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15 June 1964

Briefly Noted

Defense of Private Agriculture in Poland

Nowe Drogi, the main theoretical organ of the Polish Communist Party, has published a lengthy defense of private peasant farming by Mieczyslaw Mieszczankowski, a leading proponent of non-collectivized agriculture since the 1956 uprising. Both the article's length and its publication in Nowe Drogi would seem to mark it as a basic, if not definitive, pre-Congress "white paper" on agriculture.

The new article is actually an extension of Mieszczankowski's argument, advanced in a series of Zycie Gospodarcze articles last year, against a reorganization of Polish agriculture which would build the countryside around state farms and lead to the eventual dissolution of the private peasant economy. The dogmatic wing of the Polish Party has been arguing for some time that, since collectivization has met with failure in Poland and will probably never be attempted again, state farms afford the best remaining opportunity to introduce public ownership in the countryside. [See unclassified attachment "Polish Economist Says Communist Socialized Agriculture Cannot Succeed" for summary of arguments.]

We cite the Nowe Drogi article as an indication that Poland is officially abandoning Communist agricultural collectivization as an unworkable theory and a proven failure. We also note that dogmatic Communists, refusing the evidence of pragmatic tests and disregarding the welfare of the people, still attempt to maintain their Party control over the economic life of the country.

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## DATES OF PROPAGANDA INTEREST

- 1 July Communist Party of China founded. 1921
- 2 July Afro-Asian Women's Conference, Djakarta, July 2-10.
- 5 July Conference for Denuclearization of Mediterranean Basin, WPC-promoted, Algiers, July 5-9.
- 13 July President Urrutia, in TV address, charges Communism endangers Cuban revolution. 1959.
- 13 July Pope Pius XII excommunicates all defending Communist anti-Christian doctrines; bars from sacraments those reading CP doctrine. 1949.
- 15 July Women's International Strike for Peace Demonstration, all NATO countries.
- 17 July Second OAU Heads of State Meeting, Cairo, 17-20 July.
- 19 July Laos becomes independent by treaty with France, 1949.
- 23 July Geneva Agreements guaranteeing Laos' independence and neutrality. 1962.
- 27 July French Thermidor 170th anniversary. Robespierre overthrown, guillotined following day. 1794
- 31 July 30,444 refugees register during July at West Berlin receiving center (highest total since March 1953). 1961.
- 31 July Agreement reached for Federation of Malaysia. 1962
- 6 Aug 10th World Congress Against A and H Bombs, Tokyo.
- 13 Aug Third anniversary of The Wall, sealing East-West Berlin border.
- August Symposium of "Peking Center" of World Federation of Scientific Workers (WFSW) in Peking.

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PROPAGANDIST'S GUIDE TO COMMUNIST DISSENSIONS

#30

23 May-5 June 1964

Principal Developments:

1. Soviet and pro-Soviet media during this period continued to propagate intensively the Soviet position and to denounce the Chinese, although mostly not going beyond previous polemics. Soviet Government daily Izvestiya featured a series of editorials: May 30, describing and castigating Chinese efforts to subvert Soviet citizens; June 3, implying that the Chinese are removing themselves from the socialist camp and nullifying the provisions of the Sino-Soviet alliance; and June 5, saying that "one cannot put up with" the uncoordinated acts of some which involve the interests of other fraternal states and damage the common line of the socialist countries -- and it lists "behind-the-scenes intrigues and "concealed speculations" in foreign trade, the work of mass organizations, and sports (for the first time) among the Chinese sins. In addition to a steady stream of endorsements of the CPSU position by other parties, Pravda published (May 24) an emotional piece by prominent writer Simonov describing Chinese efforts to subvert "Soviet us" and ringingly declaring that they will fail, and a 2-part reprint (June 3-4) of a major article from Partiynaya Zhizn (Party Life) which outlines the case against the Chinese "hegemonist-splitters," stresses the obligation of Communists to adhere to international Communist discipline -- voluntarily, establishes the need for a new international conference, and calls for collective efforts by the M-L parties to remove the threat of a split caused by the subversive activities of the CCP. It said that "the overwhelming majority" of world parties are with the CPSU and that "a majority" favor calling a conference as soon as possible. The June Kommunist published excerpts of statements supporting the CPSU by 53 parties, not including some known to be pro-Soviet, and Problems of Peace and Socialism added several more.

2. On May 26, Radio Belgrade's Moscow correspondent, commenting on the announced plans for East German boss Ulbricht to go to Moscow May 29 (for his 3rd visit this year), said that Moscow circles view it as the beginning of a new round of mutual visits preparatory to a world conference, which could be held before the end of the year. His comment seemed to be borne out as a new, high-level Rumanian Party delegation went to Moscow on the same day (26th), a Bulgarian high-level Party delegation went on June 4, and Tito detoured from Finland to meet Khrushchev in Leningrad on June 3.

3. The Chinese struck back only once -- but apparently with considerable force -- during this period, with a brief,

pungent Government statement dated 30 May in response to the Soviet Government statement a month earlier denouncing Chinese opposition to USSR participation in the Second Afro-Asian Conference. The Chinese demonstrate that the Soviet Union is a European power and cannot have it both ways, point to the precedent set at the First A-A Conference in Bandung when the USSR was not invited (Nehru quoted with approval on reasons why not) and still supported it, and ask what has changed to cause the Soviet leaders to adopt a new attitude now. They assert that if the Soviet leaders have "the least respect" for A-A countries, and their decisions at Djakarta, they should not "carp and cavil and attempt to overthrow this conclusion through crude interference." The Chinese ask rhetorically what difference there is between the Soviet attitude toward A-A and that of the Western powers, and question Soviet motives "in persistently wanting to squeeze into the Second A-A Conference." "The times when the Asian and African countries could be ordered about by others are gone forever."

