant in subtle and indirect ways, in such mobility."

This is true, but how much longer will it be correct to say that the position of a person today is determined by the position of his caste in the traditional hierarchy? The portents are that it is not the backward position of the caste but the economic and educational backwardness that stands in the way of an individual's mobility.

One may agree with or differ from Srinivas, but he deserves to be congratulated for the issues that he raises, the light he throws on them, and the new angles that he provides.

BOOK NOTES

These brief reviews are of books available at American Libraries in New Delhi, Bombay, Calcutta, Madras, Bangalore, Hyderabad, Lucknow, Trivandram, Guntur, and Patna.

BEST SPORTS STORIES 1966: A Panorama of the 1965 Sports World. Edited by Irving T. Marsh and Edward Ehre. Dutton. 1966. 336 pp. This twenty-second annual collection contains fifty-one of the best newspaper and magazine articles on sports and thirty of the year's best sport photographs. The sports represented are baseball, football, boxing, basketball, golf, horse racing and auto racing, track and field, hockey, and skiing. Included is a list of 1965's champions of sports events throughout the world, brief biographical sketches of the authors, and an alphabetical list of the photographs.

URBANIZATION IN NEWLY DEVELOPING COUNTRIES. By Gerald William Breese. Prentice. 1966. 151 pp. This broad examination of city conditions in developing areas outlines the problems which confront rural populations and pre-industrial economies in trying to develop and support the urban society which is necessary for development.

NEGRO PROTEST THOUGHT IN THE TWENTIETH CENTURY. Edited by Francis L. Broderick and August Meier. Bobbs. 1965. 444 pp. This copious collection of original materials by American Negroes is likely to remain the authoritative review of modern Negro protest thought for several years, containing important pre-1960 pronouncement and a good sampling of 1960-65 opinions of Civil Rights leaders.

CLASSROOMS ON MAIN STREET. By Harold Florian Clark and Harold Stephenson Sloan. Teachers College, Columbia University. 1966. 162 pp. This study places in perspective 35,000 specialty schools which grant certificates rather than degrees, preparing students for a particular position in business, industry, skilled trade, semi-profession, personal and protective service, or recreational activity. The authors relate the development of these schools and explain their regulation and worth in the educational pattern.

TECHNOLOGICAL INNOVATION AND SOCIETY: Columbia University Seminar on Technology and Social Changes. Edited by Dean Morse and Aaron W. Warner. Columbia. 1966. 214 pp. In a series of meetings at Columbia University a group of physical and social scientists and businessmen grappled with the problems of providing the peoples of the world with satisfactory standards of living. Statements by scientists in industry and the universities and edited transcripts of discussion of the papers describe "the human condition and its problems with clarity and in a humanitarian spirit."

BLUEPRINT FOR PEACE: White House Conference on International Cooperation. McGraw. 1966. 416 pp. The various reports in this volume are concerned with: Curbing the Arms Race; Keeping the Peace; Developing International Law; Protecting Human Rights; Promoting Cultural Exchange; Containing the Population Explosion; Conserving the World's Resources; Assisting Economic Development; Strengthening International Finance; Expanding World Trade; Helping the World's Cities; Exploring Outer Space; Using Science and Technology;

Harnessing the Peaceful Atom; "Doing Something" about the Weather; and Meeting Other Challenges (Youth, Women, Transportation, etc.).

GOLD AND WORLD POWER: The dollar, the pound, and the plans for reform. By Sidney E. Rolfe. Harper. 1966. 276 pp. Rolfe evaluates comparatively the various plans for reforming the world's system of foreign exchange. His soundly reasoned volume explains the working of the international monetary order, discussing special problems of the United States and Great Britain.

WITH KENNEDY. By Pierre Salinger. Doubleday. 1966. 391 pp. Salinger presents a personal memoir, revolving around his career with President Kennedy. The author's treatment of his four months with President Johnson and his own Senate race are covered at the end of the book. Interesting insights are given into such occurrences as the "Bay of Pigs," the Vienna meeting of Kennedy and Khrushchev, and the Cuban missile crisis.

