They require a wide exchange of information and ideas. This is what distinguishes the present-day economy from the economy, say, of the countries of the Ancient East.

But in the process of exchange of information and ideas in our country we come up against insurmountable difficulties. Truthful information about our shortcomings and negative phenomena is kept secret lest it be "used by hostile propaganda." Exchange of information with foreign countries is restricted out of fear of "penetration of hostile ideology." Theoretical conceptions and practical proposals, which may seem to be too bold to some, are suppressed immediately without any discussion because of fear that they may "undermine the foundations." There is obvious distrust of active persons who think critically and creatively.

Under these conditions, those who verbally profess dedication to the party but in fact are concerned with only their narrow personal interests and blind obedience move upward, while those who show high professional qualities and the strength of their convictions cannot. Restrictions on the exchange of information not only hamper control over managers and sap popular initiative but also deprive middle-level administrators of rights and information and transform them into mere executors or petty functionaries. High-ranking administrators receive incomplete or falsified information and thus cannot fully exercise their powers.

Our economy can be compared with traffic entering a crossroads. When cars were few, the police could easily cope with their task, and traffic ran smoothly. But as the number of cars continually increased, traffic jams occurred. What can be done in this situation? The drivers can be fined or the policemen changed. But this will not be the way out.

The only way out is to make the crossroads wider. The obstacles that prevent the development of our economy can be found outside it, in the field of public politics, and any measure that cannot eliminate these obstacles inevitably will be ineffective. The vestiges of the Stalin period still negatively affect the economy, and not only directly because of the lack of a scientific approach to the problems of organization and management, but in no less degree indirectly, through the general reduction of the creative potential of those representing all the professions. But it is creative work that is becoming progressively more important for the national economy under the conditions of the second industrial revolution.

In this connection one must also speak about the problems of the relationship between the state and the intelligentsia. Freedom of information and creativity is necessary for the intelligentsia because of the nature of its activity and of its social function. The desire of the intelligentsia to have greater freedom is legal and natural. But the state suppresses this desire by introducing various restrictions, administrative pressures, dismissals from employment, and even the holding of trials. This brings about a gap, mutual distrust, and profound lack of understand-

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ing that make fruitfu ficult between the par the most active (most strata of the intelliger tions of present-day where the role of th growing continuously, be termed suicidal.

The greater part of th.

youth realizes the necessity of democratization and of a cautious and gradual approach to this problem. But it can neither understand nor justify actions of an obviously antidemocratic nature. How can one justify keeping in prisons, camps, and mental asylums persons whose opposition is nevertheless quite legal in the realm of ideas and convictions? In fact, many cases involve no opposition whatever but simply a desire to have information and an impartial discussion of public questions.

It is intolerable to keep writers in prison for their work. One cannot understand or justify such foolish and extremely harmful steps as the expulsion from the Union of Writers of the greatest and most popular Soviet writer, a man deeply patriotic and humane in his every activity [*]; or the crushing of the editorial staff of *Novy Mir*, around which had united the most progressive forces of the Marxist-Leninist socialist orientation.

One has to come back again to ideological problems. Democratization, with its competitiveness and fullness of information, must bring back to our ideological life (social sciences, art, propaganda) its dynamic and creative nature; it must liquidate the bureaucratic, ritualistic, dogmatic, officious, hypocritical, untalented style which currently is such a prominent feature.

Democratization would eliminate the gap between the party-state apparatus and the intelligentsia. Mutual lack of understanding would give way to close cooperation. Democratization would summon a tide of enthusiasm comparable to that of the 1920s. The best intellectual forces of the country would be mobilized for the solution of social and economic problems.

Democratization is not an easy process. Its normal course will be threatened on the one hand by individualist and antisocialist forces, and on the other hand by those who advocate "strong power," fascist-style demagogues who may try to use for their own purpose the country's economic difficulties, the lack of mutual trust and understanding of the intelligentsia and the party-government apparatus, and the existence of a petty bourgeois and nationalist mood in certain sections of society.

