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# Beyond Automation

George Crowley, Louise Crowley

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WE AGREE ESSENTIALLY WITH THE ANALYSIS of the Ad Hoc Committee on the Triple Revolution, as stated in its memorandum to President Johnson. That memorandum holds explicitly that cybernation invalidates the traditional methods by which society's wealth is distributed. Implicit in the Committee's report is the thesis that our present economic and social system (read capitalism) is now facing breakdown through a deepening paradox: income, hence consumption, hinges on employment; while accelerating productivity with all its potential of abundance, hinges on the very opposite—elimination of human labour. This paradox cannot be resolved within capitalism's distributive framework of wage labour.

We submit, however, that the cybernation revolution poses an impasse for socialists also: it presents us with nothing less than the liquidation of the working class as a significant component of society. When human industrial labour is obsolescent, to project a worker's state becomes an anachronism. It has long been the essence of our philosophy as Marxists to believe that economic developments stimulate appropriate changes in the organisation of society. The Industrial Revolution triggered the rise of socialism;

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the cybernation revolution calls for something beyond it, which as yet has no accepted name.

It is not communism. The abundant society cybernation makes possible eliminates need for social constraint, including the constraint to produce according to ones abilities. It points instead to the freest conceivable exercise of individual option in production and consumption as in all human activities. It points away from private ownership of the means of production, but not toward their collective ownership; rather, it suggests that the fully automated productive complex, operating independently to supply whatever people may demand of it, needs no ownership nor management at all. Who owns the air?

If this be anarchy, it is anarchy of an altogether new type stripped of its own nostalgia for primitive communism. If it be utopian, it looks toward a hitherto unimaginable kind of utopia: a variform utopia of ultimate technology, in which men and women, freed from all compulsion to wrest their livelihood from a given environment, may live their lives as they desire in milieux of their own choosing.

We assume the beneficence of freedom from toil, and therefore assert that our efforts should be directed toward the speediest development and broadest application of automation. As the Ad Hoc Committee stated, it is the income-through-jobs link that acts as the main brake on the capacity of a cybernated productive system. This link must be broken. The traditional dictum (however modified) that he who does not work shall not eat is postulated on an economy of scarcity, in which the labour of all is needed to sustain the community. In the United States at least, current levels of productivity have invalidated it even in terms of the present system. The income-reducing aspects of capitalist automation cannot and should not be countered by finger-in-the-dyke attempts to hold on to existing jobs and to create others. Such efforts can only delay the advent of a desirable new state of society, while little alleviat-

whatever manner may be feasible in any specific situation; he implements rupture of the job-income link by utilising social welfare agencies, consumer credit, and whatever means may be at hand to preserve his consumption power. To proponents of the status quo, such procedures either are criminal or ought to be; to the several orthodoxies of the Left, they are (horror of horrors!) anarchistic. So be it. To a rapidly growing class they are the usual and accepted ways of coping with the environment a fact to which only sectarianism or our own relative well-being could blind us. Police may bluster and social workers may moan, but the lumpens rebellion continues to mount. Despite its sometimes nihilistic aspect, we acknowledge its revolutionary potential. As the practicability of an anarchic society on a cybernated economic base is popularised, it will find its direction and its purpose.

Then will the three streams of revolution be joined and an irresistible flood sweep away the damming power structures of old society, to carry man into that future of unlimited freedom in which his infinite aspirations may be realised.

replacing them, and the practice-ground where men can function together on the basis of mutual understanding, without constraint either of binding ideology or of physical force. The normal modus operandi of the lumpenproletariat is also the logical tactic of the anarchist revolution.

