### FRONT PAGE COMMENT:

# IMPORTS, DOMESTIC TRAI ECONOMIC GROWI

processing some of the

beans into cocoa paste and

cocoa butter. Once again,

appeared. Cocoa paste

fell from £207 per ton in

1962 and to £16 per ton

Julius Sago

If a trade deficit of this

magnitude is to be main-

tained—and this is the

logical consequence of a

policy of letting imports

flow in unchecked—then

we have to draw on our re-

serves of foreign currency

in 1963.

THE problems of shortages, hoarding, rising prices that face our nationa! economy arise from a reduction in the volume of imported consumer goods coupled with an expansion in total purchasing power due primarily to increased employ ment. While the quantities of

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tionary, the amount of And to the extent that money the public has to local industries are driven social services These factors-con-

tracting imports of consumer goods and expanding purchasing power of the people taken as a wholehave combined to create the present situation of hoarding, black marketing and profiteering. Those who handle the nation's retail trade are evading the price control machinery in order to reap abnormal profits by exploiting the existing inflationary pressure on consumer goods.

This problem rightly agitates the minds of all. Many see it merely as a cost-ofliving problem. While not ignoring the cost-of-living element, it is, however, more fundamental to see the problem in its bigger context, namely in its relation to the overall economic development of this country.

It is not the intention of the Party or Government to create shortages of consumer goods. The policy is to meet consumer demand in full; but to raise home supply of these consumer goods relatively to the overseas supply. In other words, while meeting the demand for consumer goods, official policy is to draw more on home production and less on imports.

There are sound reasons for this. In the first place, a reliance on imports willworsen, our balance of trade deficit with two serious consequences—a depletion of our reserves of foreign currency to the detriment of the Ghanaian E, and a slow-down or even abandonment of our

plans for industrialisation and modernisation of agriculture. Eventually, we will have to seek large overseas credits and loans even to maintain our level of imports. The result is loss of e c on o mic independence and hence of national independence.

In the second place, a consumer goods brought reliance on imports of conin from overseas are con-sumer goods will undertracting or remain sta- mine our young industries. spend is expanding, thanks out of production, to that to growing employment extent will employment and to expanding free opportunities contract and unemployment grow. What the Party and

Government are doing is to shift consumption away from overseas supply and on to home supply. This major exercise involves major quantitative and structural changes in our economic production. Existing factories must cxpand output; more factories have to be built existing economic institutions have to be altered and new ones built up. All this takes time. Therefore there is bound to be a period of disequilibrium which coincides roughly with the length of time needed to bring the new economicpattern into full and efficient operation. This interval of time will be marked by dislocations of the old economic rhythm, by shortages alternating with surpluses, by fluctuations in prices, etc. However, it is the duty of the Party and Government to see to it firstly, that the changeover period is as short as possible; and secondly, that unscrupulous elements do not add to the temporary hardships of the people by exploiting the situa-tion to enrich themselves at the expense of the general public.

Some people think the way out of our present difficulties is to allow the consumer goods to come in more freely from overseas. Their view is that if the local market is saturated with imports, black

marketing will disappear and hoarding will no longer be a paying concern. Even a price control ma- the fall in world prices re-

chinery would be redund-

On the face of it, this 1961 to £70 per ton in looks a plausible argument. But, alas, this view is not in 1963. Cocoa butter fell based on the realities of from £417 per ton in 1961 Ghana's foreign trade po- to £236 per ton in 1962, sition. And its adoption picking up to £355 per ton will lead to a blind alley temporary advantages which lead ultimately to economic stagnation and to more foreign control over Ghana's economy.

Let's look at the facts. Since 1956 (that is, even before independ ence) Ghana has had a balance of payments deficit. Apart from 1958 and 1959, this deficit in the balance of payments has been growing. This is brought out in table I below:

TABLE I

Ghana's overall balance of payments (in million pounds.) 1960 1961 1962 1963 1956 1957 1958 1959 -£2.3 -£5.0 †£19.9 †£0.3 -£13.6 -£27.6 -£1.7 -£21.5

(N.B. † indicates a favourable balance and — a deficit).

From £86.5m. in 1956, our exports went up to went up from £88.9m. in 1956 to £130.3m. in 1963, an increase of 46 per cent by value.

This retarded growth in exports has not been due to a drop in production at home. Cocoa output, for example, went up from 300.000 tons in 1954 to 421,000 tons in 1962.

slow expansion of exports by value is the steady fall in world commodity prices.
Cocoa prices fell from over £300 per ton in 1954 to a little above £170 per ton in 1961. And the fall has continued—from £171 per ton in 1961 to £159 per ton in 1962 and £168 per ton in 1963.

We tried to maintain the prices for cocoa beans by free education system, we out in Table II below.

Again, our imports have to balance our trading been growing at a faster operations. Our reserves rate than our exports. of foreign currencies (i.e. excluding gold) at the end of 1963 stood at £33.5m. £108.8m. in 1963—an in- It is clear that only two crease of 26 per cent by years are needed to liquivalue. But our imports date our reserves of foreign currencies should we leave our trade deficit where it is.

The policy of borrowing from the International Monetary Fund to balance our payments overseas is no solution because we have to pay back what we borrow.

The social consequences The primary cause for a of a policy of letting in imports unchecked are disastrous. While our consumers create a ready market for foreign goods, new local industries will not come into being and existing ones may be forced to close down. Unemployment will grow; and thanks to a high birth rate (2.6 per cent compared to U.K.'s 0.5 per cent) and a

shall have a growing pool of literate unempolyed in this country. This way lies political explosion of the most violent type.

wisdom of changing the Sterling Area. direction of our foreign on importing from the traditional markets (i.e. the Sterling Area) and to refrain from opening up new markets. This is the standpoint of the foreign companies in this country However, these firms do Africa. not own up this fact. Instead, they proceed by way of condemning trade with socialist countries as "fraternising with communism" as if anyone is interested in the religion of the fishmonger when the whole exercise is to buy fish at the lowest price possible. The se foreign merchants also drag in the argument of quality, completely losing sight of the even more important factor of relative prices.

The case for a change in the direction of our foreign trade is irrefutable if only we allow ourselves to be guided by the facts. Our trade with the Sterling Area shows a persistent deficit. This is also true of our trade with Japan and with African countries not within the Sterling Area.

Our trade with the European Economic Community has shown a favourable balance for several years although a deficit appeared for the first time in 1963.

Our trade with the Dolar Area and the socialist countries has shown a favourable balance.

These facts are brought

TABLE II

(Ghana's trade balance with various areas)

-£12.2m. -£20.6m. -£4.9m.  $-£15.2m_{i}$ Sterling Area . European Economic †£ 7.6m. †£ 5.7m. †£ 6.1m. -£ 1.9m., Community †£ 7.7m. †£12.6m. †£ 8.3m. †£ 6.9m. Dollar Area †£ 2.8m. -£ 2.4m. †£ 1.5m. †£ .7m. Socialist countries African countries (not in -£ 5m. -£ 7.8m. -£ 4.4m. -£ 4.3m.

(N.B. † indicates a favourable balance and — a deficit).

The inescapable logic of

sterling Area)

Japan

Alternatively, these trade. They want us to go areas have got to take much more of our exports.

But since we may not ports to these areas, at least in the short-run, the only way out for us is to cut down our imports from which see a change in our the Sterling Area, from trade pattern as injurious Japan and from the non-. to their home economies. sterling countries of

The figures further show that we can import more from the dollar area and the socialist countries without running the risk of creating a trade deficit. It is here important to point out that it will not be wise economic policy to liquidate our favourable trade balance with the dollar area by a great expansion of imports for these sources, because the most advantageous reserve of foreign currency to hold is the dollar. We therefore have to draw our imports more from E.E.C. countries and the socialist countries while quickly building up local production of these consumer goods.

There is a third aspect Faced with the above this state of foreign trade to the problem of restrictfacts and figures, some is that we have to cut ing the imports of consupeople admit the need for down on our imports from mer goods. This country is a reduction in the volume the Sterling Area, from committed to a policy of of imported consumer Japan and from the Airi- rapid industrialisation and goods but question the can countries not in the modernisation of agriculture. Without this, there can be no meaningful talk about economic reconstruction.

-£10m. -£ 9.4m. -£ 5.3m. -£ 4.3m.

But because we are not, succeed in expanding ex- at the moment, an industrial economy, we have to import the capital equipment needed for industrialisation and for a modern agriculture. This means an increase in the import of industrial goods and machinery.

If total imports are to go down, in order to solve our balance of payments problem, and imports of industrial goods and equipment are to go up to meet our programme of industrialisation and modernisation of agriculture, it follows that there must be a sharp drop in the value of imported consumer goods. In other words, the relative importance of consumer goods in our total imports must fall while the relative importance of industrial goods and equipment must go up. And this is precisely what the government has been doing in the past few year. Look at Table III be-

Continued on Dag

#### TABLE III (Relative importance of consumer and industrial goods

	· · · · · · · · · · · · · · · · · · ·		Ghana's			irrui goo		
		1961		19	62	19	1963	
		value	% total	value	% total	value	% tote	
I.	Consumer goods	£70.5m.	49.4	£44.8m.	47.9	£49.3m.	39.4	
	Raw & semi- finished pro-						-	
	ducts for in- dustry, etc.	£39 5m.	27.7	£32.9m.	28.3	£39.5m.	3∩ ⊿	
נון	Capital euipment in- cluding fuel							
	and lubri-						δυ	
	canis	£32.6m.	22.9	£27.8m	23.8	£39.4m.		

# Science and the Building of

RUMANIAN science, very often treated with contempt and indifference in the past and lacking any material support from the former responsible authorities managed to make headway and obtain successes, sometimes remarkable, through the isolated efforts and endeavours of the creators, who generally had to face an attitude of open hostility and disdain on the part of officialdom.