But we must realize that for our country there is no other way out and that this difficult problem has to be solved. Democratization at the initiative and under the control of the highest authorities can allow this process to proceed according to plan, insuring that all the links of the party-state apparatus change to the new style of work that will involve more publicity, openness, and broader discus-*EDITOR'S NOTE: The reference presumably is to Alexander Solzhenitsyn.

The leaves fall, the blood	l flows d style.
by George Wald	ority of thly de-
Saturday Review	elves to
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gram of measures which may be taken within the

next four or five years. 1) A statement from the highest party and government authorities on the necessity of future democratization and on its rate and methods.

2) Restricted distribution . . . of information on the state of the country. . . . Later, access to this type of material should be gradually broadened and restrictions finally abolished altogether.

3) An end to the jamming of foreign broadcasts. Free sale of foreign books and periodicals. Entry of our country into the international copyright system. Gradual (three to four years) expansion of international tourism in both directions. Unrestricted international correspondence... 4) Establishment of an institute for the

study of public opinion. . . . 5) Amnesty for political prisoners. . .

6) Other measures to facilitate the operation of courts and procurators' offices and to insure their independence from the executive power....

7) Elimination of the nationality designation in passports. A single system of passports for urban and rural areas. Gradual elimination of passport registration...

8) Thoroughgoing organization of industrial associations (firms) with a high degree of independence in the problems of industrial planning and production processes, in sales and supplies, finances, and personnel....

9) Reforms in the field of education. Greater allocation for primary and high schools, improvement of the material situation of teachers, with greater independence and the right to experiment.

10) A law on the press and information, facilitating the establishment of new press organs by public organizations and groups of citizens.

11) Improved training of leading cadres versed in the art of management. . . .

12) Gradual introduction of the nomination of several candidates for a single post in elections to party and Soviet organs at all levels....

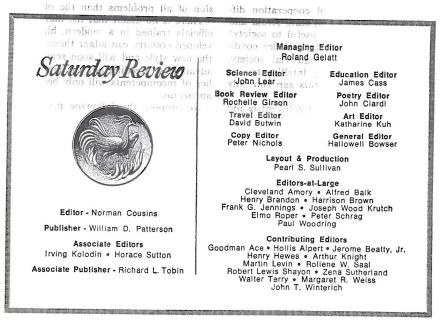
13) Extension of the rights of Soviet organs. Extension of the rights and responsibilities of the U.S.S.R. Supreme Soviet [Parliament].

14) Restoration of the rights of all nationalities forcibly resettled under Stalin. Of course, this plan must be regarded

as approximate. It is also clear that it must be complemented by a plan for economic and social measures worked out by specialists. We emphasize that democratization in itself does not solve economic problems; it merely creates the prerequisites for solutions. But without the prerequisites there cannot be solutions. A. D. SAKHAROV

N. D. SAKHAROV V. F. TURCHIN R. A. MEDVEDEV March 19, 1970

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The Leaves Fall, the Blood Flows

The name of George Wald, Harvard biology professor and Nobel Laureate in physiology and medicine, became nationally known following a talk he gave at Massachusetts Institute of Technology on March 4, 1969. The "Boston Globe" published the transcript of the talk, and the "New Yorker' magazine devoted its entire Talk of the Town department to excerpts. The speech has also been reprinted fully or in part in seven foreign languages. George Wald speaks to today's youth with special understanding and effectiveness. SR is pleased to make this page available to Professor Wald for a guest editorial.

During World War I, all Americans learned the German word *Schrecklichkeit* — frightfulness. We were told that *Schrecklichkeit* was a deliberate aspect of German military policy. Its point was to direct military operations in large part against civilians—to terrorize and starve civilian populations in the theater of war. All Americans felt that civilization needed to be defended against such practices.

It is hard for Americans to realize that our own Armed Forces now pursue such policies. It is now we who practice frightfulness. In our present methods of warfare, civilians are among the principal victims. Our operations are not intended to spare them, and the civilians, of course, most often lack the means of self-defense.