AMERICAN STRATEGY: A New Perspective. By Urs Schwarz. Doubleday. 1966. 178 pp. Schwarz, a foreign editor of the well-known Swiss newspaper *Neue Zuercher Zeitung*, summarizes the evolution of American strategic thought since World War I. He states that American strategy is abreast of rapidly changing technological, political, and economic developments in the international environment.

MEDICINE IN AMERICA. By Richard Harrison Shryock. Johns Hopkins. 1966. 346 pp. These essays deal with medical history, development of the profession, public health movement, medical facilities and practice during the Civil War, the story of women in American medicine, and the contributions of individuals. Information is included on the beginnings of the medical profession, medical institutions, medical education and research, and the medical profession as related to the social and cultural development in the United States.

RESCUE AT SEA. By John M. Waters, Jr. Van Nostrand. 1966. 264 pp. In 1956 the "National Search and Rescue Plan" was organized with the Coast Guard responsible for SAR (Search and Rescue Operations) over and on the water and the Air Rescue Service responsible for land areas. The author relates how the advent of wireless, radio telephone, radar, seaplanes, helicopters, and a host of technological devices have made SAR an incredibly complicated and effective means of saving men, aircraft, and ships. The author provides accounts of actual events of rescue told in an exciting manner, doing credit to the men who risk their lives to save others.

REMEMBER THE LADIES. By Emily Taft Douglas. Putnam. 1966. 254 pp. This is a dramatic story of American women in the early years fighting for emancipation and for elimination of evil and puritanical practices. Mrs. Douglas tells her story through the lives of such women as Anne Hutchinson, Anne Bradstreet, Abigail Adams, Fanny Wright, Margaret Fuller, Emma Willard, Prudence Crandall, Dorothy Dix, Emily Dickinson, Mary Cassatt, Isadora Duncan, Jane Addams, and Eleanor Roosevelt.

SELECTED PROSE. By Robert Frost. Holt. 1966. 119 pp. All of these selections are printed in full, covering such different subjects as poetry, baseball, and religion. They afford the reader a wise understanding of the versatility of Frost as teacher, philosopher, friend, and of his creative artistry in figures of speech.

FAMILY PLANNING AND POPULATION PROGRAMMES: International Conference on Family Planning Programmes, Geneva, 1965. The University of Chicago. 1966. 848 pp. Participants at this conference discussed achievements and problems of family planning programmes in their countries, including techniques of organization and administration of programmes, contraceptive methods and their programmatic implications, and research and evaluation of programmes in various areas.

THE ISLANDS. By William Storrs Lee. Holt. 1966. 408 pp. This historical narrative of the Hawaiian Islands—lively, colourful, and easy to read—is filled with dramatic stories, humour, and many anecdotes, each chapter covering major groups and their contributions to the Islands' customs and ideas.

SHOWCASE. By Roy Newquist. Morrow. 1966. 412 pp. In these interviews with star performers of Show Business, each begins with an autobiography followed by a serious discussion of the artist's profession, his experiences, his goals, the public, the critics, and his success. Edward Albee, Julie Andrews, Sammy Davis, Jr., Sir John Gielgud, Helen Hayes, Danny Kaye, Mike Nichols, Peter O'Toole, and Agnes de Mille are some of the twenty-five theatre people who are interviewed.

THE METROPOLITAN TRANSPORTATION PROBLEM. By Wilfred Owen. Revised Edition. Brookings. 1966. 266 pp. This study analyses the causes of the growing crisis in urban transportation and discusses various approahces to the problem, focusing attention on the need for a comprehensive approach to urban mobility. Such factors as metropolitan-wide planning, coordination of all methods of transport, and control of population densities and land uses are discussed.