Under people's power, remarkable conditions, of which one could hardly even dream before, have been created for the development of science and culture, which have become useful factors promoting the general interests of building up the new social order.

rial and moral conditions provided for that creation co-ordinative combinations, which pursues lasting achievements, which is capable to enrich the cultural and scientific treasure of this country—bring about ever more successes in this field and make room for the sound spirit of emulation in the scientists noble work. Scientific work, enjoying the appreciation of the entire people is an active contribution of a new method for calculato the progress of science, to the development of socialist culture and economy.

#### SPECIALIZED UNITS

The scientific work carried out under the auspices and guidance of the Academy of the RPR is concentrated in 40 specialized units where several thousands of research workers and experts are provided with the conditions necessary to carrying out their researches.

The investigations made by the scientists of this country and especially of the highest scientific organization of Rumania, the RPR Academy, have been directed towards domains of topical interest, both theoretically and practically, such as: nuclear physics, the physics of semiconductors. macromolecular chemistry, the chemistry of hydrocarbons, the mechanics of solid bodies, the discovery of deposits of valuable substances, the theory of finite automata, the applications of mathematics in economics; cellular substructure and the biochemical basis of the functions of the organism, concrete sociological research, structural linguistics, topical problems of the philosophy of natural sciences, of the methodology of special sciences, concrete historical and sociological researches, etc.

In order to promote such scientific studies, the RPR Academy has organized a number of debates on problems of genetics, linguistics, the orientation and direction of researches in energetics and machine building.

Last year for instance, the Rumanian scientists obtained numerous valuable achievements in all domains in which the Academy is concerned. Our mathematicians must be praised for their achievements in the domain of the spetral theory, in differential geometry, algebra, for the researches in generalized sector derivatives, the axiomatic theory of Dirichlet's problems, the theory of finite automata, the high-speed dynamics of gases. the study of aleatory processes, the approximation of functions, etc.

#### REMARKABLE SUCCESSES

In 1963 the seminar of mathematical linguistics and the colloquy on the approximation of functions with applications to numerical calculus, scientific manifestations which attracted many participants also from abroad-were held in the RPR and enjoyed considerable suc-

Remarkable are also the successes of our physicists (a complex study of the structure of atomic nuclei, of the interaction in the structure of sub-

Well known men of science stances in different states of and letter have put their pas- aggregation, the study of the sion, efforts and creative energy interaction of elementary partiat the service of the magni- cles on fluids, the physics of ficent, renewing transforma- solid bodies, the properties of tions taking place in today's oxide semiconductors, the tun-Rumania. The civic conscious- nel effect in semiconductors, ness of the creators, the mate- etc.) of the chemists (the nature of the chemical link in the study of binary mixtures of dissolved salts, a relatively easy synthesis of the two isomers of the cyclo-buta-diene mire, etc.)

> As to technical sciences, mention must be made of the elaboration of a theory for the analysis of electrical networks, ting the divergence speed of a lifting surface in a supersonic current. The lubrication theory was extended to the case of surfaces with rolling movement, a new theory of the movement of heavy fluids with a free surface has been made through ultrasounds in the structural modification of metals by wear and tear.

The geological researches have clarified some matters of the sediment genesis of the flysch and sandstone, and have established the characteristic associations of micro-organisms with a view to their separation from different strati-graphic layers. Geographers have continued the studies on the direction of the Danube valley and the formation of dunes associated with them. Biologists have continued their researches for elaborating the work on the flora and fauna of the R.P.R. Their studies of cell physiology in some plants have contributed to theoretically clarifying the mechanisms which take place at the level of cells Animal physiology has made progress with studying the phenomenon of ionic equilibrium in man's organism and with the researches on metabolism regulation in birds. In the agricultural sciences work has continued for elaborating Wine and Fruit Tree Growing in the RPR as well as the researches in soil sciences.

#### HISTORICAL **EXPERIENCE**

New results have been obtained in the field of medical sciences as regards the role of chemical intermediates in the transmission of the nervous influx, the role of vaso-motor reflexes in the determinism of cerebral vascular accidents, in the study of cellular dynamics. New hormonal epiphyseal fragments have been isolated. Studies have been made in the relations between adencberuses and the appearance of lung cancer, as well as the transformation outside the cell of inert nuclei acids into infectious nucleic acids.

The researches in the field of social sciences were directed towards generalizing the historical experience of the Rumanian people in the construction of socialist society, and the elaboration of important synthesis works. In the field of linguistics, the General Dictionary of the Rumanian Language is in preparation as well as the treatise on the History of the Rumanian Lánguage. In the field of logic, fruitful studies on the basic problems of contemporary logic, on its principles, on the relation between apophoristic logic and mathematical logic. on the forms of judgement and reasoning, have been carried

# Socialism

At the laying of the foundation stone of the buildings for the atomic reactor at Kwabenya, Accra, Kwame Nkrumah declared the maxim: "Socialism without science is void". Following this all-important statement. "The Spark" begins today to run a series on the importance of science in the socialist revolutions.

The contributions are being made by two eminent scientists. One is a socialist in a socialist country, Rumania, looking at the problem from that angle. The other is a socialist in a capitalist country, Britain, considering the same problem from his standpoint.

The first is academician Rumitru Dumitrescu, First Secretary of the Rumanian People's Republic Academy. Dr. Dumitrescu who is also head of a department at the Bucharest Polytechnic Institute has published several works on problems of theoretical and experimental hydraulics. His original contributions won him the State Prize in 1963.

The other contributor, Dr. E. V. Rowsell is a world famous British scientist and Marxist with several publications to his name. We sincerely believe our readers will greatly enjoy reading what these eminent scientists say on this important subject.

some works of applied science ministries as well as researches diseases.

Simultaneously with the have been under-taken such as fundamental studies, in the in- the tasks set by the technical stitute of the RPR Academy. State plan or suggested by the

which were the normal outcome of the theoretical results previously achieved. Thus the studies in the sphere of ra-contemporary science affords, dioactive isotopes have been the activity of the scientists applied to the petroleum in- concentrates on those domains dustry, to mechanization, etc. Achievements have been obtained also in the application tance. The scientific plans of of semiconductors.

#### EVER HIGHER LEVELS

In technical sciences let us mention the studies concerning Rumanian motor vehicles, the creation of an automatic system for regulating the charge of hydraulic turbines. Special attention is given in geology to the theoretical studies underlying the prospection of deposits, and in biology to the hy-drobiological study of the water in the Black Sea and in some tributaries of the Danube, as well as to the methods of controlling some plant

sing their work to an ever higher level. Science plays an important part in all the spheres of life, it opens up new

It is to this end that the vistas to the material and spiritual progress of the workingpeople. In order most efficient to apply the possibilities which which have the greatest theoretical and practical importhe institutes, of the branches and research bases of the Academy, like those of the institutes under various ministries. reflect the main features of modern research themes, the judicious indication of the spheres of study the careful selection of the problems studied, the adequate tackling of complex problems. Thus the scientific work has been rendered efficient and interesting, the existing means and research forces being used in a rational

In the last few years, the in finding the best ways and theoretical problems with the socialist construction.

manner.

Revolution And

The Rumanian scientists prospective development of direct their efforts towards rai- the main branches of the na-

scientific forces have been concentrated and directed. For the purpose, systematic consultations with ministries and other central bodies as well as specialists in factories and mills have been undertaken. This has made possible the more precise outlining of the problems of definite theoretical and practical importance, towards which the creative activity should be directed.

The socialist state provides the most favourable conditions for scientific researches, investing important funds in the development of the material basis, in research and the promotion of science. The important tasks of the RPR Academy in support of the deve-kopment of the national eco-nomy and the flourishing of culture, muster the energies and creative possibilities of scientists have been concerned scientists for increasing the contribution of Rumanian means so as to co-ordinate the science to the completion of

## Science,

THE need to refurnish our industry with the most modern technology, and the need to expand opportunities in education to provide increasing numbers especially of scientists, engineers and technicians, these related themes are now close to the centre of political discussion in Britain.

part of a whole pattern of for years to come. In the world-wide development, a 1930's, they were already co-scientific and industrial revolu-ming to grips with the protion that will eventually trans- blems which now become the form the material conditions subject of widespread debate. and the culture for all mankind. Humanity now stands on the brink of scientific advances which hold colossal potentialities for improving man's lot.

Throughout this century, there have been opportunistic or apprehensive speculations as to the social impact of the continued growth of science. However, until recent years, with some notable exceptions, the interest was expressed mainly in a way which implied that the necessity of grappling with the problems involved would be for future generations. The present interest is quickened by an appreciation that the world is already in a phase of revolutionary change. Problems emerge for discussion that impinge on the shaping of current national policies.

#### PROBLEMS FOR BRITAIN

In Britain, how much research can we afford?

Taking into account the limits of our resources should we take calculated risks and concentrate industrial research and development effort on relatively few projects? Can a general strategy of optimal advance be designed integrating programmes for fundamental and applied science? How can we make science an integral part of our whole culture? Journals are founded to stimulate discussion and investigation on these and allied problems. A study of the history of science can illuminate many of the questions we must now ask and there is

n renewal of interest here Not so many years ago science as a transforming social force was thought worthy of detailed consideration only by a few. One thinks of pioneers such as Bernal, Blackett, Haldane and Hogben. Their impulse was a science concern that

There is fuller an increas-ing awareness that the chan-harnessed to serve humanity. ges immediately needed in Their writings will be an in-Britain must be seen as just a spiration and a quarry of ideas

> inis recent spread of inte rest has every appearance of being here to stay. It is a welcome development. Yet there are serious limitations in the present discussions. Many participants for instance admit their debt to Bernal's pioneering studies. However, the passionate humanism that continues to mark his work in this field, for instance in World Without War (1958), finds only a pale reflection generally in contemporary discussions. And it is clear enough that it is not thought fit to make use of Marxism, though Bernal has never made a secret of the fact that this philosophy has always been his guide.

> It is only possible to understand and point the way to control the growth and application of science when these are observed together with many other interacting factors in a complex pattern of social change. Advances in technology have a profound impact on the development of society, and the whole process is accelerated when technological innovation is guided by scientific un-derstanding. But it is not a one-sided process.