4. In a possibly significant move, the Soviet Foreign Ministry took a large group of foreign diplomatic chiefs from Moscow on a tour of Alma-Ata and vicinity, capital of the Kazakh SSR, largest of the Soviet Central Asian Republics, lying just across the disputed border from Chinese Sinkiang.

5. Among the other Communist-ruled countries, another group of Chinese workers departed from Mongolia, the Czechs denounced Chinese interference in their internal affairs, -- and the Rumanians appeared to be moving still further toward independence of the USSR, signing an extensive economic co-operation pact with the US, exploring possibilities for a relationship with the Western Agreement on Tariffs and Trade (GATT), etc. Perhaps even more significant, on June 5 monitors picked up a Bucharest domestic broadcast in Rumanian which rebutted and denounced a May 30 Moscow Rumanian-language broadcast entitled "Let Us Strengthen the Socialist Community" -- although Bucharest identified Radio Moscow only as "a foreign radio station." (Press reports of a recent Khrushchev secret trip to Bucharest in an effort to unseat Gheorghiu-Dej are not confirmed, although such an effort might have been made several years ago.)

6. FBIS reports that Radio Peking broadcast the texts of the 7 CPSU and CCP letters, which it released on 3 May, 1,000 times by the end of the month, almost as often as the 14 June 1963 CCP letter (1,116 times). With the beginning of June, Peking's transmitters shifted to massive dissemination of the 30 May CPE Government statement [see para 3 above].

Significance:

It appears that the CPSU continues and intensifies its

drive for a world conference, despite the objections and wishes of even friendly parties, to convene it as early as feasible, possibly before the end of the year. Soviet domestic opinion is being prepared for drastic anti-Chinese measures, and it appears that a determined new drive to marshal world Communist support is gradually adding to the number of lesser parties who can be counted. However, the Soviets have apparently had little or no success in breaking down the opposition or resistance among such important hold-outs as Rumania, Yugoslavia, and Italy, and it is therefore still too early to forecast the outcome.

Despite the great volume of their output, the Soviet propagandists seem to have made few points in the battle of words during this period: in contrast, at least in our judgement, the Chinese probably scored heavily among the Afro-Asians with their strong Government statement [see para 3 above].

Treatment:

1. On the contradictions inherent and apparent in the Soviet effort to develop a new "liberal" image against the CCP tyrants and still preserve the working discipline of the old movement; use, for example (in addition to the rich materials described in our last installment), the 3-part Pravda series May 10-12 on a "creative attitude" as the true Leninist approach to blast the Chinese acceptance of what was written decades ago as immutable scripture in contrast to the Pravda June 3-4 protest against efforts by some people to define different types of parties on the grounds that the type of Marxist-Leninist party was shaped in Lenin's time and there is no necessity to evolve new types.

2. We continue to use the mutual recriminations of subversive activities against "both your houses." For example, Izvestiya complains (May 30) that the Chinese have mailed more than 11,000 pamphlets to Soviet citizens within a short period: how many pieces of propaganda material does the USSR mail "within a short period" to citizens of the USA, Great Britain, Japan, Indonesia, or any country where they are not banned from the mails?

3. To leaders of organizations and officials in Asian and African countries, play back the CCP attempt to act as the leader of the Bandung conference, past and future, by, for example, suggesting that to Chinese representatives that it is their own country which is now attempting to "order others about" and questioning their right to charge that the USSR is "attempting to squeeze into the Second A-A Conference."

#30

23 May-5 June 1964

May 12 - (delayed): A large group of heads of foreign diplomatic missions (including the ambassadors of Indonesia, Mongolia, China, Thailand, Iraq, Argentina, Brazil, Nigeria, Rumania) in the USSR arrives in Alma-Ata (capital of Kazakh SSR) from Moscow on a visit organized by the USSR Ministry of Foreign Affairs. The diplomats will visit various sights of Alma-Ata, industrial enterprises, a suburban collective farm, the Kazakh Academy of Sciences, theaters, and other cultural establishments.

May 21 - (delayed): Pravda publishes a dispatch from Canberra describing a joint statement of the CPs of Australia and Ceylon appearing in the paper Tribune: they both condemn the Chinese activities and "believe that the time has come to convoke as soon as possible an international conference...."

May 23: The Indonesian CP (PKI) celebrates its 44th anniversary with a mass rally in Djakarta. Speeches repeated PKI's determination to smash revisionism and attacked Yugoslavia by name. Radio Moscow's Indonesian-language broadcast on the occasion called for "firm action against the confused and dangerous steps taken by Chinese Communist leaders."

May 23-24: Corrected dates for 2-part Izvestiya article on revolutionary theory described in last Chrono from Tass summary which gave dates as 22-23.