What remains is that this hitherto mainly defensive action be turned to positive ends; this we now see happening in sections of the Negro movement. But with all enthusiasm for the Negro's effort, we insist that it is folly for white radicals to tail his kite. To pin our hopes on moving the mass of whites through a struggle but peripheral to their needs is to abandon the bulk of the oppressed to the demagogy of the far Right (which knows well how to use them) and to abandon the Negroes themselves to the white backlash. Until it is achieved, equality must of course be the Negro's overriding demand. But the fact is that many of the Negro's white friends have unwittingly and with the most commendable intentions become millstones around his neck, retarding the development of his own tactics of struggle. Those able to identify with his tactics as well as his aspirations have a particular contribution to make in bringing them into the broader arena. Beyond equality, the Negro's needs are the same as those of his fellow-humans, and are not to be satisfied by a job soon lost to automation, a vote nullified by class bias of the electoral system, unsegregated indoctrination, and the replacement of moldering ghettos with jerry-built slums. The hearteningly dynamic drive for racial equality needs to be echoed by parallel (and equally direct) action for peace, personal liberty, and an equitable share of the goods and services our productive complex pours forth in such abundance, just beyond our reach.

It has been the habit of the Left to deplore insurgent action when it manifests itself in ways outside our approved (and by new institutionalised) forms. But the lumpen's approach is varied and flexible. He refuses by whatever device may be most expeditious to participate in the conduct of war; he does not cooperate with police and opposes enforcement of laws repressive of personal freedom in

ing the misery inherent in the old. It is not jobs that are needed for the transition, but income.

Capitalism can accept, indeed, has in significant measure already accepted-breaking the linkage of income to employment. To provide everyone with an adequate income as a matter of right would of itself deal no deathblow to the system. Intelligent proponents of capitalism could even find virtue in thus cushioning the shock of technological displacement for millions of quondam workers. Yet it would rupture a critical strand in the fetters that precariously restrain the genie of cybernation, who even now, with tied hands, has begun to lay the economic foundation of the new society.

Mark I, Univacs I through VI, and Eniac, those first ponderous monsters, solved the manifold logistic problems of the Second World War and performed the calculations for the atomic and hydrogen bomb projects. Experience with these cooled vacuum-tube computers demonstrated that their speed and accuracy, unhampered by the limitations of the human nervous system, made feasible the solution of problems too complex to have been investigated with mechanical calculating devices.

The second stage of cybernation began with the introduction of small, low-voltage vacuum tubes that required no special cooling system nor elaborate controlled-temperature housing. The more versatile machines that resulted automated the big basic industries steel, textile, petroleum, and chemicals and broke the paperwork bottleneck in insurance, banking, and government, these accomplishments dispelled forever in the minds of those associated with production management the idea that automation was just another step in the slow rise of labour productivity. Early the lesson was learned: as automation progresses, it becomes imperative to get all of the people out of the way so that the machines may work at their own optimum speeds. The new Ford block plant at Cleveland has been so designed that much of its assembly line is inaccessible

to people; it was the presence of a few workers that rendered its ten-year-old predecessor obsolete.

Application of transistors and block circuits introduced the current proliferation stage, which has unveiled the Frankenstein's monster. The new devices (they can hardly be called machines, for virtually all mechanical components have been eliminated) can be made in any size and complexity, from miniature systems for small shops and offices to the Bureau of Internal Revenue's Big Brother which does the work of half a million people at a cost of less than twenty-five cents per man-year. Componentised and standardised, they can be custom assembled to any specifications. Built-in detector systems permit self-maintenance. Their reliability has brought precise quality (and obsolescence) control into mass-production industries. Communicating by telephone, a Minneapolis-Honeywell computer is capable not only of receiving six million bits of information per second, but of transmitting, over a different frequency, another six million at the same time. Such high-speed communication enables the otherwise prohibitive cost of complex systems to be spread over many users. If the average cost of all systems can be said now to have reached parity with that of hiring and equipping a human labour force, henceforth the scales will tip in automation's favour. As systems reach out for optimum workloads, they as eagerly assume the tasks of the doctor, lawyer, merchant, and chief as they did those of the butcher, the baker, and the candlestick-maker.

At this stage of the production revolution, all attempts to reclaim some of the lost jobs by featherbedding, reducing hours, etc., only serve to unleash new rounds of automation, as the delicate cost-balance shifts. Once a single plant in an industry has automated the whole industry must follow suit to remain competitive. As Big Business automates, the anguished screams of smaller capitalists impel the state to subsidise their automation.