> Social and economic pressures operate; some can foster, others frustrate progress. However, one does not see in the present discussions anything like a proper recognition of their strength or significance

Sometimes they proceed as if fact gathering and an exchange of ideas between eminently reasonable and impartial scientists, engineers and administrators were all that were needed to solve the problems of scientific and industrial advance. And it is assumed that this will automatically bring a general betterment. This is far too comfortable an approach. For example the installation of radically new plant and methods in industry and the programmes of research and development which

and control capital; and the large capital resources. Whether or not these are made available for any projects in Britain today is largely decided by the few who own and control capital; and the expectation of a fairly immediate profit from investment is their guide.

This does not inevitably serve the long term advantages of many with a stake in capitalism. And it would be retaken on this basis were found sober and realistic assessment markable indeed if decisions to fit a rationally designed programme for continuous technological and industrial needs of the whole people

optimism. The language of must be tried for the re-invimany official reports on our economy, or on the application of science in our industries, would hardly encourage one to believe that a scientific and industrial revolution is being engineered. No doubt there are those who will see these reports as giving a

Timid and pessimistic advance appropriate to the would be a more accurate description. But since it is

of possibilities for progress.

#### By E. V. Rowsell

and to our national resources. How may the present mechanism for making such decisions be changed to serve the national interest? Could it be done through controls on the movement of private capital? Would extensive government investment in private indus-try be adequate? Is extensive social ownership of our major industries the only effective way? It is in the nature of the problem that political issues are involved. But no discussion on scientific and economic progress can ignore these questions if it intends to be more than table talk.

#### FRUSTRATIONS UNDER CAPITALISM

One suspects that many simply do not want to become embroilled in politics. A brave new world is visualised made possible by the advance of science. And there is a confident belief that our century will see it. But the political struggles which must mark the way are not a subject for discussion. The result is that only the most shallow consideration is given to the social and economic movement with which scientific and material advance is inextricably enmeshed. And it would be wrong to give the impression that everyone shares this vision of our generation building a brave new world. Few who are concerned with the administration, of British intry have that degree of

assumed that the way in which our industries operate is to remain fundamentally unchanged no more can be expected. The following comment on the Machine Tool Industry from a recent of socialism substantial im-N.E.D.C. report illustrates provements cannot be made. the anarchy our industries must contend with.

'The industry has stress-

ed that the big fluctuations in demand for machine tools arising from the cyclical movements in manufacturing investment and th associated bunching of orders are a drag on its efficiency. They involve underused capacity for much of the time and the break-up of skilled labour forces; and overstrain for much of the rest, with frustrated orders, and an increase in imports. Recent developments suggest that just such a cycle is in progress and that the inefficiencies associated with it will be no different from those in the past. Under such conditions the industry's growth objective would seem increasingly unlikely to be realised".

A bold strategy for the initiation of industrial revolution is not going to be conceived, still less carried through, in that kind of economic environment.

There are some nevertheless who are hopeful enough to see a grand application of science to our industries as the latest new medicine that

goration of British capitalism. It has even been implied that computer techniques could be employed to manage its political problems.

Politics (1)

In this situation Marxists must restate their position. Marxists stand on the side of those who see a new world being born in which poverty, drudgery, disease, ignorance and squalor will be banished for ever; and agree that the fullest flowering of science will be one of the necessary conditions. And they in fact cannot avoid the conclusion that substantial progress will be made only through challenging the basic tenets of British capitalism.

One purpose of this contribution is to underline again some of the obstacles inherent in British capitalist society that stand in the way of the full and proper use of

This is not to say that short The brighter prospects for expansion in the facilities for higher education are one indication of what can be done. And Marxists have not been slow in insisting that this is a key to general advance. We. can be sure that in locating some of the obstacles to scientific and industrial progress that tend to be entrenched in our society we shall find areas where the most far reaching improvemnts can be made, and some within the framework of capitalism.

#### ACHIEVEMENTS OF BRITISH SCIENCE

However (putting aside for the moment criticisms of the scale and direction of effort). it would be well to note first on the credit side that the quality of British science and technology is as good as it ever was.

The fine record of Nobel Prize Awards is ample evidence of the excellence of our fundamental research; and this is paralleled by achievements of equal merit in many fields of applied science. The development of nuclear fuel-

Continued on page 4

— by –

F. E. BOATENG.

General Secretary, The

Accra Assembly of the

World Without The Bomb.

decision, on a controversal

international issue such as the

Multilateral Nuclear Force.

The question is, will America

and Federal Republic of

Germany be prepared to start the scheme without their allies

and risk the possibility of.

deepening the obvious fis-

sures in the NATO Alliance?

While considering the NATO Multilateral Nuclear

Force for what it is worth, it

is relevant to ask whether the

disease from which NATO

is suffering has been correctly diagnosed and whether the

potion being given to cure it,

In the two world wars in a space of a quarter of a cen-

tury the United States had to

break her isolation to join in

against an aggressor in Europe. It could be argued that

this fact justifies United States

hegemony in Europe. Per-

haps this argument would

have been tenable if world

The end of the last war saw

broken Europe; there were

whole cities to be built and

whole economies to be recon-

structed. The only country

which at the end of the war

could offer any assistance for

the reconstruction of Europe

was the United States which

because of her distance from

the war theatre escaped the

U.S. POLICY OF

"CONTAINMENT"

Moreover, militarily, the

United States had developed

the atomb bomb which was

considered a deterrent to ag-

gression from any direction

In the meantime the temporary

'bed-fellowship' which had

existed between the capitalist

world and the Soviet Union

in the face of a common enemy had ended and Ma-

Carthysm which had hightened

prejudices in the United States

had given rise to the U.S policy of "containment", a policy aimed at strengthening

the position of world impe-

rialism under the guise pre-

venting the spread of commu-

nism. All this had given new

impetus to the ideological con-

flict often referred to as the

It was within these circum-

stances that NATO was born.

It was conceived as a military

alliance linking the imperialist

powers as well as a political

unit. The US could hold the

hegemony in this alliance be-

cause at the time she posses-

sed the means to assist in re-

constructing Europe's broken

economy and she possessed

the atom bomb which could

be a deciding fact in any con-

The present circumstances

however, present a changed

circumstance. European eco-

nomy has been reconstructed

and is booming and American

assistance is therefore no long-

er needed to sustain it; nuclear

weapons have gone beyond the

Cold War.

ravages of the conflict.

ed static.

is the correct one?

# Multilateral Nuclear Force

THE current session of the NATO council in Paris will be faced with a number of problems which although relevant to the maintenance of unity within the NATO alliance, have no easy solutions. Mr. Harold Wilson and President Johnson have already had talks. Since their talks a meeting between the British Foreign Secretary, Mr. Gordon Walker and the West German Foreign Minister, Dr. Shroeder, has taken place in London, with a promise of further meetings early in the new year. At this meeting, the German Foreign Minister was presented with the British Government's proposal for the creation of an Atlantic Nuclear Force. On Mr. Walker's arrival in Paris, he had talks with the French Foreign Minister and presented him with a copy of the British Proposals. Mr. Walker has instructions also to arrange an early meeting between the British Prime Minister and President de Gaulle.

The statement issued at the end of the Johnson-Wilson talks indicate that questions affecting the NATO alliance, particularly in relation to its collective defence, including the controversal Multilateral Nuclear Force, were discussed. Although the statement itself does not announce any agreements reached between President Johnson and Mr. Wilson on the future of the Multilateral Nuclear Force or on any suggested modifications to it, a statement from the BBC correspondent in Washington indicated an agreement by the U.S. to suspend the scheme.

The Multilateral Nuclear Force, on the face of it, can be regarded as a feverish attempt by the United States to dispel fears created by the retreat of Kennedy's Administration from its doctrines of "massive retaliation"—deterrence by threatening obliteration of enemy cities imme diately upon attack—to one of "counterforce"—an attempt to limit nuclear exchanges initially to destroying the enemy's retaliating capacity. This fact of a shift in doctrine is borne out by the increase in conventional force especially in Europe, the removal of the essentially firststrike rockets, Thor and Jupiter from Britain, Turkey and Italy and the creation of a second-strike capability in the form of Minuteman and Polaprobable, and by others on the ground that the doctrine options" had considerably broadened the scope of the arms race, the US continued to press for the highest degree of central control and the abolition of independent deterrent.

#### U.S. DOCTRINE REJECTED

When her allies showed reluctance to go along with this new doctrine, West Germany, because she could no longer trust America to react with nuclear arms to attack on European countries, Britain, because the Conservative Government was committed to developing an independent nuclear deterrent, and France, because she considered the creation of her own nuclear deterrent as necessary to repair her international prestige after the enforced retreat from Algeria,—the US conceived the Multilateral Nuclear Force as the answer. It has calculated to restore confidence in her NATO allies particularly West Germany, while removing the recessity for the Federal Republic of Germany developing her own independent nuclear deterrent.

In its present form, the Multilateral Nuclear Force envisages a merchantmen-like fleet of 25 ships each armed with eight Polaris ballistic missiles with a warhead of .7 megatons and a range of 2,500 miles. Each ship therefore would be carrying an explosive capacity equivalent to 35 times that of the bomb dropped on Hiroshima. The total cost of the project is estimated to be £1,500 million over five years.

Mr. Wilson went to Washington with his own answer to the problems which have apparently made the establishment of a NATO Multilateral Nuclear Force necessary in the form of an Atlantic Nuclear

The NATO Multilateral Nuclear Force has not found the enthusiastic support-Washington expected within the NATO Alliance. The only NATO country which has shown any enthusiasm for it is West Germany, which although not satisfied with the suggested system of control and deployment of the force. was prepared to make a start on it, perhaps, in the hope that future bargaining might give her a greater say in these as-

#### NO DEFINITE **DECISION YET**

pects of the Force.

After the Johnson-Wilson talks, one can forcast that the "Biddle", renamed "Ricketts", will not go into operation this month as was envisaged. It is events after 1945 had remainris. Although this doctrine unlikely that any definite dewas criticised by some as cision on launching the mixedmaking conventional war more manned fleet would be taken current the NATO Council. There are still some hard negotiations ahead on the new British proposal for an Atlantic Nuclear Force in relation to the Ame-Multilateral Nuclear rican Force project before any of "collectivising" scheme NATO nuclear capacity can take off the ground.