May 24: Pravda publishes article "Do Not Go Astray," by leading Soviet writer Konstantin Simonov in which he denounces the splitting activities of the CCP leaders." "Against whom is all this (malice and poison) written? Against imperialism? No!....(It is) against you and me, against us, Soviet us, Soviet comrades, Soviet Communists, the Soviet people, and Communists in other countries. You immediately ask yourself: How so? How could this happen?...." "There was no single year in the memory of my generation when our country and Party had not helped the Chinese people and CCP in every possible way, sharing like brothers that which we ourselves needed. He recalls "how much love and respect for the Soviet Union and the CPSU" he saw while marching as a Pravda correspondent with the Chinese PLA after the retreating Chiang Kai-shek troops.

Simonov says that "a crude and primitive double game is being played by the Chinese splitters" in "the hope, naive in its absurdity, that someone among us will fall for this bait" and "come to believe" that it is "a quarrel above our heads with our leaders alone."

It appears that the hope has given rise to attempts to stuff us with heavy, dull, and clumsy radio propaganda and to mail to private addresses various documents containing preposterous attacks on our Party and its leadership.... I would like to say: "No, nothing will come of it, either in general or particular, anywhere or with anyone." The

(Chronology Cont.)



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bait with which you are trying to catch someone in our country is rotten,...

May 25: Czech Party daily Rude Pravo publishes "excerpts from letters which the Chinese People's Association for Cultural Relations with Foreign Countries is sending" to Czech officials in capitalist countries which are "slandering the present leadership of the Czech CP and denouncing the abolition of the personality cult in Czechoslovakia." Rude Pravo rejects "this unheard-of interference."

Khrushchev returns after a visit to the UAR regarded as generally successful in publicizing Soviet aid to underdeveloped countries, though in one impulsive speech he sounded a sour note deprecating Arab unity as against proletarian unity.

May 26: On the 40th anniversary of the 13th Congress of the Russian Bolshevik CP (23-31 May 1924), Pravda carries an article by "Candidate of Historical Sciences K. Kuznetsov and veteran Party member B. Terekhov" recalling Lenin's testament, with its recognition of Stalin's shortcomings. "By going all out in instilling Mao Tse-tung's personality cult, the Peking figures are now praising Stalin." The same Pravda carries a statement by the Chilean CP/CC calling "for the earliest convocation of an international conference."

A Rumanian Party delegation led by CC Secretary Stoica arrive in Moscow for talks "marked by a warm and friendly atmosphere." Tass said they came "to familiarize themselves with experience in party guidance of economy in engineering and petrochemistry," but observers believe that they are primarily concerned with problems of the world movement.

May 27: Pravda carries an article commenting on how Peking's foreign policy, claiming to be a "model of revolutionism," gets along amicably with British colonialism in Hong Kong. The authors complain especially about HK's role as "a major foreign center of slanderous propaganda and subversive activity conducted by Peking against the Soviet Union and against the WCM."

The Mikoyan-led Soviet "parliamentary delegation" departed from Japan after a 2-week visit which apparently produced no notable results.

May 28: Pravda features Italian CP deputy chief Longo's: "The Soviet Union is a Bulwark of Peace and Democracy." After condemning the Chinese line and anti-Soviet activities, Longo ends ambiguously: "it is necessary to condemn those methods of political struggle -- a priori condemnation and excommunications -- to which they adhere and which we must unconditionally reject." Pravda also reprints from the London Daily Worker a CPCB statement which discusses preparations for a world conference but

does not urge it: the aim of such a conference must be unity, and there can be no question of "excommunication."

On the other side, the Chinese press republishes an article from the 25 May issue of the Melbourne Vanguard, organ of the pro-Chinese dissident CP of Australia (Marxist-Leninist) in full support of the Chinese position. On the disputed timetable for a world meeting: "Three or four years from now....There is no hurry, and haste can only add to confusion."

May 29: East German Party boss Ulbricht is given a red carpet reception in Moscow "on a state visit" of two weeks. Radio Belgrade's Moscow correspondent says Moscow circles view this as the beginning of a new round of mutual visits preparatory to a new conference, which, "according to some reports, could be held before the end of this year."

May 30: Soviet Government daily Izvestiya editorial "On the Nature of the Relations between Socialist Countries" emphasizes that Chinese talk about "sovereignty" and "independence," as shown by their deeds, "are hypocrisy and deception." Asserting that "interference into the internal affairs of the USSR has been lifted in China to the level of an official political line," Izvestiya charges, that according to Tass, "Chinese organizations try to exercise political influence on Soviet citizens with the help of officials at Chinese institutions in the Soviet Union, students and tourists. Chinese organs send anti-Soviet literature to the USSR, more often than not through illegal channels. More than 11,000 pamphlets vilifying CPSU policy have been mailed to Soviet people within a short period. Particularly alarming are the incidents provoked by Chinese authorities on the Soviet-Chinese border which at times take the form of gross provocations." In contrast, "the CPSU unconditionally rejected the antidemocratic and actually antisocialist methods which Stalin used," restored principles of equality and non-interference, liquidated mixed joint stock companies, relinquished rights to the naval base in Port Arthur and Dalny. On the same day, Moscow's Communist Youth League organ Komsomolskaya Pravda publishes materials of a Komsomol CC plenum which discussed the CPSU February plenum resolutions. First Secretary Pavlov, in main report, stressed duty of all Soviet youth to support the resolutions against "the Chinese splitters who try to sever the youth movement in Asia, Africa, and Latin America from international democratic youth organizations and thereby undermine the democratic youth movement."

Pravda publishes an editorial from the Jordanian CP organ Al-Magawamah As-Shabiyah lining up with the CPSU, including support for a conference.