If our Department of Defense or our Armed Forces at present exercise

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any restraints in the procedures and weapons they have prepared for use, on the grounds of humanity or sparing non-combatants, I would be happy to know of them. There still seems to be some compunction about shooting civilians while looking at them; a number of soldiers and ex-soldiers are about to be court-martialed for allegedly having done that. But if noncombatants are killed from the air, or with artillery, or by some indirect means so that they are not visibly and individually identifiable as civilians, that seems altogether acceptable.

However, the military mustn't be blamed for all of this. Much of it was started and is fostered by civilians.

Our use of defoliation and herbicides in Vietnam is a case in point. A major change in U.S. policy occurred in November 1955, when Secretary of the Army Wilbur M. Brucker approved the report of a civilian advisory committee that urged the development of instruments of chemical, biological, and radiological warfare "to the fullest extent the human mind can encompass" (The New York Times, November 7, 1955). That decision marked the beginning of our modern CBW establishment. In the fifteen years since, the CBW community seems to have been engaged in fulfilling this program to the letter.

At the heart of the American system is civilian control of the military. Among the major instruments of that control should be the House Armed Services Committee and the Senate Military Affairs Committee. Those committees, however, rather than restraining the military, goad them on, particularly in the expenditure of military equipment and funds, and in the expansion of defense contracts. As the whole world looks with hope to the Strategic Arms Limitation Talks (SALT) in Vienna, Representative L. Mendel Rivers (D-S.C.), Chairman of the House Armed Services Committee, calls those talks a meaningless exercise (the *Times*, April 29, 1970). So, it wouldn't be fair to blame these things entirely on the military.

Always the excuse made for acts of atrocity, such as in the Mylai massacre, is that our men are fighting for their lives in a war in which civilians do take part. Often I am asked: What would you do? I think the point is that, if one finds oneself fighting old men, and mothers, and five-year-old children, then one is in the wrong war, and had better get out of it.

Students in Santa Barbara recently burned down a bank, and here and there other students are breaking up ROTC offices. I abhor violence in all its forms, wherever it happens. Student violence, like black violence, is a symptom of despair, of hopelessness. Give the students and black people, and red and yellow and brown people, some grounds for hope, and they will turn from violence to working to fulfill that hope.

But, of course, the big violence in the world occurs under official auspices. Student violence usually stops at breaking windows; but "law and order" begins with breaking heads.

In the case of our intervention in Cambodia, we are told that the internal conflict there is in no sense a civil war, but a matter of foreign aggression. The penetration by American troops twenty miles into the country is "not an invasion." It took only twenty-four hours for that noninvasion to turn from a South Vietnamese force accompanied by American advisers to an American force accompanied by South Vietnamese auxiliaries.

Every killing that we know about anywhere in the world we share in, we well-behaved civilians trying to live decent lives. We share responsibility for every maiming, burning, and starving out of civilians, of innocent and helpless persons, and for every child who is hurt, orphaned, sick, or hungry. That is true if only because, knowing of these things, one grows used to them, one ceases to respond.

Our country took the lead in drafting the Geneva Protocol of 1925, which banned the use in war of all "asphyxiating, poisonous, or other gases" and of "bacteriological methods of war-

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fare," but the Protocol was never ratified by the Senate.

Why have we not even now ratified the Geneva Protocol? A curious consideration keeps this from happening. Virtually all the rest of the civilized world includes among the gases mentioned the so-called incapacitating gases—tear gas and CS, really a lung rather than a tear gas-as well as herbicides and defoliants. Our government from the beginning has wanted the 'incapacitating gases" excluded from the Protocol on the curious ground that we should not refuse to use on an enemy what we use on our own people. We speak of the tear gases and CS as "riot control agents." There are two major difficulties with this view. As riot control agents, these materials are used in the open, and their purpose is to make people move away from the area of application. In Vietnam, however, they have frequently been used on underground shelters, where their concentration rises to such levels as to become lethal, particularly to children. The main object of their use in underground shelters is to drive persons out from under cover so as to expose them to attack by other means, by bombing or artillery fire. So what are "riot control agents" here become lethal weapons under combat conditions, as in Vietnam.