In the meantime, Mr. Wilson has had to give assurance to the Labour Party that Britain's defence expenditure would in future be within her financial capacity. There are other questions which will have to be decided if Britain is to go along with any scheme for collectivisation of NATO nuclear defence capacity:

The Conservative Party which Labour succeeded by only a marginal majority had proposed a NATO "Multinational" Nuclear Force as against Washington's Multilateral Nuclear Force. The difference in the two schemes is that while the Multinational Nuclear Force permitted the withdrawal by member states of ships and other weapons contributed to the scheme, the Multilateral Nuclear Force does not. The Conservative Government's proposals appears to have been influenced by three considerations:

1. The policy to create an independent nuclear deterrent for Britain.

2. British military commitments outside Britain itself, and

3. Britain's financial capacity is as far as it relates to (1) and (2).

These factors have not changed since Labour came into power in October this year and they are likely to continue to influence Britain's flict. thinking on any proposal for collectivising NATO'S nuclear defence capacity. Further, while the Labour Government is busy strengthening her own position at home, perhaps with an eye on an early General Elections, they are unlikely to take any dramatic

Hiroshima bomb and are now not the monopoly of the United States. The USSR has built up a nuclear weapon capacity. Britain, France and China have tested nuclear devices.

The U.S. therefore, no longer holds a controlling posi-tion in the NATO alliance and justification for hegemony within the alliance has disappeared. In fact the present position presents a curious paradox. By buiding up nuclear strength, both the United States and he Soviet Union have neutralised themselves and have no significance, militarily, as great powers except in as much as they provide an umbrella under which both the NATO alliance and clear club". the Warsaw Pact Organisation could undergo disintegration. The effect of this curious situation is to make defence alliances in both the Western and Eastern camps obsolete and cohesion based on military necessity an anachronism. If such a unity is to be maintained, a new basis should be found. The Multilateral Nuclear Force is clearly not an

#### EFFORTS MADE TO ACHIEVE COMPLETE DISARMAMENT

The most significant aspect of the NATO Multilateral Nuclear Force, however, lies in its probable effect on the international scene and on efforts being made to achieve general and complete disarmament and to find a new basis on which international peace and security could be founded.

The USSR has stated both at the Geneva Disarmament Conference and elsewhere at of the military group which various times that the Multilateral Nuclear Force is incompatible with any agreement on the prevention of proliferation of nuclear weapons. The reaction of the United States has been to counter this argument by accusing the Soviet Union with unwillingness to negotiate an agreement aimed at preventing the spread of nuclear armaments. The U.S. argues that the Soviet objection is only calculated to justify this unwillingness. From the United States stand point, the Multilateral Nuclear Force, far from likely to lead to the spread of nuclear armaments, would in fact restrict the "nu-

#### THE SOVIET **OBJECTION**

I intend to discuss briefly how seriously the Soviet objection can be held as valid, or how acceptable the U.S. argument is.

No final decision has been taken on the control and deployment of the Multilateral Nuclear Force. While West Germany seeks a greater say in the control and deployment of the Force, the Labour Government under Premier Harold Wilson maintains that the U.S. should maintain an over-riding veto in that matter. "The Observer" in its issue of the 12th July 1964, says vaguely "Missiles will be fired only by unanimous decision of the participants, later perhaps by a military decision". How this unanimous decision is to be

arrived at or what the composition and terms of reference is eventually to assume the decision-taking role are to be, we do not know. With so many unknown quantities it would be naive to accept the argument that the Multilateral Nuclear Force would not eventually lead to an increase in the number of countries controlling nuclear armaments or in fact actually manufacturing them, no matter what the plans for establishing such a force are at present.

#### HIGH DEGREE OF FAITH NEEDED

Even if we were naive enough to accept the argument that the establishment of the Force would not lead to proliferation of nuclear armaments, it will not doubt create a corresponding reaction in the countries within the Warsaw Pact Organisation. Militarily, it would require a high degree of faith in the capitalist world for the Soviet Union to resist pressures within the organisation to make nuclear weapons available to member

If the Soviet Union should yield to such pressures, what would be the conditions likely to be devised for the control and deployment of the weapons thus made availabe? These are unknown quantities which do not appear to have entered into the calculations of the planners of the Mutilateral Nuclear Force.

Another danger of proliferation arises out of the secrecy

which surrounds military strategy in both camps as a result of the mutual distrust. Even if genuine controls were devised at the initial stages mutual suspicion is likey to generate one action in one camp and produce a counter action in the other till all the conrols are swept off and members of each camp would be freely sharing secrets on nuclear weaponry among themselves. In the event of this happening, the world would have lost its chance of achieving nuclear disarmament, let alone general and complete. disarmament. The logical consequence of such a situation would be for countries not possessing nuclear armaments at the moment to ally themselves with one or the other of the two nuclear blocs or to develop their own huclear armaments to maintain their independent line of thought, nuclear theories now fast becoming part of scientific known ledge of our generation.

### DANGER OF NUCLEAR

Unless the NATO powers decide to give up their plans for the projected Multilateral Nuclear Force in the interest of human survival, the fututre of the disarmament negotiaions is very gloomy, and the next few years will see another round of polemics to apportion blame for the spread of nuclear weapons and the heightening of the danger of a nuclear war, perhaps, starting as a regionalised war and escalating into a global nuclear war.

## Trade & Economic Growth In Ghana

This table shows that while consumer goods have dropped from half of total imports in 1961 to twofifths in 1963, industrial equipment and industrial goods have gone up from 50.6 per cent of total imports in 1961 to 60.6 per cent in 1963. This is a vivid reflection of the government's determination to industrialise the country and bring enhanced earning power to a large section of our growing labour force.

The above then is the background against which the nation must grapple with the current problems of shortages, rising prices and blackmarketing in imported consumer goods. For purposes of clarity, proposals for solving these problems should be grouped into short-term remedies and long-term solu-

First, the short-term remedies.

A fact of some significance is that these consumer goods are available. But the traders refuse to sell until they are quite sure that they can charge higher prices without being apprehended by the

' The practice of blaming everything on the Lebanese trader is not entirely helpful. It is true that these Lebanese traders are neck deep in the blackmarketing business. But it is also true that they are not

law.

need support from high quarters. In other words, the individual Ghanaian and non-Ghanaian African traders are taking part in this nefarious trade. And the Lebanese and African retailers get along fine because of help given them by persons and institutions more highly placed in the distributive trade in the country. To make matters worse, some of the Ghanaian retailers strengthen their position by making use of political connections and Party influence.

In adition, it is necessary to make a critical evaluation of the current notion that the faulty distribution of these consumer goods is entirely the responsibility of the G.N.T.C. (Ghana National Trading Corporation). It is argued that 'big shots' of the G.N.T.C. make goods available to their relations and business contacts.

While not denying this charge, it is necessary to point out that similar practices could be indulged in -and, in fact, are indulged in-by the private foreign firms operating in this country. These should in fact take more of the blame because, up to the moment, these foreign firms still handle fourfifths of Ghana's import trade leaving only onefifth to G.N.T.C. It is therefore illogical and quite wrong to blame the

gone wrong in the distribution of imported consumer goods, whereas the bulk of these goods pass through private foreign firms.

The short-term remedies lie in an effective price control machinery as well as in an efficient check on wholesale trade.

To improve the price control machinery, a new Government Department has been set up. A comprehensive price list has been issued. It is, however, necessary to do a few more things as follows:-

1. take control of the new Department of price control away from the Ministry of Trade. To show the importance of the whole exercise this Department could come under the President's office:

2. abolish the pass book system ;

3. make each firm engaged in wholesale trade keep a detailed register of its wholesale customers and submit such register to regular checking by state officials;

4. a tightening of the relevant legislation by making it an offence for rotailers to refuse to sell or to sell bulk :

5. a step-up in the punishment provided by law for selling above the control price;

6. an improvement in the quality of the price inspectors.

Continued from page 1 alone; that their activities G.N.T.C. for all that has There is need for come bined operations by The Party and its integral wings, the Government and the Chamber of Commerce in giving effect to these remedies

> The long-term solution must of necessity follow four main paths. The first is a rapid build-up of home production to supply the much-needed consumer goods.

The second line is to expand the network of public trading agencies. This involves an extension of the G.N.T.C. network (without losing sight of the advisability of creating a second state trading agency). The expanding network could be augmented with T.U.C. shops in the major centres serving the workers and their fami-

lies. A third line of action is state monopoly of foreign trade. It is only necessary here to add that socialist economic planning cannot hope to achieve much lasting success if it depends largely on the institutions of capitalist private enter-

Fourthly, the existing inflationary pressure due to expanding purchasing power and contracting supply of consumer goods has got to be tackled through a big savings drive, an increase of purchase tax on luxury goods, increased taxation of spending generally, and the expansion of provident and pensions

# Science, Revolution and Politics (I)

Continue from Page 2

led power stations and jet aircraft in post-war years in Britain demonstrates that, given adequate facilities, engineering talent is comparable with the best in the world. In both instances the development policies adopted have been continuously questioned on economic grounds. But no one will dispute the resourcefulness of the scientists, engineers and technicians involved.

Creative imagination is shown in the development of the hovercraft. In certain agricultural operations it is likely to find a most useful application. Promising experiments are being made using small hovercraft to tow cultivating machinery where the wheels of the normal heavy tractor would damage crops. And there are other technologicai achievements which have not come so much to public notice. Selecting only one example: our engineers and technicians have solved the problems of mechanised coal-getting for the particularly difficult conditions of British mines

Research in Britain continues to make an invaluable contribution to medical knowledge. At the Hammersmith post-graduate Medical School a machine has been developed to oxygenate and pump blood around the body, artificially taking over the function of the heart. Such machines manufactured here are now in use in many hospitals around the world and greatly extend the scope for heart surgery.