May 30-31: The CPE Government issues on the 30th -- and all Chinese papers publish on the 31st -- a statement striking back sharply at the Soviet Government statement a month earlier denouncing Chinese conduct at the Djakarta preparatory meeting for a 2nd Afro-Asian Conference (see Chrono #23, April 25 and May 4).

(Chronology Cont.)

In this statement the Soviet Government unscrupulously blamed the Djakarta preparatory meeting for failing to invite the Soviet Union to the Second A-A Conference and resorted to crude attacks and abuses against the participants.

....

All its arguments boil down to the following: the Soviet Union is an Asian power and must participate in the Asian-African Conference; to object to its participation means to "divide" the forces fighting against imperialism, and the Soviet Union will make a "rebuff." These words are wrong in their point of departure, absurd in logic, and ridiculous in conclusions.

The CPE statement refers to Soviet description of the enormous size of its territory in Asia. "Does the fact that all the large Asian states could fit into the Asian part of the USSR give it more say than all the Asian and African countries put together? Size cannot frighten anybody....In international relations each state is a single entity and can have only one political center." Nearly three-fourths of Soviet population live in Europe: the political center of the Soviet Union as a single entity has always been in Europe and therefore it has traditionally been acknowledged as a European country.

The statement points to the first A-A conference in Bandung, where "the Soviet Union as a whole was not invited," "nor were its union republics in Asia," and it quotes the late Prime Minister Nehru in 1954: "Soviet Asia was not invited because politically it is part of a European unit, namely the Soviet Union." "He was quite right," say the Chinese. Moreover, the Soviets supported the Bandung conference without being invited. "On what grounds can the Soviet leaders insist on being invited to the second...? What changes have taken place...? Can it be that the capital of the Soviet Union has been moved from Moscow to Vladivostok...?"

The Chinese elaborate on the "racism" issue, asking what kind of racism -- yellow, black, or unity of the yellow and black against the white -- and pointing out that among the participants at Djakarta were "quite a few countries whose population is mostly white."

The statement then takes the offensive:

In frantically vilifying China and behaving as if the Djakarta meeting had been manipulated by China single-handed, do you still acknowledge the existence of the other A-A countries? In what position do you want to place the other 21 countries....?

If the Soviet leaders have the least respect for A-A countries, they should first of all respect this conclusion...and should not carp and cavil and attempt to

overthrow this conclusion through crude interference....  
what difference is there between your attitude toward A-A  
countries and that of the Western powers?..Are not your  
motives clear enough in persistently wanting to squeeze  
into the Second A-A Conference?....

"Although the Asian and African countries are poor, they  
have backbone. The times when the Asian and African countries  
could be ordered about by others are gone forever. Those who  
suit their actions to the times are wise. We suggest that the  
Soviet leaders had better not take such an attitude."

May 31: Pravda carries an article by V. Stepanov, one of Soviet delegates to the 7th Congress of the Ceylon CP on the activities of the Ceylonese splitters and their Chinese bosses: among other things, he charges that "the splitters spent monthly up to 200,000 rupes -- 40,000 dollars -- on publishing and distributing their newspapers and propaganda literature in Ceylon."

June 2: Pravda carries an article by "Algerian political and public leader Larbi Bouhali" on the Chinese splitting activities at the recent Algiers AAPSO session. "The Chinese delegation's conduct was such as to suggest that they came to the conference with the intention either to set the peoples against the Soviet Union or to destroy the solidarity movement itself."

Tass announces the purchase by the Chinese Techno-Import Company of 5 Soviet turboprop IL-18V airliners, "on the basis of mutual deliveries between the Soviet Union and the CPR." It added that "the deal was preceded by talks between the Chinese firm and the French," and that "Techno-Import changed its mind and gave preference to the Soviet aircraft."

June 3: An Izvestiya editorial on the need for coordinating actions and policy, national and international interests, describes China's moves toward terminating its status as a member of the world Socialist camp and nullifying the provisions of the Soviet-Chinese alliance. The CPR Government, it says, has "stopped coordinating its actions in the international arena with other socialist parties," is "waging an open struggle against the agreed line of the majority of the socialist states," "rejects consultation on major international problems," and "stopped taking part in the work of different conferences between leaders of socialist states," "Taking foreign policy steps affecting the interests of other socialist states, the CPR Govt does not deem it necessary to consult them, or even to inform them in advance."

Moreover, the CPR Govt is now openly voicing its contempt for treaties and agreements concluded with fraternal countries. Seeking to justify its flirting with reactionary regimes, Marshal Chen Yi declared that China is an "unaligned" country. Politically speaking, this means that Chen Yi no longer regards China as part of the world social-

The editorial went on to state that since 1960 the Chinese Govt has drastically reduced its deliveries of lead, mercury, wolfram, and molybdenum to the Soviet Union and "completely stopped its deliveries of strategic raw materials." Moreover, "there is evidence that strategic raw materials from the CPR are reaching imperialist countries." The Chinese Govt. also stopped sending foreign policy information which it undertook to exchange under the treaty of friendship, alliance and mutual assistance. From 1960 to 1963, the SovGovt sent the CPR Govt. over 140 items of information on important international questions but received only 38 such items from the CPR, "largely of second-rate importance and in oral form."