Reaction to the much-touted tax cut was the greatest shock of all. Official doctrine was that the higher profit ratio would relieve

all precepts to thrift, industriousness, and self-denial—that is, to the factitious morality that upholds wage-enslavement and privation. Their slogan is “Now!”—freedom now, peace now, abundance now. The homogeneity of their experience products concerted actions without need for elaborate theory or formal organisation. They, and they alone, can settle for nothing less than the transformation of society and the transformation of man. Their ranks are growing, and their vanguard is on the move.

Our re-examination now leads us to question whether the Left's usual methods of procedure are applicable to this new revolutionary situation. Reluctantly, for it is always comforting to walk in accustomed paths, we must conclude that they are not. The objective is no longer to replace one power structure with another, however benevolent; so our efforts must not serve to create institutions capable of assuming control. The old concepts of organization therefore can lead only to counter-revolution. Moreover, that the already emergent transformation of man is so essential to the new society demands tactics that will further its development. This, neither political maneuvering nor traditional forms of insurrection can do—on the contrary, they can only hinder it, and thus in effect prove counter-revolutionary also.

In the activities of the lumpens themselves we see an approach more congruous with the aims of this revolution. Resisting the war in Korea, they eschewed all organised forms of protest and simply dodged the draft, gold-bricked, and deserted—without apparent organisation but none the less in mass. General Hershey testified bitterly to the volume and effect of their non participation. Resisting wage-slavery, they simply adjust to living on welfare; and resisting welfare restrictions, they simply evade them. Though spontaneous, these are not merely scattered individualistic acts of personal expediency, but coherent and predictable responses of the class. As such, they reflect a solidarity of outlook that grows naturally out of common frustrations and common needs. Mass action thus motivated is the means that can destroy institutions of power without

tion holds out to them. They too may be brought to defend their future rather than their present interests.

The lumpenproletariat, the declassed scum of society, Marx characterised as a rotting mass, now and then to be swept into a revolutionary movement but on the whole better fitted to be informers, scabs, and goons in the service of the bourgeoisie. He was undoubtedly quite correct. He recognised their affinity to the proletariat in that they had no share in the ownership of the means of production, but the lumpens comprise the slough of all classes, and in Marx's day the classes discarding slough were the decaying aristocracy, the peasantry, and the distressed petty bourgeoisie. The proletariat itself had little to discard: the industrial complex of a younger capitalism consumed it utterly. Marx detested these corrupt and fickle lumpens, and Marxists have scorned them ever since, without giving them a second look.

It is time to re-appraise them. The aristocracy is gone, and the rate of liquidation of the petty bourgeoisie is practically stabilised; now the overwhelming mass of lumpens comes from the working class. They are the hard-core unemployed and the young people who will never find jobs; they are the ex-miners of Appalachia and the ex-autoworkers of Detroit. A great many of them are Negro, many are Puerto Rican, Mexican-American, and Indian. It is absurd to call these people workers. They do not work; they do not expect to work again; as they adapt to their new conditions of life, they do not want to work. Living on relief or (statistically) on air, they are the most depressed element of modern society, proletarians in the Roman sense: people of no value to the social order. They are no longer even needed as strikebreakers; machines do it better. A government economist has dubbed them "no-people."

Yet they constitute today a true class, with a common relationship to the rest of society, with common attitudes and values unlike those of other classes, and with a common aspiration: to consume the fruits of humanity's conquest of nature without submitting to repressive social relations. The permissive lumpen culture scorns

the urgency of automating, and would trickle down through more readily absorbed wage increases to improve mass consumption. instead, something like 70 per cent of the gain has gone into automation equipment. Since this equipment is itself made in automated plants, the expected trickle-down is simply bypassed.

So we stand, in the Ad-Hoc Committee's words, "at a historic conjuncture which demands a fundamental re-examination of existing values and institutions." Not of existing values and institutions only, we add, but of all concepts postulated on a need for human labour—in short, re-examination of all hitherto conceived notions of society. Default or short-sightedness could mean congealment of the social order with a powerful oligarchy still astride the means of production, decreeing through a new Dark Age the conditions under which the lumpenised mass of unwanted humanity may, or may not, be permitted to survive. This, while automation stands willing and potent to give all men the full fruit of mankind's age-long struggles, if only it be turned loose to do the job! Our imperative task is to formulate a realistic programme to provide those conditions in which the new society can come most readily to fruition.