In the not so distant future it is going to be possible to remove a diseased or seriously damaged organ from a sick person and replace it with a healthy organ (in some cases from a donor recently deceased). Already in the case of kidney trans-plantation as our hospitals have shown in recent years the surproblems are solved. And the work of Medawar and his colleagues in the M.R.C. laboratories makes progress in overcoming the difficulties of foreign tissue rejection which for the present makes lasting success precarious in these operations.

#### WHAT IS AND WHAT COULD BE

Impressive achievements can be listed but there is little cause for satisfaction when we begin to review the coverage or scale of scientific activity either in research or in the application of what is already known. And these are the criteria we must use in assessing the adequacy of scionce in Britain today. How does it compare with the level of activity there could be, making full use of all possible resources, human and material? How much is being done to cater for our everyday needs?

One thinks of the research needed in so many directions to promote better health, housing and education; and to improve the amenities of social life in town and country And how does the present level of technological research and its application measure up to Britain's urgently needed industrial progress? Not unexpectedly it is the last point which is given most attention.

Once we have national policies which permit continuous economic expansion and in pursuit of socially desirable objectives there is no question that we have nuclei, in all fields, around which all the needed research support can rapidly grow. That is a fair statement of our present position.

The writing has been on the wall long enough: the poor growth rate of our economy as compared with most other industrialised nations, and oursteadily falling share of the world export trade (21 per cent in 1953 to 15.2 per cent in 1962).

new course of economic expansion then technological support will be called for on This brought a large and a greatly increased scale in many industries, and more than a crash research programme if the economy is to responsible for the £10 million gain and then maintain its vitality. Measures are included in the accompanying Table for research and development and the employment of scientists and engineers in steel making, machine tool manufacture and building construction. These are key industries in the sense that they must be highly productive and versatile if our whole economy is to have the base it needs for continuous expansion. It is with three industries, aircraft, chemicals and electronic apparatus, where levels of applied science are outstandingly high. A comprehensive Table would show that in many other from those listed for these key industries. In fact they would be bracketed along with them as having a low level of

#### SCIENCE-BASED INDUSTRIES

support.

No doubt where a branch of industry virtually owes its existence to a developed science then it is easier for all concerned to accept the neces. sity of a continuing high level of scientifically trained man- ment departments the total of power and of research. The qualified scientists chemical industry today is clearly "science-based" (see Table) and with the present knowledge of chemical science and technology it would be inconceivable otherwise. But it was not always so in Britain, the first to demonstrate at the tribution of scientists and end of the nineteenth century engineers. Nevertheless these

guaranteed market for medical preparations. No doubt conspent last year on pharmaceutical research.

The other "science-based" industries listed are those concerned in the manufacture of electronic apparatus and and aircraft. No one would dispute that production here must be closely geared with sustained research. However, there is one reason only why they absorb such a large proportion of the nation's reseainstructive to compare them rch and development resources. For the development of military aircraft, guided missiles and the like, these industries received the bulk of the £157 million given out of government funds in 1962 for industries (e.g. motor vehicles, war research in private textiles, food) the comparable industry. In the same year figures were not very different these industries also employed three-quarters of the 8,850 scientists and engineers working in private industry on military projects. In the aircraft industry and the electronics industry two-fifths and one-half respectively of all personnel engaged on research and development were on military projects.

> The table shows moreover that where we include those in the Armed Forces and arreary employed by governengineers involved in "defence" was about 21,000 in 1962. About half these were engaged in research.

These are not novel observations. There has been much the same distribution of the The lesson had first to be nation's expenditure on resealearned from the example of rch and developments for years the German chemical industry, past. And much the same dis-

If we are to proceed on a tively high level of research measured in tens of millions has been the establishment of of pounds, and the extra the National Health Service. numbers of engineers and scientists needed would be some thousands. In fact the T.U.C. has recommended fidence in this market was that research spending in Britain should be increased by £100 million a year.

#### HOW TO PAY FOR THE RESEARCH

The Tories insist, and quite properly, that when policies are advanced involving great expenditure of public money then one has a right to know where this is to come from. For their part Communists must continue to insist that if we are sincere and serious in our desire to see Britain's industries operating in the near future with the most advanced techniques then the most obvious and perhaps the only way in which they can obtain quickly the necessary funds (or workshop and laboratory facilities) is by diversion from military research. We can also see employed on the development and manufacture of weapons the only reserve of scientists and engineers which could speedily be made available to man the many new posts in production and research that modernisation demands. The machine tool industry at least recognises that the need to develop is too urgent to allow bidding time until suitably qualified people may be recruited from the Universities and Colleges of Advanced Technology.

In the 1960 report on this industry there is a point of particular interest for the present discussion. It stresses the need for the development of electronic control systems and recognises that much more basic research on machine tools themselves will be required so coupling with such controls. scientists and laboratory faci- we should be able to see so lities certainly in the electro- many examples of scientific nics industry from their present application predominantly to weapon development would be seen as essential.

official reports is not set by so ambitious an objective as the initiation of Britain into an era of scientific and industrial revolution. Nor is it to be expected that committees sponsored by a Tory government would recommend any diversion of scientific manpower or research resources from military objectives. Failure to do this, however, is to prejudice seriously the chance of attaining much more modest targets for industrial advance, for instance catching up with what the "efficient" capitalist nations have accomplished in the last ten years.

Over the period 1953-55 to 1959-61 Germany and Japan respectively recorded increases in manufacturing output of 54 per cent and 148 per cent (compare Britain's 20 per cent increase over these years).

#### UNITED STATES INVESTMENT

No doubt there are a number of reasons for this. including a high level of United States investment there. But it is not just coin cidence that in these countries to supply the many people of high growth rate which compete with increasing effectiveness in traditional British markets there has been a relatively small re-armament knough problem.) programme. And it has been of further help to the vitality of their industries that accumulated capital has been largely re-invested in modernisation.

In contrast a continuing source of weakness in British

and technological advance originating in research for war. And for the useful by. products of this research what a fantastic price we are obliged Of course the tone of recent to pay.

#### WAR, PROFITS AND RESEARCH

The squandering of research resources in the cold war can be documented in fair detail. There are other wastages of research potential perennial in capitalist society for which no satisfactory quantitative estimate can be made. Yet no one concerned to see research effort making the fullest contribution to industrial and social advance can overlook them. There is the wastage for instance which comes as a result of economic competition.

Consider the following example.

One kind of anaemia occurs because iron is poorly absorbed through the intestine into the blood. A great deal of research has been devoted to iron-containing discovering compounds which may be used to penetrate this blockage. Such compounds have indeed been synthesised in the laboratory in recent years, but it is proving difficult to produce one on a scale sufficient suffering from this anaemia. (To scale up in this way from the laboratory discovery to the industrial process is a common

#### WHOLE HEARTED -SUPPORT

There is no question that this is the sort of research that deserves whole-hearted that they may be adapted for manufacturing industry extens support. However, there are in ding over many decades has Britain at least two pharmaceu-

proper function. A survey in the Manchester area has made this evident.

"As the investigation proceeded it became in fact clear that a very large number of firms looked upon the research associations chiefly as trouble-shooters and information bureaux for themselves, and did not see them as establishments mainly devoted to research and development activities likely to be of value to the industry as a whole, At times firms discussed their long term projects with their research associations, but the investigators were left with the impression that many firms appeared to fear that, by discussing such matters they would reveal the lines upon which their new developments were moving and that these might unwittingly be passed on to competitors who were also members of the same association".

#### CONTINUOUS **EXCHANGE OF** RESULTS

Yet all science, pure and applied, thrives on a continuous exchange of results obtained, techniques devised, ideas through the scientific journals, organised meetings and personal contacts. Indeed a major problem we face today is how to facilitate such intercourse; so at least it seems to scientists not influenced by commercial considerations.

The efficient exchange and dissemination of information. still presents problems under socialism but these become only technical and administrative.

One of the great strengths of socialism is that scientific and technical co-operation can be at a far higher level with the disappearance of the profit motive and the economic competition that follows it. A recent D.S.I.R. delegation to the Soviet Union makes this clear in their comments on the function of the Sovnarkhoz (Regional Councils of National Economy):

Another important part of their work is to send lists of technical suggestions to the firms in their regions and for the firms to report back to the Sovnarkhoz as to whether these suggestions will lbe applied or not. On receiving a Sovnarkhoz list of suggestions, a firm can write to another firm, referring to the fact that the Sovnarkhoz list states that this other firm has employed a certain method, and the first firm can demand full particulars and drawings so as to instal the method in their own plant. A prerequisite of this system is, of course, a complete lack of private enterprise and competiton."

These conditions have also made possible in the Soviet Union a close co-operation between industry and institutes of higher education for research and for teaching. Many in Britain responsible for graduate and post-graduate teaching in technology see the desirability of such co-operation. Students morale would benefit from closer contacts with industry; research in the universities and C.A.T.s would be stimulated by the problems of industry; and these problems would in many cases be more satisfactorily studied in an atmosphere where there is a concern also with fundamental science.

Efforts to achieve this closer union deserve our full support, though enough has been said to show that in our society the difficulties in the way of whole-hearted co-operation are formidable. Nor would closer liaison of this kind be sufficient by itself to bring about a proper balance between fundamental and applied research. This does not yet exist and the reasons become plain when we look again at the example of the pharmaceuticals industry.

INDUSTRY Establishments with 100 or more employees		RESEARCH AND DEVELOPMENT EXPENDITURE 1961-62		SCIENTISTS AND ENGINEERS 1962			
	Total employees	Total £ million	£ per employee	Total	On research and development	per 1000 employees	On research and development per 1,000 employees
Iron and Steel	413,000	5.5	13 ×	3,771	938	9	2.3
Construction (building) Machine tools*	630,000 42,000	1.5 3.0	2.4 72	5,441 550 (Approx.)	339 120	9 13	0.5 1 <b>2.9</b>
Chemicals Electronic Apparatus Aircraft	343,000 274,000 278,000	39.7 49.9 140.6	116 182 507	7,484 7,615	6,111 4,685 4,365	46 27 27	18 17 16
Total All private industry.		368 (157 from Defence Depts.)		85,000 8,850 on military projects)	31,000		
National total for weapons develop- ment, Military, etc.		246 (Govt. Defence Depts.)		21,350	10,500		
Government Total		385					

\*Figures taken from "The Machine Tool Industry", Stationery Office, 1960.

course scientific activity in our chemical industry is still responsive to economic stimula-

93,000 is stated as the total employed by the Machine Tool Industry in the N.E.D.C. publication, The Growth of the Economy (March, 1964). With this figure as the basis of calculation some of the measures of technological support for this industry would be considerably lower than as presented above.