Radio Moscow also announces the publication by the Political Literature Publishing House of a collection of materials and documents entitled "For the Cohesion of the ICM," including the most important documents of the CPSU and SovGovt statements exposing the anti-Leninist, neo-Trotskyite course of the CCP leaders.

According to the New York Times, the June issue of the CPSU theoretical journal Kommunist appears with excerpts from statements by 53 foreign CPs voicing support of the Soviet position in the conflict, saying that the "absolute majority" had condemned the Chinese. The list was not represented as complete and did not include several parties known to be pro-Soviet.

June 3-4: Pravda publishes in two installments an article "Against the Splitters and for the Unity of the Communist Movement" from the new issue of Partiynaya Zhizn (Party Life). It traces the road of the present-day splitters, who, at the 1960 conference, "in their correspondence with the leading organs of fraternal parties (FPs) and also by distributing propaganda material, ...tried to force on all CPs their own particular anti-Leninist platform and to subordinate the WCM to their own ideological leadership. However, the FPs remained true to the M-L positions of principle. Then the CCP leaders began to resort more and more openly to various kinds of unpleasant devices -- slander, bribery, and blackmail -- thus trying to bring under its influence at least some of the Communists from other countries....But this device did not succeed, either."

The article, after tracing the road taken by the CCP from 1960 through 1963, turns to Lenin as authority on three signs of fractionalism which fit the Chinese: the presence of a special platform; group fractionary discipline; and special press organs. In the latter, mention is made of "the new international magazine published in several languages at Peking's expense under the high-flown title of REVOLUTION."

The second installment begins by condemning the new dialectic on the inevitability of a split and the Chinese attempts to draw an analogy between their splitting methods and the struggle of the Great Lenin

say that "the ICM is allegedly in the process of selection, crystallization, and consolidation, and that at the present time there exist four types of Communist and workers parties." (The M-L party; a party where the leadership is controlled by revisionists but in which exists an M-L opposition; a party under complete control of revisionists, while M-Ls expelled form M-L groups; and a party in which the leadership is revisionist but alongside which a new CP has formed -- the Indonesian formulation.)

"Some comrades think they can maintain contact with all the groups and parties mentioned above, and are appealing to others to do the same. Thus they are in effect supporting a sort of Communist multiparty system. But where can such an arrangement lead to in practice? Some say toward a selection, toward the breeding of new varieties. But wasn't the type of the working class revolutionary party, the party of M-Ls, shaped in Lenin's time? Is there any necessity to evolve new types of CPs?

....The overwhelming majority of the world's CPs are consolidating on the platform of...the 1957 and 1960 Moscow conferences....They speak of four types of party, but who gave them the right to elevate these factional subversive organizations working against the Communist movement to the rank of CPs?..."

The article notes the "highly significant" way the editors of the London Financial Times describe the Chinese aims: "the Chinese leaders have been using Marxism to disguise their military and expansionist aims."

What to do about it? The article stresses the obligations of Communists to adhere to international Communist discipline -- voluntarily, in the spirit of Lenin, and in accordance with the evaluations and conclusions collectively worked out in international conferences.

To remove the threat of the split hanging over the WCM, the Chinese leaders must return to the general platform of the Communist movement, discontinue their political struggle against M-L parties, and agree to settle inter-party differences within the framework of Lenin's norms....

A new international conference of Communists could be a new, important stage in the struggle for unity. The majority of the worlds CPs are in favor of calling one as soon as possible....The Chinese leaders are increasingly and openly seeking to postpone the calling of a conference. ...To remove the threat of a split created by the CCPs subversive activities, collective efforts by the M-L parties are needed....

June 4: A Bulgarian Party delegation headed by CC Secretary Grigorov arrived in Moscow "to familiarize itself with CPSU experience in the field of ideological activities.

(Chronology Cont.)

NCNA announces that another group of Chinese workers left Mongolia, indicating that this accounts for about two-thirds of the 3500 who had been there.

Tass reports from Mexico City that the Mexican CP has published a resolution which recalled that the 14th MCP Congress at the end of last year had endorsed a new world conference and says that "the Presidium believes that such a conference is even more necessary under present conditions...."

Indonesian CP Chairman Aidit welcomed New Zealand CP Secy Gen Wilcox on a visit to Djakarta, praising him as "leader of a CP which holds high the banner of M-L and stands in the forefront of the struggle to smash modern revisionism," a party from which the PKI can learn much.

The new issue of Problems of Peace and Socialism, according to UPI, carries an article by a Costa Rican Communist who visited Mao in 1959 and reports him as saying: "Personally, I like international tension." It also added parties in North Vietnam, Ecuador and Iran to the list in Kommunist endorsing the Soviet call for a world conference, according to AP.

June 5: "Completing its series of articles on the nature of relations among socialist countries," according to a Tass summary, Izvestiya denounces the CCP leaders for "casting aspersions on economic cooperation among the socialist countries," and alleging that "such cooperation leads to the subordination by the more developed countries of the less developed ones and a loss of equality by the latter." (We recall, of course, that this was also reflected in the Rumanian April 22 declaration.) Izvestiya calls "absolutely impermissible the uncoordinated steps of some members of the community which involve the interests of other fraternal states and damage the common line of the socialist countries." "One cannot put up with any behind-the-scenes intrigues, concealed speculations in the field of foreign trade, in the work of international democratic organizations, in sports -- and that is what the Chinese leaders are doing."