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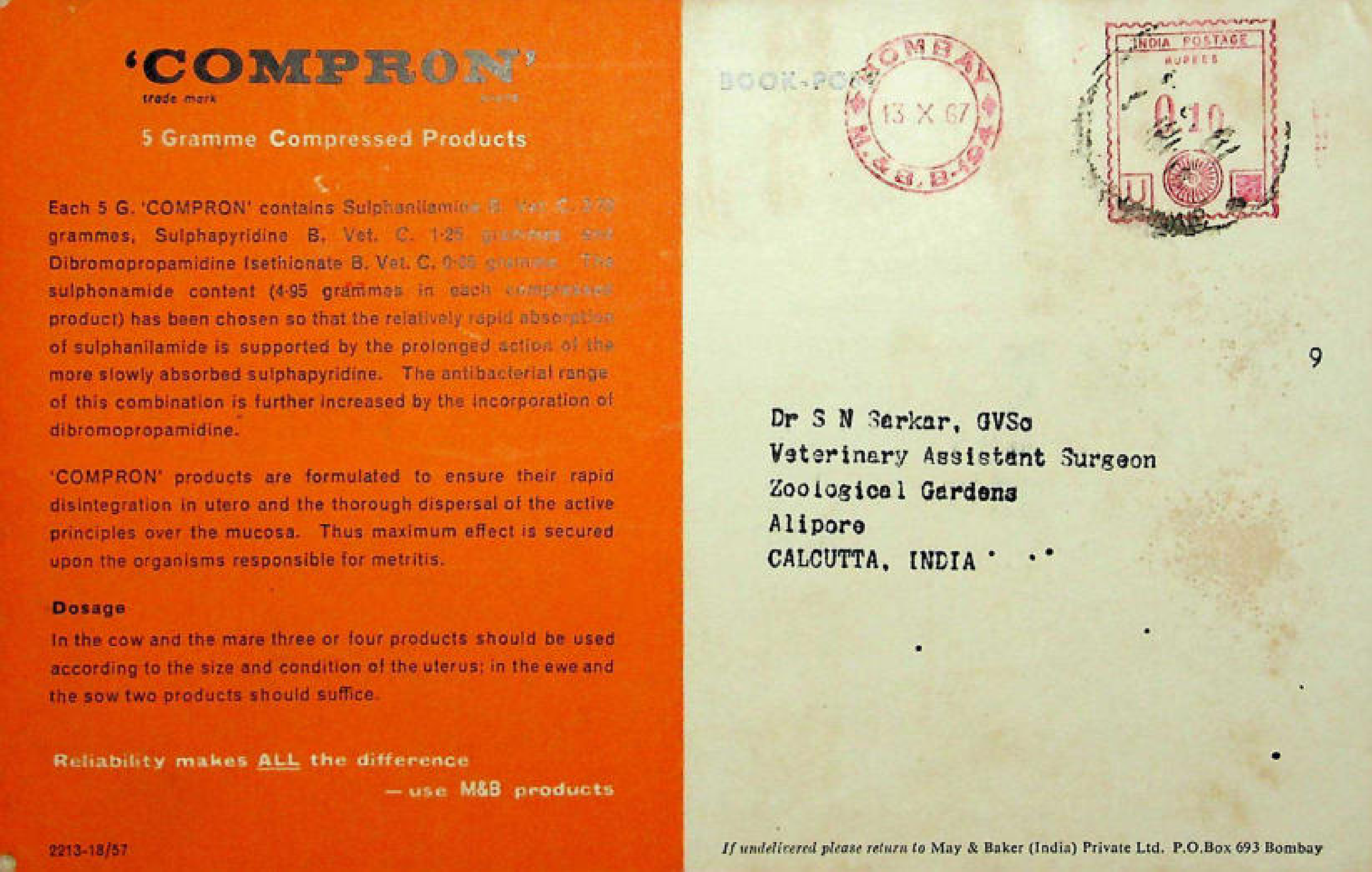

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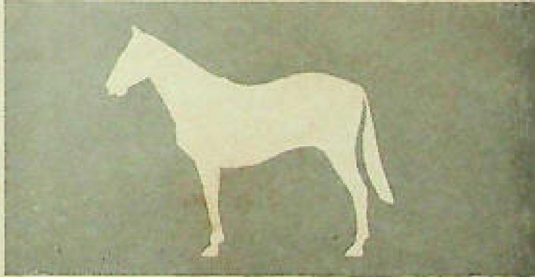

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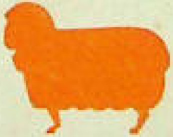

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