Compiled or calculated from data presented in Annual Report of the Advisory Council on Scientific Policy 1961-62 especially Table VI Stationery Office, Jan. 1963. Scientific and Technological Manpower in Great Britain 1962 especially Table IV Stationery Office, October

In the post-war years one important reason for the rela-

that science pays. And of facts must be continually restated. Certainly they cannot pored when the technical improvement of our industries is under discussion.

> The recent reports on the Iron and Steel, Machine Tools and Building Construction. industries are restrained in their criticisms. Yet they all recognise the urgent need for an increased level of research. Taken altogether the increase in money terms that they recommend for the next few years is about £11 million, and one can estimate that the extra recruitment of engineers and scientists they envisage would approach 1,000.

> If other industries were to subject themselves to the same self-criticism we find in these reports, muted though it is, we can be sure that the national total recommended for increased research expenditure in private industry would be

the machine tools and electronic apparatus industries here in technical improvement. will be essential. This research And the rearmament prois seen in the report as, at best, of long term commercial value and a recommendation was made that such research, financed from public funds, should be running at a figure of £1 million p.a. by 1964. This would mean the employment of about 100 qualified personnel. It is a welcome beginning. Progress in this field is in fact crucial for the introduction of automation in comment to what can be immethe machine making industries. But it gives us also a measure of the low priority given to the highly trained manpower on advancement of productive rearmament; since with an technology when we contrast improved political climate in this recommendation with the fact with a policy of peaceful denloyment of resources in co-existence, these could be military research.

If there were any serious not be left behind in the ly beneficial by-products. scientific and industrial revolu-

Close co-operation between been the export of capital which could have been invested gramme of the last fifteen years (now costing close to £2,000 million p.a., 8 per cent of the gross national product) which has served this imperialist policy and anti-communist objectives has had an enormous debilitating effect. These far exceeded the drain of funds for the development of weapons. However, I have preferred above to restrict diately appreciated as a waste of research resources and quickly mobilised for constructive purposes.

It cannot be denied that concern that Britain should military research has its social-But what a sad commentary

tion—then the liberation of on the way we progress that

tical companies each separately attempting to solve this problem. Each employ a whole team of research workers on this same project, and a great deal of their work must be along the same lines. But there is no exchange of ideas permitted, no co-operation of any kind; because the aim of this research is not in the first place the solution of an important medical problem. The production of commodities to be sold for profit is the motive for manufacture and research under capitalism. In fact what matters to the directors of the companies backing this research is that their firm should be first on the market with the drug.

One of the regrettable consequences of this secrecy surrounding industrial research (not of course confined to the pharmaceutical industry), is that it makes it impossible for the Co-operative Research Associations to carry out their

# Nkrumaism and the Individual

STUDENTS of political thought have come to grips with divergent philosophies whence great concepts such as those of Plato, Aristotle, Cicero, Augustine, Aguinas, Mazzni and Machiavelli have often influenced or moulded their thinking.

It cannot be gainsaid that in contemporary African history mention should be made of one of the trully great giants of the African Revolution. In fact one can say without fear of contradiction that this man has been the centre around which the whole African continent has been revolving, which has culminated in the unquenchable desire to achieve total liberation of the entire African Continent from the shackles of imperialism and its handmaid neo-colonialism. understand Kwame

To Nkrumah is to recognize how his ideals have stood the test of time and how determined he is to see his aims accomplished during his life time. He has always nursed the idea of total independence for dependent African countries. This idea of his took concrete form in the convening of the first All African People's Conference which was held in Accra in December, 1958, on his initiative. It was the real turning point in African his-

This was followed by another Conference, Africa Nationalist Leaders, who have since been waging a relentless war against the imperialists, for complete independence. Indeed, Africa can now see on the horizon the birth of a new image, destined to be prominent in the councils of the

#### POLITICAL ANALYST

African Unity has been the dream of Kwame Nkrumah since his early days in America as a political analyst. He nursed the idea over the years and when he founded the dynamic Convention People's Party in 1949, it was not surprising that "African Unity" featured in the first published manifesto of his political party. In fact it could be said that Kwame Nkrumah was thinking of modern society for the African Continent.

"Man's nature is essentially social and he finds himself and develops his personality only in society". As far as society today is concerned, the problem is not one of outlying a utopia and then getting everyone to agree to its construction: if that were so the whole approach would indeed be dserving of derision. On the contrary the problem blem is an historical one and an economic one. It is on the agenda of history now, as a challenge which cannot be

It is economic because society faces a dilemma-how can modern capitalism develop the backward areas of the world, advance its own educa tional and social services and avoid devastating economic conflicts between group and group, nation and nation? How can capitalism survive without war, either to smash its rivals or absorb its unconsumable surplus? There is no ultimate escape from these problems short of Nkrumaism socialism as reflected in the ideals of Kwame Nkrumah. The Capitalist thinks otherwise. The Nkrumaist points also to the internal disintegration, moral and ideological of capitalist society, in such a

Things fall apart; the centre cannot hold. Mere anarchy is lossed upon the world,

The blood-dimmed tide is lossed and everywhere The ceremony of innocence is drowned. The best lack all conviction,

while the worst Are full of passionate intensity.

We are closed in; and the key is turned on our un-\_Yeats certainty". It is asserted that Nkrumaism is not a theory which subordinates the individual to

a higher entity, the state. Now there are such theories, but far from being Nkrumaist

theories they will be found in every case to justify some form of priviledge. All totalitarian systems, such as those of Hegel and his followers. regard the State as an organism or entity with its own personality of collective mind, which has an intrinstic value far greater than the individuals.

comprised within it. The State has no obligations to its members or to any other State or race, and individuals rights are only recognized in so far as they are implied in ment of his personality; it dethe rights of the State so that sires to rescue man from the

the liberty of the individual concides perfectly with obedience to the State.

In flat opposition to such theories, Nkrumaism holds that the individual is the end and the society the means, not the State the end and individuals the means, while the common. good is not the good of some entity separate from and above individuals, but, "an association in which the free develop ment of each is the condition. of the free development of

Nkrumaism aims at the emancipation of the individual; it desires to set him free from the crippling and degrading forces of modern capitalism and all forms of exploitation, to open to him, for the first time in history, the fullest opportunity for the develop-

by P. Boi-Amporful

pitiable, fragmentary, selfdivided society in which he finds himself. The basic assumption is the dignity and worth of human personality and the goal of Nkrumaism is the maximum possibility of each individual freely developing his own potentialities, enjoyment and creation.

Nkrumaism does not therefore regard society as a higher entity to which the individual must be subordinated nor does it equate society to the State. Man is a social animal and

fits, its reciprocity of interests and its strong feeling of mutual interdependence. But there is no over-soul, no collective or group mind.

Nkrumaism is, therefore, a body of theory and a set of farreaching practices of Kwame achieved by the planned utili-Nkrumah, explicity committed zation of resources for to the end of developing the richness of the individual character and personality. But it holds that the only way in which this can be done is by repudiating the individualist creed, which seeks the welfare of the individual by setting him free to persue his own interests. It is the contention of Nkrumaists that this does not, as the early theorists of lassez faire believed, lead to the greatest happiness and the greatest number" but creates

exists and develops in a sys-social injustices and blind irratem of social relationships, tional forces which frustrate a class society is, for the workwith its obligations, its bene- and ultimately destroy the in- er, the acceptance of exploitadividual and produce the greatest unhappiness of the large majority of the people.

Rejecting the creed of individualism, the Nkrumaist believes that both individual and essentially the maker of his social happiness can only be own history and not merely the common good, which requires of course the common ownership both of the land and its products and of industry. While under capitalist these are privately owned and operated only for profit, under Nkrumaism they are socially owned and operated for common use. Nkrumaists believe that it is only under such a system that the individual finds his real freedom and the fullest opportunity for personal development.

Acceptance of one's place in tion. For the Nkrumaist the just society has to be created and can only be created by victory in struggle against social unjustice. "Man is a cog recognising his place in pre-existent mechanism". All moral action should be governed by the will of the whole; and, for the individual, the centre of gravity is thrown outside him, that is to say outside his own private interests. his needs and his desires.

Gratification of individual wants has to give way before duties to the whole. The wellbeing of the whole is the framework within which the pursuit of individual welfare can have any rare meaning and legitimacy.

### **OBITUARY:**

### Ivan Potekhin - Man, Scientist and Friend of Africa

T WAS attending a Conference on Foreign Aid sponsored by the University of East Afriin Dar-es-Salaam when the sad news of the death of Professor I. Potekhin came through. The world community of Africanists has suffered a great loss. The peoples of Africa have lost one of their most devoted friends. Ivan Potekhin was

born of a family of farmers in a small village in Siberia in 1903. No one can say what the destiny would have been if this young Siberian peasant were it not for the Socialist revolution in Russia in October, 1917. He was pulled into the revolutionary whirl and fought with arms to promote its ideals. This period in his life had a decisive role in shaping his political outlook and determining his future. From this time on, the idea of liberating man from political and social injustice became his creed. He devoted all his life to this.

In the early 30s Ivan Potekhin joined the Secretariat of the Communist International. It was here in the Comintern Secretariat that he first came across African problems and met a number of African leaders who have since played an important part in liberating Africa from colonialism. Among those he met at this time was Jomo Kenyatta. The man who introduced Ivan Potekhin to African problems was Professor D. Olderogge of Leningrad University who later became his friend and associate at U.S.S.R. Academy of Sciences, Institute of Ethnology.