A Washington Post report by S. Rosenfeld says that Khrushchev made a secret and unsuccessful trip to Bucharest about one month ago to unseat Rumanian leader Gheorghiu-Dej, according to unverified reports from the Rumanian capital.

15 June 1964

793. Lysenkoism Still Lives On.

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**BACKGROUND:** Marxism represses science. For scientific research and thought to progress, it is essential that there be no "unthinkable thoughts," no dogmas which cannot be questioned, and no fear among scientists that they may be punished for unpopular findings. Marxism professes to be scientific, but it is really a dogmatic theory, not verified by experience, and not open to revision. From time to time, Marxist dogma has collided with scientific work, since the latter has developed rapidly in the last century, while the former has--at least in theory--stood still. For many years, Marxist theoreticians contested Einstein's theories, believing them to be idealist (as opposed to materialist); the concept of cybernetics met for a time with similar hostility. Official Marxism-leninism has reversed itself by now on these two questions, nuclear physics and control techniques being fields too important to a Great Power to permit dogmatic foot-dragging. But in biology and particularly in genetics, the CPSU still supports the pseudo-scientific doctrines of Trofim Denisovich Lysenko, usually called "Michurin science" in the Soviet Union, after the scientifically-ignorant Soviet plant-breeder, Ivan Vladimirovich Michurin (1855-1935).

Inherited VS. Acquired characteristics. Michurinism is based on the doctrine that acquired characteristics can be inherited. Marx had already warmly embraced this doctrine, which was held by many scientists in his time. He acclaimed the work of Darwin and sought (unsuccessfully) to get Darwin's agreement to having Das Kapital dedicated to him; at the same time Marx scornfully dismissed the theories of Thomas Malthus on population, which had partly inspired Darwin's work. But at the end of the nineteenth century, the discoveries of the Austrian monk Gregor Mendel became widely known in professional circles and, amplified by the work of other biologists, such as August Weismann and T. H. Morgan, these findings indicated that acquired characteristics could not be inherited. Mendel's theory was that heredity is transmitted by discrete living particles, which later became known as genes, and scientific research demonstrated by 1915 that the chromosomes of the cell nucleus consist of thousands of these elements, each located in a linear order which can be mapped. The adaptation of a living organism to its external environment in no way affected its genes.

Mendelian genetics were repellent to good Marxists, for several reasons.

1. The theory, especially as developed by twentieth century research, was too complicated; non-specialists who were political activists could not understand it themselves,



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and found it useless for propaganda purposes. Unsophisticated experimenters like Luther Burbank, Michurin, and Lysenko likewise failed to understand the Mendelian theory, or the evidence which supported it.

2. Mendel, like Malthus, was a cleric; indeed Mendel was a monk. Other proponents of Mendelianism were bourgeois scientists, without "social consciousness." Always inclined to see things in black-and-white, good vs. bad terms, Marxists identified their own views with science and materialism, and identified Mendelianism with metaphysics and idealism. They distorted the Mendelian theory to make it seem that the germ plasm or the genes were a spiritual element, like a soul.
3. Mendelian genetics outdated views expressed by Marx and Engels.
4. The denial that acquired characteristics could be transmitted to later generations ran counter to Marxist plans to rebuild society over a short period, to dreams of creating a "New Soviet Man," and to schemes for rapid re-education of every kind.

Although most Western scientists had accepted Mendelianism by the time of the Bolshevik revolution, Soviet scientists made valiant efforts to show the inheritability of acquired characteristics. The psychologist I.V. Pavlov tried to show that an acquired ability to learn could be transmitted; a serious and competent scientist, he admitted by 1927 that his experiments had not proven the point. Michurin, and after him, Lysenko claimed to have created new plant species over a short period; their claims are believed to have rested on poor experimental techniques and, at least in Lysenko's case, on falsification. A notorious case was that of an Austrian zoologist, Paul Kammerer, who claimed to have changed the color of salamanders; he evaded an examination of his specimens for seven years, and after they were finally checked (in 1926) and shown to have been painted with India ink, he committed suicide. At the time of his exposure, Kammerer had accepted an appointment to head an institute in Moscow. Perhaps partly because of this experience, a strong and able school of Mendelian geneticists was permitted to work in the Soviet Union in the '20's and early '30's, led by Nikolai Ivanovich Vavilov.

Stalin represses science. But a new school arose under Stalin, associating itself with the name of Michurin and led by Lysenko. Whatever his shortcomings as a scientist, Lysenko was and is an able politician and propagandist. He managed to get Vavilov exiled and imprisoned; Vavilov died in a concentration camp in 1943. Lysenko's theory appealed to the xenophobia of Stalin and Zhdanov, and in 1943, this theory became official; the few remaining adherents of Mendelian genetics either recanted or were removed from their positions. Biological research in the USSR

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Khrushchev supports controversial Lysenko. Some revival of genetics took place after Stalin's death, and it has been possible for Soviet biology to recover some of the ground it had lost when Mendelians were branded public enemies. But since the consolidation of Khrushchev's position, Lysenko has succeeded to a degree in consolidating his position as well. Khrushchev has a fondness for "practical" scientists who "get the work out," and Lysenko has pandered to this taste, claiming fabulous results for his Lenin Hills experimental farm, especially in grain production and in raising (through breeding) the butterfat content of milk. Of course, Lysenko's farm's production (if the figures are accurate at all) is attained by a lavish use of the best materials and equipment, and an intensive expenditure of man-hours. But at the slightest criticism of Lysenko, Khrushchev points to Lysenko's figures and tells the other experts to go to Lenin Hills and learn.