To do this we must consider in at least equal depth the implications of the other two coalescing movements. Fear engendered by the total destructiveness of nuclear weapons has obscured the nature of what the Ad Hoc Committee calls the Weaponry Revolution; actually it is a power revolution manifesting itself in the field of weaponry. We see latent in the demand for human equality an urge toward freedom from all dependence—from dependence on society as well as dependence on nature. The confluence of the three revolutions, all sweeping toward the same social transformation, is the force that can realise this freedom.

In its memorandum, the Ad Hoc Committee touched but briefly, and we think with mistaken emphasis, on the new weaponry. That no nation can "win" a war fought with nuclear, chemical, and organic weapons is to us a truism; and the futility of war is but its

corollary. Without minimising the need to get this point across to those who fail to see or to heed it, we submit that the multiplex body of scientific and technological progress, still largely contained within the military womb of the new weaponry, holds the momentous potential of freeing mans evolution from the limitations imposed by his earthly environment. Cybernation offers to remove only one portion of Adam's two-fold curse; the new science in toto holds forth the prospect of lifting it altogether. Our view should not be narrowed by the dreadful fact that important areas of the current scientific revolution are being researched and developed with warlike intent. Cognisant of the ultimate capacity of the new weapons, we nevertheless prefer to speak of a Power Revolution.

Let us look at the long history of social change.

With the Neolithic Revolution, agriculture transformed the economic base of primitive society, signalling the dawn of recorded history, the rise of commodity production brought about the profound social and political changes of the Urban Revolution. The formerly almost imperceptible progress of science and technology quickened, productivity growing apace, until toward the end of the Roman Republic the sophisticated culture that had developed stood ready to pass in the Industrial Revolution. Manufacturing and agriculture were producing at the saturation point for a slave society. In the Archimedean screw, the aeolipile, and the steam piston, means were at hand to utilise the understood power of water and steam. But only by emancipating the slaves to become free consumers could the Industrial Revolution have been consummated. This the skilled and powerful Roman ruling class was able to prevent. After an initial application of authoritarian control, it wrought the fixation of the individual's socio-economic position, blocking progress so effectively that Rome's own decay merely added to the general stagnation. Western Europe, still basically neolithic when conquered by Rome, and with no strong traditions of stable community life, defined social position in terms of individual to individual man to master, and master to lord. Despite trappings of urban

labour power only, but their whole selves; their role is to administer the means of production in the best interests of its owners. To do so, they identify their own welfare with that of the institution they serve so completely that their upper echelon is frequently confused with the bourgeoisie itself. Their philosophy is most succinctly embodied in Charles Wilson's conviction that what is good for General Motors is good for the country.

The working class itself has attained a degree of social privilege Marx did not believe possible under capitalism, though Engels, who outlived him, observed in England the beginnings of its perversion. Even more critically, it is now a rapidly declining class. Its most skilled adaptable members are recruited into the lower ranks of the lackeys above; mechanisation and automation ruthlessly slough off its lower levels to the lumpen-proletariat. That which remains is in the process of being divided into two distinct layers, according to the social value of their labour power—the favoured workers in automated and semi-automated industries, and those in unautomated industry and services. No longer subjected to homogeneous conditions of life, they no longer have the basis for a common philosophy; working-class solidarity has become a nostalgic legend. Each of its organisations not corrupted outright by the capitalist class serves mainly the narrow interests of the particular trade or craft that it represents, sometimes at the expense of other organised workers, often at the expense of the unorganised, and almost

always at the expense of working women and Negroes. To be sure, the working class stands opposed to the bourgeoisie, which exploits it. But its very existence as a class depends upon the continuance of the value of human labour power, and its institutions will work to preserve that. Its aim will be to contain the revolution.

This is not to say that workers may not align themselves with the truly revolutionary class. The essence of their exploitation is that they are constrained to labour, and consummation of the revolution will release them from that constraint. Their stake in the present social order is therefore less than the promise the revolu-

the terms on which society may be re-stabilised. Contending human forces will strive, according to their own diverse interests, to halt social and economic change or to control it to their advantage. Only those who have no stake in present institutions will wish it to run its course.