Professor Potekhin spread no effort to spread knowledge of Africa in the U.S.S.R. and to create the Soviet community of Africanists. Historian and ethnographer, Potekhin a sembled around him linguists, economists, sociologists and political scientists, along with students of other disciplines. He was their head and soul. Not only

did they all work together but they also shared their leisure hours. National holidays. such as 1st May and 7th November were very often spent with him at his own home. He was also the first guest to be invited to his coleaques festivities. The centre of this community was the Institute of Ethnology of which he was Deputy Director of a number of years, but all who worked on African problems in various other institutions and universities were in touch with him and benefitted enormously from his knowledge and advice. It is in this way that the author of these lines came to know Professor Potekhin in 1951.

The year 1960 was a landmark in Atrican studies in the Soviet Union. In that year the Institute of African studies, more commonly as the "Peoples of African Institute" was set up within the U.S.S.R Academy of

course on modern Atrican history at Moscow University and to participate in all important international Conferences on African problems and ethnography in general. And yet Ivan Potekhin has written more about Africa than anybody else in the Soviet Union and perhaps in the world. To his credit belong

about a dozen books and several hundred articles, essays and papers. Among this multitude of publications, the best known (written alone or with coauthors) are—"Peoples of Africa (available in German), "Africa looks to the future" (available in English and French) a study of Socialism in a Africa. "Africa ways of development" (available formation of the National Community of South African Bantu" One of his last and most fundamental contributions to African studies was the two-volume "En-

Since the First International Congress of Africanists was held at the University

Ghana in December, 1962, just two years ago, two of the most prominent non-African participants in the proceedings of that Congress have passed from the scene.

The sudden death of Dr. Melville J. Herskovits of the United States soon after his

attendance at the Accra Conference came as a shock. And just last September there

came the loss of Dr. Ivan Potekhin of the Soviet Union, who was well known to many

This tribute is written by George Skorov, a Russian associate of Dr. Potekhin.

Ghanaians as a result of his visits and studies in this country.

was in 1956 to Egypt. Africa south of the Sahara, he could not go until even later, after Ghana became independent. And yet the books and papers he has written on Africa are works of immense scholarship erudition. I remember a review of his book on the South African Bantu in a reactionary journal in which the reviewer could reproach him only for over-looking just two sources out of the several hundred cited in the bibliography. He could, of course, never go to South Africa but he worked on this subject for almost 20 years before publishing this volume.

His contribution to African studies covers a great variety of subjects. In notes written itirely from memory it would be a risky undertaking to try and evaluate this contribution. I can only say that in highlighting problems related to national consolidation in Africa, the

Potekhin took up any thing he started with thorough zeal. Even such an innocent occupation like fishing absorbed him passionately. He was not the sort of person who would just spend a couple of hours with a rod. He usually got up at two or three in the morning to drive into the country for the whole weekend. He did this in the summer as well as in winter. Very often he spent Saturday night in the forest near one of the numerous and nameless Moscow lakes, putting a few elm tree branches on the snow like a true Siberian in temparatures 25—30 degrees below zero. He always returned from these journeys refreshed and energetic full of new ideas and projects, to plunge him-

self back into work. One of his constant preoccupations was the question of peace. A staunch supporter of the national liberation movement of the colonial peoples, he never confused the just wars for national liberation and the class struggle in societies split into antagonistic social and racial groups with a world thermonuclear catas-

trophy. He was a passionate advocate of disarmament and peaceful coexistence as the only alternative to mutual annihilation and the death of civilisation on the earth. He thought that the best way to achieve it was to scrap all weapons of the rival camps and to switch the enormous material and human resources involved in building up means of mutual annihilation into economic and technical assistance to the developing world. But he also realised that world peace and disarmament would not drop from the skies and had to be fought for relentlessly by people of goodwill

I recall a conversation in the early fifties between him and Basil Davidson, the well-known British journalist, novelist and historian of Africa. This was their first meeting although—they knew one another "in

print". Replying to a remark by Basil Davidson on the role of intellectuals in the struggle for peace, Potekhin said: "I am a scientist. My job is to do research and. teach. But should it be necessary, I will exchange arms—I will drop my pen and take up a rifle instead, to fight for justice as I did more than forty years ago during the October Revolution".

Potekhin was a man of great personal generosity and hospitality. His home in Moscow was opened to all visiting African personalities. Dr. W. E. B. Dubois and Paul and Eslanda Robeson had been among his numerous guests. He was very well known in all African countries. Wherever I have been in Africa I have inevitably been asked if I knew Ivan Potekhin. Letters bearing the most rudimentary addresses reached him in Moscow.

He once showed me an envelope addressed simply "Ivan Potekhin, Moscow, U.S.S.R.". He was not only loved by his friends but also respected by his critics. The main reason, I think, for this immense and widespread popularity was that he had been a man of great wisdom and intellectual integrity who would never consider himself and, in fact, was not an acade-mic scholar in the narrow sense of the word. He was also a fighter for the freedom of Africa. This is why his death is a loss not only for the world academic community but also for the African peoples.

He had been critically ill during the last two years of his life. When I last saw him a few months before he died, he was partially paralysed and could not speak, but he continued to work even on his death bed. He was writing a contemporary history of Ghana. He died as a soldier on duty. We honour him as a man, scientist and friend of Africa.

G. Skorov.

Sciences as an autonomous institution. As the foremost student of African problems in the U.S.S.R. Professor Potekhin was invited to be its first Director. Such an Institute had been the dream of his life and he had devoted a good deal of energy to its realisation. He always felt that economic and social development is a multi-facet process and could be tackled properly only by the joint efforts of a group of students of various fields -economists, political scientists, sociologists, ethnographers, historians.

As well as being Director of the Institute, he was also President of the Soviet - African Friendship society and head of the African section of the Soviet Afro - Asian Solidarity Committee. He also found time to read a

cyclopaedia Handbook on Africa, prepared under his direction and involving his extensive personal participation. This is the first reference book on Africa written entirely from the point of view of Marxism-Leninism. Potekhin was very proud of this work and said to me after its publication: "Students of Africa will no longer complain that the only reliable reference book they can have on Africa is "An African Survey" by Lord Hailey.

Like all other Soviet students of African problems Potekhin was in a far more difficult position than any Western scholar in this field. Until the achievement of independence, Sovist scholars were not allowed to visit co'onies His first trip to Africa when I had the pleasure accompanying him-To the second second

can peoples before colonisation, the true and false backwardness of Africa, national and social revolution, the building up of African unity and economic and political co-operation between Africa and socialist countries, in all these he played a conspicuous role in the Soviet Union. I cannot remember any book on Africa translated into Russian and published in Moscow in the fifties which had no preface signed by Ivan Potekhin. African politics, history, ethnology, eco n o m y fine arts, literature and philosophy, all interested this searching man. He made a strong impact in all these fields. His preface to the Russian translation of Peter Abraham's novel. "Thunderpath", would made any professional literary critic jealous.

Dr. Alphaeus Hunton.

social structure of Afrieverywhere.

AND THE PROPERTY OF THE PARTY O

# THE AFRICANINTELLECTUAL

Speech delivered by Comrade Kodwo Addison, Member of Presidential Commission and Director of Kwame Nkrumah Ideological Institute, Winneba, at Inauguration of Party Branch at Kwame Nkrumah University of Science and Technology, Kumasi, on Sunday, 13th December, 1964.

IN the study of Nkrumaism, we find that it is an ideology drawing its strength from modern science and technology and founded upon the conception of one and united Africa. A careful examination of these foundations shows that Nkrumaism has a scientific outlook and a continental scope. This is not surprising if we consider that in a modern world where science and technology play an indispensable role in the life of man, an ideology can stand on its own if and only if that ideology takes account of modern scientific and technological world outlook.

An instance of such scientific world outlook is the unity of component parts, a synthesis of all elements of society. This synthesis on a very large scale, can be identified with the unity of Africa, a fusion of states with identical historical past and similar political, cultutral and social background.

modern scientific world outlook and the unity of Africa, constitute the ideological justification for the existence of the Kwame Nkrumah University of Science and Technology. This ideological justification in turn provides the basis for the formation of a Party Branch in this University. Logically, therefore, it is right and proper that we meet here today to give official recognition to this Party Branch.

It is evident, then, that the role of the Party Branch of this University is going to be of incalculable value to Ghana and Africa, while the responsibilities that will devolve on the Party Branch Officers will be very great. But these responsibilities, far from scaring the officers, should spur them on to do all that is possible to bring glory and fame to this University and so provide material justification for the existence of this University.

The officers, and indeed the entire members of the Party Branch can always draw inspiration from our Leader, Kwame Nkrumah, whose untiring zeal and unflinching loyalty to the cause of Ghana and Africa fill modern African youth with determination and ambition.

#### **ORGANISATION**

In various ways, the Leader has taught us that organisation is the determinant in many fields of endeavour and that in every situation we must expect a plenum of forces in

This determinant may have favourable results or unfavourable results depending on the mode of organisation on the nature of the struggle between the forces in tension; that is the organisation may yield good fruits in the interest of the people so organised if the positive forces in the struggle overwhelm the negative forces, or the organisation may yield evil fruits detri-mental to the well-being of the people if the negative forces gain the upper hand in the

We cannot, however, allow ourselves to be defeated by the enemies of our revolution neither can we allow the progress we have made so far to be destroyed by the evil forces at work. This means that we must pull all our resources together in order to transform nature and our society for our own benefit. Since the transformation is a dialectical process, a conversion of quantitative African Society into a qualitative one, a catalyst in the form of dialectical moment is needed to speed up the evolution.

The proper moment to apply must take into consideration the historical past of our people, the need for scientific and technological advancement and the energy of our youth. It is in this context that the Party Branch of

These two concepts, namely the Kwame Nkrumah University of Science and Technology becomes an invaluable asset to Ghana and Africa. Viewed from the standpoint of the dialectical changes that must give birth to the new African Society, this University and its Party Branch have very heavy responsibilities to fulfil.