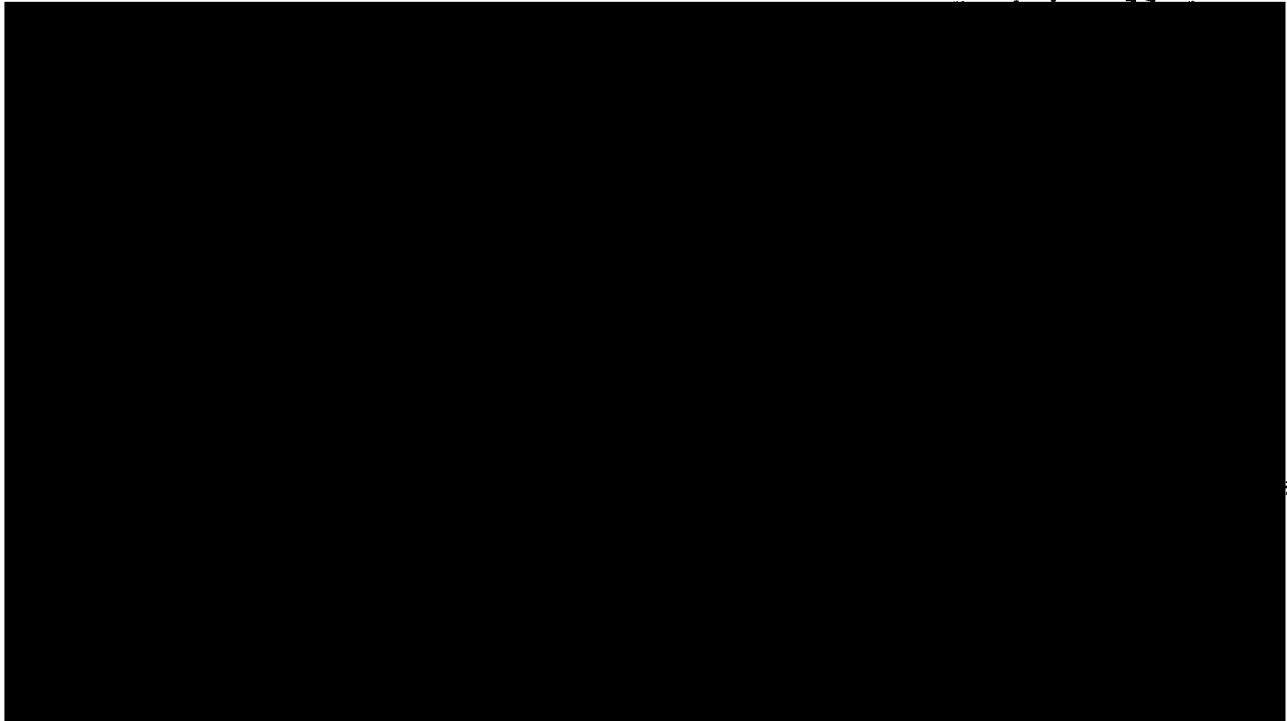
Ideology continues to block Soviet biological science. In March 1963, a literary journal, Neva, printed an article, "Prospects of Soviet Genetics," by Zh. Medvedev and V. Kirpichnikov [see unclassified attachment for text]. This article gave an excellent layman's survey of modern genetics, and without naming Lysenko, attacked the isolation of Soviet biology from world biology as survival of the cult of personality. But other Soviet scientists failed to come to the support of these writers, and on 18 August, Sel'skaya Zhizn (Rural Life) printed a forceful criticism by M.A. Olshanskiy, a faithful Lysenko follower who occupies Lysenko's old position as President of the V. I. Lenin All-Union Academy of Agricultural Sciences. Olshanskiy concluded that a spirit of conciliation between Michurin genetics and "classical" (i.e., Mendelian) genetics was "impermissible in biology" and that the Medvedev-Kirpichnikov article "must be considered mistaken and harmful for our science." Neva reprinted the Olshanskiy article in September, along with a note of apology; by October, more than half of Neva's editorial board had been replaced. Other signs continue to show the efforts of the Lysenkoites to enforce conformity: for example, a recent book, Genetics, by M. E. Lobashev, was sharply denounced in a review of 10 March 1964 as an attempt "to revive the old idealistic, metaphysical Weismann-Mendel-Morgan genetic theory."

True, there has been a real change since the days when Vavilov died in a concentration camp. Today, much worthwhile Soviet material is published with a ritual bow in the direction of Michurin. Biochemical science in the rest of the world has in recent years witnessed exciting advances with research on DNA (desoxyribonucleic acid) and RNA (ribonucleic acid); DNA molecular chains appear to provide a sort of genetic code or (in the computer sense) program, and indeed seem to be the material counterpart of the theoretical concept of the genes. The Soviet biologists are well aware of these developments, and even Lysenko himself tries to incorporate DNA into his own system. In a sense, molecular biology may ultimately serve Soviet purposes, since it

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has made it appear possible to induce or block mutations--i.e., to control genetic processes. But as long as the ideological line prevails in Soviet biology, independent research will be hindered, the exploitation of Western research will be handicapped, political hacks will occupy important positions, and the best talent will be discouraged from taking up this study. Lysenko cannot be blamed for last year's agricultural failure, but the reliance on an official line and the discouragement of initiative leads to similar results in biology, agriculture, and other fields of Soviet life as well.