It follows that the working class, mortally concerned as it is to preserve the value of labour power, is not the class to bring about this revolution.

Those conscientious scholars, Karl Marx and Friedrich Engels, opened their 1848 exposition of the aims of the several social classes with the word "today" and *The Communist Manifesto* is a document that does not waste words. Now and here a new alignment of forces exists, radically different from that which they so accurately and concisely defined for their day.

We see today a capitalist class divided by the adherence of one segment to the principle of laissez-faire and the adoption by the other of the values of social planning. One wing would consign us to a jungle; the other, to an anthill. Both have access to far more potent media for influencing the opinion and attitudes of the people than were conceivable in Marx's time, and their ideologies permeate, in one or another degree, all other classes of society.

The reduction of the small manufacturers, shopkeepers, and independent artisans and farmers has proceeded to just about that point reckoned most desirable for preserving the still-cherished illusion of free opportunity. Their relative significance has diminished, but their role has not changed.

With the rise of institutional capitalism, a formerly negligible element has come to prominence—people having little or no share in ownership, but bound wholly to the class that buys their services and their loyalty. They constitute the career management of institutional capitalism and its professional retainers. Not oriented toward independent business or professional status, they have none of the outlook of the petty bourgeoisie. Their precariously privileged position in society is predicated upon their selling not their

civilisation, the self-sufficient feudal manor was essentially a neolithic village. Feudalism was thus a product not of revolution but of counter-revolution.

As Europe emerged slowly toward the threshold of its own belated urban revolution, the powerful Catholic Church (a most urbane institution) sought to control the movement and on the strength of a successful Holy War to establish temporal authority over a restabilised, more trade-centered Europe. The Crusades precipitated backward Europe into confrontation with a society in which the Industrial Revolution had long been overdue. Matters got out of hand. Returning crusaders brought back a pregnant ideology: the reintroduction of scientific inquiry and of applied technology, a cosmopolitan view of man and his institutions, and a taste for opulent living. Its fruit was the Protestant Reformation, the Renaissance, and the consummation in the form of mercantilism of Europe's suspended urbanisation. The momentum of the movement carried Europe (with the significant exception of the Iberian peninsula) into the Industrial Revolution.

We see operating here the same factors that brought socialism not to the mature industrial nations that seemed most ripe for it, but to only superficially capitalist societies.

Examining these factors, we are struck most forcibly with the strength and sophistication of a solidly grounded ruling class. Revolutionary theory is not the property of revolutionists alone; the ruling class has studied Marx far more profoundly than has the proletariat on which he based his hopes. By whatever maneuvers of force, concession, and guile, advanced capitalist states have countered every bid of the working class for power, while strengthening control over their own internal stresses. It is time to face up to the sobering realisation that an over-ripe social order is by no means as vulnerable as Marxists have traditionally believed.

Nevertheless, compelling forces have transformed society and will transform it again. The three-fold nature of the current revolution brings their dynamics into sharper focus.

Each major social revolution has tapped previously unavailable sources of power. The Neolithic Revolution harnessed the muscle power of beasts; by providing institutions able to cope with human gang labour, the Urban Revolution made feasible the use on a large scale of slavery. With the Industrial Revolution man converted into torque the energy stored in fossil fuels, and applied it to an already advanced system of mechanised hand manufacture. This yoking of superior power to a body of cumulate technology touched off an explosive proliferation. Innovations burst upon society with institution-shattering force, and a process of metamorphosis got under way.

This is precisely the state of affairs we now see imminent. The abundant power attainable through control of nuclear events can catalyse just such a violent technological acceleration. Granting that the present cumbersome reactors work with true Rube Goldberg inefficiency to produce power by extremely uneconomical methods, we yet recall that ordinary aluminum, the most common metallic element in the earth's crust, was until 1886 the costliest of metals to produce. The breakthrough occurred when sufficient current became available to permit cheap electrolytic extraction. Development of the MHD generator, shielding itself with its own magnetic field, may point a way toward breakthrough in the economic utilisation of nuclear power.