#### CONSCIENCISM

Consciencism points out that "Dialectical change in matter is that which serves as ground to the possibility of the evolution of kinds. The evolution of a kind is the loss of a set of old properties and the acquisition of a new set through the dialectical movement of matter". Hence if our nation must evolve a new and vigorous society, it must transform the best and what is out-dated, lose its old properties and acquire new properties. The role of a science and technological institution in this matter cannot be overemphasized since science and technology lie at the root of the evolution of the new so-

It is not only in the evolu-

tion of a new society that this

University and its Party Branch are of immense value to Africa. In the realisation of African Unity, in the maintenance of world peace and in the development of nuclear science for the benefit and prosperity of man, the University and its Party Branch cannot afford to be mere onlookers. Their role is tremendous; their significance ment of the Party and Governis immeasurable; for it is through the Party Branch that both the Government and the University itself can hope to implement the scientific and technological programmes of dialectical changes, as we have our nation. It is through the already seen, aim at the resurmembers of the Party Branch gence of a new post-indepeninitiate any collective action are distinctly different from experience have proved the

against neo-colonialism and annihilate the evil forces of imperialism throughout the continent of Africa. Again, it is through the Party Branch that the Kwame Nkrumah University of Science and Technology can make its presence effectively felt in the community in which it is

established. But that is not all. In man's conquest of nature, man has been able to develop those techniques which enable him to harness the great resources of land, sea and air and employ them for man's benefit and happiness. In these endeavours, both the University and the Government have their parts to play. These parts are not isolated or unconnected. Each is the complement of the

#### AN OVERALL **POLICY**

The Party and Government issue the overall policy, provide the necessary safeguards and create that atmosphere which alone is congenial to academic scientific and technological work, research and progress. The University for its part engages in the actual academic, scientific and technological pursuits, research co-operate and work together, society will be able to realise that happiness which is conducive to peace and progress. As I have already explained,

a University is the complement in that co-operation, that unity of action, singleness of purpose and sameness of goal which generates the dialectical dialectical changes, as we have

the old colonial society. In this united action of both the Government and the University, the University cannot claim special privileges and rights neither can it assume an attitude of mind entirely devoid of true patriotic and nationalistic spirit nor pretend to live in a world foreign and inimical to the interests of the very people, who maintain it.

In this regard, we cannot allow academic freedom to distract our attention or to make our forward march an uphill task. Freedom has its limits. There is no freedom without boundaries. Nature, itself from which we take our cue, has laws, very objective laws, governing motion growth, reproduction, life and so on. The objectivity in nature sets limits to every event, every activity. But in some peoples efforts to thwart and disrupt the progress and well being of his fellow men, they often pretend that there is no such thing as limited freedom, they forget or pretend to forget that even in the pretence that they make, there is a limit since the pretence can only operate in conditions provided by the very people whose progress and welfare are being thwarted by the pretence. In other words, the pretence acts as a boomerang upon itself, negating its own existence by removing the very foundations

of its being. What is crucial at this point is not the academic freedom itself but the people who seek to work in that freedom and and advancement. It is clear who also reserve to themselves our people as well as the fate from these considerations that the right to determine what is of the millions throughout the the Government and the academic freedom and what world. University must work hand in is not academic freedom. hand, not in isolation, not as Before any further argument, separate unconnected bodies it is clear that the reservation but as a team with one aim, of the right to determine what one purpose, united by the is and what is not can only be same ideology and under one leader. If, yes if, the University and the Government can seen as a limit to that whose fate is being determined. This unseen limitation to what is seen as a limit to that whose fate is being determined. This supposed to be unlimited is the hypocrisy which projects the academic freedom levers as enemies of the revolution, and as people who very rightly ought to be declared "personae

non gratae". When we look back into our colonial past, we discover the counterparts of the academic freedom lovers in our past. changes in society. These In the colonial era they paraded as civilisers and carriers of the 'White man's burden (i.e. the burden of civilising that the Government can dence society whose properties the African). History and

falsehood of such pretences neighbourhood. The link that Party Branches in all our and further shown that the can foster such healthy relareal white man's burden was tionships is the responsibility how to adopt and develop the techniques for robbing, plundering and plaguing the Africans without being discovered. In otherwords, how and the general outlook, an overt act, plain colonial whether inviting or repelling, robbery under imperialist has much to do in winning the inhumanity could be trans—love and respect of our people. formed into a covert act, with all the subtlety of neo-colonialist subterfuge and chicanery. A very careful scrutiny of modern day academic freedom lovers quickly reveals a similarity of purpose and intent between them and the colonial robbers of imperialist fame.

#### **WORK IN UNISON**

Since, however, the Government and the University are expected to work in unison, the gospel of academic free dom must be abandoned and in its place instituted the people's freedom, that is the right of the people to determine their own welfare and to set the boundaries in which the University must operate.

The Party Branch can therefore play no small a part in this exercise. As the liaison between the University and the People or the Government, it can influence opinion and direct its own activities to produce real advantage to both the people and the university. A University Party Branch can in this way be looked upon as the tool of the people, the tool of the university and tool also of the Government.

But especially when we consider that this University concentrates on science and technology do we find that this Party Branch has a very prominent part to play in the revolution of our times. Science and technology are the pillars of present day civilization and progress. We cannot do without them, so the role of this University in the African revolution is going to determine the fate of the millions of

Perhaps, it might be necessary to say at this point that the immediate neighbourhood where the university is established has a part to play in furthering the work of the university and making those provisions in which the University and the University of the University sity can fully act as a contri-butor to world peace. The people of Ashanti and Brong-Ahafo have been known for their magnanimity. These attributes, which are great and nationalist in outlook, cannot be ignored by the University if it is to play its role as the servant of the people. The university also cannot afford to live in isolation from them.

Mutual co-operation, good neighbourliness and friendship must always exist between the university and its immediate

of the University Party Branch. The attitude of the undergraduates to the people, the relations between them has much to do in winning the It can easily be seen that if this outlook is very congenial pensable to the University.

Party Branch every success in Branches as jobs well done. its efforts. Since we now have

Universities, it is hoped that greater unity of action will result in order to produce the good fruits beneficial to the whole nation. The Party can promise them the maximum co-operation of the Kwame Nkrumah Ideological Institute, Winneba. I can also say with certainty that the Kwame Nkrumah Ideological Institute will always watch with interest to good neighbourliness, it the activities of the various can offer the University those Party Branches, and we all opportunities which probably look forward to the day when, have not hitherto been forth- together with our Universities coming, but which are indis- and all our higher institutions of learning, we can look upon Finally, let me wish the the formation of Party, Thank you.

### The Theatrical Movement in Revolutionary **Cuba** (2)

### Roberto Blanco,

Director of Cuban Theatre and presently Drama Adviser to the Ghana Institute of Art and Culture.

TN the case of Cuba, we know our character as a nation dating from the 19th century. It was then that a national culture with forged. These were well defined, and had been integrating through a process that began with the colonisation of Cuba, in which the elements of the Spanish culture fusioned the vigorous element of the African culture contributed to the island through slavery

Universal theatrical tendencies are also well known in Cuba. Stanislavsky and Brecht are familiar and respected names of our theatre. Stanislavsky's method of acting has been generally accepted today as the only concrete method of interpretation based on truth, emotion and realism, while, on the other hand, the influence of the "epic theatre" "dialectic theatre" of Brecht is present in most of

the young producers today. There was a great debate over whether or not they contradicted each other. This debate was made public. It was generally accepted that they need not necessarily contra-dict each other although it was left to their respective followers to prove their points through their works. This is as far as their methods of production are concerned. As to the philosophy behind their work, it was agreed that Brecht's ideas of the theatre of today only compliment Stanislavsky's based on truth, emotion and realism.

"There is something which is no longer doubtful", Brecht said "the world of today can not be described to men by showing its transformation. To the man of today there are no other valid questions than those susceptible of answers. The men of today are interested in situations and events upon which they can do something. The world of today will be represented validly in the measure it is considered susceptible of transformation." The audiences of Cuba seem to agree to this, as is proved by the success and popularity of Brecht's plays.

The Cuban men of the theatre, conscious of the fact that their main object are still the creation of an audience of theatre-goers, avail themselves of every possible opportunity to increase their number and

theatrical groups frequently, visit factories, military posts, schools and farms, either to have a friendly get-together or to present a small play, or a scene from their coming proits own characteristics was duction. This helps to promote public interest thus increasing the amount of people that are getting interested in the theatre.

The "Consejo Nacional de Cultura" has organised with the help of the C.T.C. (Central Oil Workers Union), the Armed Forces, The Cuban Women Federation, and other mass Organisations, the participa: tion of the people in cultural activities. Today there practically does not exist a centre of work, farm or office, military unity or technological school, without its chorus, dance or theatrical group.

These groups are almost always guided by the workers or students with artistic aptitudes, or by an art Instructor. The plan of the Art Instructor was started during the year 1961, and has recently seen more than one thousand young men and women take their diplomas and go back to their different fields of work with the technical and ideological training that will enable them to promote, in their schools, farms, or simply in their home towns, cultural activities and the creation of theatrical, dance or musical groups.

Every year in Havana, the capital of Cuba, a National Amateur Festival takes place with the participation of the winners of the Provincial Festivals which have been selected from the best of every union, mill or workshop, etc.

The increase of activities of these amateur groups has been a determining element not only in the mass incorporation of the people to cultural expressions, but also to the increase of the audiences of the professional theatre, of concerts, ballet, modern dance, etc. Art as a form of human knowledge, it has become a vital social activity of the Cuban people.

The Cuban people are taking Revolutionary conscience of her cultural heritage, has started to recognise herself in national and universal Art, has begun to attend directly in the formation of a new culture, a socialist culture, free and radiant, as is meant to be the life of the people; a revolutionary people ideologically conscientious of the historical moment she is living of the profound-social transformation she is carrying out both in her, material and spiritual needs. - 13. - (,, six months) to improve their knowledge of in her economy and her culthe art of the theatre. The ture, her work and her art.

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