It is much the same with the use of defoliants and herbicides. Our government stands almost alone in insisting on exempting these agents from the terms of the Geneva Protocol. Apparently, at the Geneva Conference in 1925, everyone else agreed that the Protocol included among the chemical weapons it intended to ban both tear gases and herbicides.

Defoliation and herbicides kill not only plants but men. The most widely used agent of defoliation in Vietnam has been a 50-50 mixture of 2,4-D and 2,4,5-T. The latter has been shown to cause a high incidence of birth deformities-teratogenic effects-in pregnant rats and mice, when fed in extraordinarily small amounts, such as might easily be reached by drinking water in the sprayed areas. We have as yet no definite information of its effects on man. Yet, at least four newspapers in South Vietnam reported last summer a remarkable rise in the incidence of deformed babies in areas that had been sprayed with 2,4,5-T. The newspapers were promptly closed by the Thieu government for "interfering with the war effort" (New York Post, November 4, 1969). Further, 2,4-D has been reported to cause a significant rise in birth abnormalities in experimental animals. These chemicals have been in common use in the United States for weed control, but under

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JOSEPH WOOD KRUTCH, a longtime contributor and editor-at-large of SR, died in Tucson, Arizona, on May 22 at the age of seventy-six. He was an enlightened critic of the human situation with a boundless appreciation for man's creative bent. Krutch never separated man from his natural setting, and he devoted all his efforts to the cause of a world congenial to the human spirit.

carefully restricted conditions. They have been sprayed in Vietnam without those restrictions, and at more than ten times the concentrations employed here.

Herbicides also, as used in Vietnam, are lethal weapons. In that poor country, where most of the population is never far above the subsistence level, they are used to destroy food crops. Our food destruction programs in Vietnam—and now also in Cambodia are almost exclusively directed against civilians. The point is simple enough. When food is scarce, soldiers take what they want. It is the weak and defenseless who do without: the aged, infirm, the women, and most of all the children.

Why do we do such things? One major objective of our herbicide and defoliation programs in Indochina is to make large sections of the countryside uninhabitable, and so to drive the farmers and peasants into the cities. Wars of national liberation have their principal base in the peasantry. Destroy the peasantry by destroying the countryside, and the base has been removed.

The major villain in the piece is, of course, the concept of total war. War itself is an atrocity, and by now has become so dangerous that we cannot live with it much longer. Total war is altogether depraved and brutalizing. It leaves one nothing with which to continue. The vanquished are hardly more injured than the victors. Even the spectators are maimed irretrievably. For they grow used to the atrocities and cease to respond, and so forgo their common humanity.

All the chickens are coming home to roost. A few months ago, CS was sprayed by helicopter upon a penned-in crowd of students and faculty on the Berkeley campus. Within the space of a few days, four unarmed white students have been shot dead at Kent, Ohio; two black students at Jackson, Mississippi; and six alleged black looters in Augusta, Georgia. The Bill of Rights is under fire, the news media are harassed by the administration, and construction workers beat up peace demonstrators while members of the financial community and the police look on. Having been stopped by the Senate from degrading the Supreme Court, the President seems bent on subverting and humiliating the Senate. We have supported military dictatorships in so many places-Spain, Greece, Brazil, South Vietnam, now Cambodia, to name a few-is dictatorship also coming home to roost?

That is now our problem.

-GEORGE WALD.

Reptile in October

by Alexander Laing

Chinking on hardpan, my long shovel levels to hoist deep topsoil to the barrow and with it, an oddity, bump-skinned.

A truffle, maybe?

Small, black brightness glints. I kneel

as my truffle opens a wart that becomes an eye,

lifts a minutely-fingered

outraged hand against the light's intrusion.

What have I done? What am I to do?

As I cup the sodden limpness of your sleep

in this blood-raveled hand, I give you

quick April. Your galvanic leap

returns you to October.

What are we to do?

Stumbling, I drive the blade

in rumpled soil,

place you as far as you were below the surface. You lunge, you scrabble at the crumbling walls.

As I sift well-meant earth

you leap, and leap more wildly, shaking it off.

Now you are hidden, but the fresh earth trembles.

Now you are wholly buried.

What have I done?