Theoretically, nuclear power is incredibly cheap. Sources are literally infinite, and the nuclear generator consists potentially of only a relatively small conversion unit without moving parts, together with its appropriate switching gear. There will be no need for such massive paraphernalia, with attendant maintenance requirements, as is requisite to the generation and transmission of hydro-electric power.

We know little of what may already lie in abeyance, awaiting an abundance of cheap power to trigger innovations. The power-hunger of the laser beam, for example, has retarded even its obvious applications to industry and communications; but who can

beyond the possibility of containment, theirs are the demands that will push it.

We submit that herein lies the so-called "ripeness of the masses" for revolution. It occurs when the human transformation has progressed to a point of no return at which its needs so exceed those of a limited economic revolution as to carry that revolution beyond itself and into the next.

If this be true, any given society at the breaking point is always, so to speak, one revolution behind the next impending revolution. Our examination of the revolutions, fulfilled and aborted, for which we have sufficient data, bears this out, and we are reminded of what we stated at the beginning: that in the United States the current revolution calls not for socialism but for something beyond it.

The coming change, as we see it, will bring man from a condition in which he can maintain society only through the coercive institutions of government and law to a state of humaneness wherein all such institutionalised constraints will become unnecessary and will vanish. The individual man has long found them irksome; his more or less reluctant acceptance of the social order, and conviction that constraint is indispensable to its functioning. We grant that it has been so but believe that this revolution, if it is fully consummated, will virtually remove the element of interest/conflict from man's environment. In free interaction, the humanist ideal can be realized. We find it no less reasonable to postulate a functioning society without authority than to postulate an orderly universe without a god. Therefore the word "anarchy" is not for us freighted with connotations of disorder, chaos, or confusion. For humane men, living in non-competitive conditions of freedom from toil and of universal affluence, anarchy is simply the appropriate state of society.

To recapitulate: with productivity already straining the economic systems' capacity to cope with it, the impending advent of cheap nuclear power threatens an explosive expansion. These are prime preconditions for social disruption, but they do not ensure



tion of the species. In short, the Neolithic Revolution transformed *Homo sapiens faber* into *Homo sapiens domesticus*.

The Urban Revolution translated interdependence to subservience. More or less consciously, domestic man traded personal freedom for greater security. With the slaves read out of the human race, the application of their versatile labour power to productive techniques furnished mankind with fecund conditions to speed its development. In the affluent cities, the slave may have sunk to subhumanity, but the man became a citizen and a scholar.

When the harnessing of power obviated society's need to prune its work force from the body politic, the slaves at last made good their chronic demand for re-admission to the human race. The vindication of self they brought with them unfitted re-unified mankind for integration into progressively more ordered anthills. With the Industrial Revolution, man asserted his right to re-examine the concessions he had made to society. In capitalism's ruthless but sometimes rewarding competitiveness he became an individual, with impelling aspirations apart from the dictates of the social order.

Each revolution thus performs the human transformation that is prerequisite to the next revolution.

We suggest that the American Negro's drive for equality, insofar as it goes no further, is in essence a mop-up operation of the Industrial Revolution. If it were no more, an advanced industrial society could accede to it with little difficulty. But in the developing ideology and tactics of the Negro struggle here and of colonial movements elsewhere, we read a forecast of the next step in man's humanisation. Its vanguard is the widespread and growing insistence upon peaceable solutions to human problems, and the emergence in significant force of people neither listless nor subservient who are capable of non-violent conduct in the face of clubs, cattle prods, and even bullets. That non-violent tactics may be suicidal in a violent society is here beside the point. These people prefigure those of the new society. If the current revolution is to be pushed

foretell the course of the laser's development, given ample power? And here is power in plenty power to explore the universe, power to create the environments we desire. Here is the means to manipulate matter itself, even to establish balanced matter-energy cycles—the Philosophers stone, the Universal Solvent, and Perpetual Motion.

At just such a juncture of technology and, potential power did the slaveholders of Rome relegate the aeolipile to parlour amusement and the steam piston to opening temple doors. For the nuclear generator our own rulers have prepared a far more ominous dustbin.

The impending union of cybernation with nuclear power threatens sudden and violent disruption to an economy already troubled by its decreasing ability to sell the goods it must produce. We see in the rise of the extreme Right a response to the threat. In the United States, reaction now strives to ride to power on the wave of the white backlash, but its underlying causes are deeper and more fundamental.

We do not believe, as a majority of the Ad Hoc Committee apparently does, that institutions geared to promoting the interests of the class in power will or can act for the greater good of all humanity. Certainly we do not expect them to manifest such altruism in a situation of conflicting interests and values. Governing bodies can but arrest the current revolution at an intermediate stage of its development and stabilise society in a new equilibrium (possibly minimising disorder thereby, with less than optimum social benefit) or be themselves overwhelmed as the revolution sweeps to its consummation.

The dangers of a limited revolution are frightful and too little understood. The Ad Hoc Committee may prate about "planning agencies under democratic control," but the very folk wisdom tells us by what forces our so-called democratic processes are dominated. We have no illusions about their plans; their plans will be those of the capitalist class. The present division in its ranks offers

us not a lesser evil but a choice between equally abhorrent alternatives. Capitalism's "enlightened" wing, which sees advantage in social tranquility, may adopt what appears to be a favourable course. It may alleviate poverty; it may end racial discrimination; it may thaw the Cold War and cool off the hot ones; it may considerably reform the economic structure. If it does, it will do so only to secure a more placid population, more conformable to its control. Such expedients will not long be needed (though social habit may preserve them), for better means will soon be at hand. With the decipherment of the genetic code, the most terrifying nightmare of science fiction becomes the all-too-imminent probability: mankind can be stopped dead in its tracks, or its development can be permanently diverted into any direction the planners see fit. Reform thus becomes the means whereby automation's surplus production is used to impose paralysis. This cannot be shrugged off. Man's very capacity to rebel can be forever extinguished, as dissatisfaction is biologically eliminated from his prefabricated psychology. Whatever his existence he would be content, for he could be nothing else. It is to this fate that the primrose path of reform would lead us.

If replacement of purblind instinct with reasoned confrontation of environment is the prime direction of human evolution, then with each progressive transformation of society we see accelerated the humanisation of *Homo sapiens*. In transforming society he transforms himself, the more so as his responses grow more malleable to environmental conditioning, and as the relative importance of his social environment increases. To the pre-human who foraged and scavenged his meager subsistence in disadvantageous competition with saber-toothed cats, the natural environment must have loomed all-important. It is unlikely that he gave much thought to his relationships with his fellow-scroungers, or that those relationships became at all complex until tool-making and pyrotechny transformed his conditions of life. We venture to guess that it was in a consequent amplification of gregariousness

that speech developed the range and flexibility to become a serviceable instrument of communication.

It is difficult for us to imagine the psychology of that pre-toolmaking ancestor of ours. But after this earliest known transformation, we see developing traditions of toolmaking, socially transmitted and diffused techniques; we can trace community acceptance of new and improved designs. We view in a much more human light the social beings who shaped their flints into conventional laurel-leaf patterns. These are folk akin to us; they have evolved in our direction.

The man who emerged from the misnamed Neolithic Revolution was more human still: as he had become a farmer, he was by that much less a predator. Diminished predaciousness and the easier conditions of neolithic life opened up a new dimension in his conscious dealings with his environment. Hunting parties occasionally encountered each other in the forests and plains but so seldom that they could afford to settle their territorial conflict afresh with each encounter. If well-matched, they might fight it out on the spot; otherwise the weaker party might flee. Hunting populations were small, encounters rare, and territorial attachments slight, so much expedients served well enough. But men living in settled villages in fixed proximity had reason to seek more stable solutions. Abraham and Lot could put an end to their recurring conflicts by reasonably negotiating a mutually agreeable partition. Thus the neolithic milieu conduced to new concepts in people-to-people relationships, and provided the conditions to implement them. Agricultural work is cyclic, with periods of relative leisure between the time of sowing and the time of first cultivation, between the last cultivation and the harvest, and from harvest to the next year's sowing. Much of the new leisure must have been put to the exploration of interpersonal relations, for man had now come to conscious acceptance of his interdependence. In the climate of neolithic, social interaction—derived from this concept—wrought the domestica-