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794 Not So Peaceful Co-existence

**BACKGROUND:** There is no detente in the cold war with the Soviet Union although a series of agreements have been made in an attempt to reduce the nuclear arms race and to create a more favorable political climate in preparation of settling the truly crucial issues. These limited agreements (e.g. reduced production of fissionable materials for military purposes, limited nuclear test ban, the US-USSR Consular agreement) are hopeful signs but they do not yet touch the heart of the crucial issues (e.g. disarmament, German questions) nor do they indicate any trend in Soviet foreign policy away from the goal of Communist world domination.

US and free world steps toward rapprochement with the Soviet Union could be interpreted in many countries as more significant than they are with respect both to our policy and to the intentions of Khrushchev's CPSU. To the extent that this is the case, such countries may rush into relations with the USSR and Eastern European Communist countries which expose them to undue influence and penetration; or they may pressure the major powers to make sweeping agreements with the USSR which lack controls and verification (e.g. disarmament without inspection, German agreements without protection for Berlin or self-determination for people of East Germany, non-aggression pacts with predatory and unreliable countries such as Cuba and Communist China).

CPSU Position and Policy. The Soviet Union recognizes the restraints placed on large scale direct aggressive action by a determined free world possessing destructive military capabilities at least equal to its own. But it is not clear that CPSU leadership is equally cognizant of the danger of limited war (e.g. Communist supported insurrection within countries or between "third" countries) -- which it has not renounced. Nor can we rely upon the Soviet leaders' ability to calculate correctly what the free world response in the event of communist aggression in one part of the world or another is likely to be. Firm, explicit US and western policies are one attempt to prevent Soviet miscalculation and the agreement on the "hot line" between Washington and Moscow is at least a recognition by the Kremlin that miscalculation is a possibility.

In the long run, it is possible that a Soviet policy of indirect aggression and subversion is more dangerous than direct aggressions. Faced by a belligerent Communist China demanding a slow down on revolutionary doctrine in a struggle for power

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over the Communist movement on the one side and by restless Eastern European countries and peoples, increasingly pressing for political and economic autonomy, on the other, Khrushchev's CPSU must prove success for its "peaceful coexistence" policy -- that is, indirect subversion in all of its aspects.

The CPSU is attempting to develop as many normal relations as possible with non-Communist countries -- and particularly key nations in the developing areas, e.g. Algeria, UAR, Ghana Indonesia. Its major purpose in such relations is to penetrate and indoctrinate, subvert to insurrection and by other means to impose communist systems.

Aggressive, anti-imperialist Soviet foreign policies.  
Khrushchev's "peaceful coexistence" policy, advocating ostensibly reasonable and normal relations with other countries in many respects, also continues aggressive actions against the free world and democratic institutions. It makes little difference whether Soviet attacks on the free world are rationalized as necessary (1) to maintain the USSR's status in the Communist world and to offset Chicom charges that Khrushchev and the CPSU are soft on capitalism, or (2) to quiet real or purported pressures within the USSR itself. The attacks and the possible consequences are real in either case. Further, the rationalizations tend to make Khrushchev's overtures more acceptable to many and to promote a peaceful image for the USSR in contrast to belligerent Communist dogmatists and Mao's CCP.

Whether Khrushchev might be moving toward a tougher line is a moot question. That he is continuing his attacks on the West in general and the US in particular is a fact. The Soviet Union's not so peaceful coexistence practices are found in many places. Some of these are as follows:

Indochina. The CPSU charges the US with aggression in Vietnam and Cambodia, blames it for the crisis in Laos and claims it has a plan to invade that country. Moscow endorses Sihanouk and favors the Pathet Lao and VietCong, though presumably wary of Chicom victory through these forces in Indochina. All US attempts to assist the struggling Indochina countries to defeat the brutal, outright aggression from the northern Communists are interpreted as US imperialism.

Ambassador Fedorenko, speaking to the United Nations on 21 May 1964 charged that the US made "war against the people of Vietnam" committed "aggressive actions" against Cambodians, and "stubbornly violated" the Geneva Agreements of 1954, which violation led in the case of Cambodia to "this meeting of the Security Council." Harry Schwartz (NY Times 24 May) said that Fedorenko's speech "used some of the roughest, cold war language heard in the

Security Council in years."

An Izvestiya article of 25 May signed by "Observer" (used for Soviet policy statements) [as reported by the NY Times 26 May 1964] "blamed the US in the current crisis in Laos. It charged that American arms had been shipped to rightist forces, which attempted a coup last month...." It likened Laos to South Vietnam and warned against any attempt to transfer to Laos the 'bankrupt' American policy in South Vietnam. ... Such an attempt would 'create a dangerous new seat of war,' would heighten political fevers throughout Southeast Asia and would constitute an expansion of American 'aggression,' the paper said."

Cuba. An "Observer" article in Izvestiya of 25 April 1964 on US overflights of Cuba contains extreme statements which also give pause to the view of a Soviet policy of rapprochement with the US. Khrushchev, supporting Castro's threats to shoot down American reconnaissance planes, says among other things that the overflights are a contravention of the US-Soviet agreement of October 1962, that Cuba has the right to Soviet weapons to protect its sovereignty, and that there can be no real improvement in Soviet-American relations unless the US respects Cuban sovereignty. The facts are that Cuba has never allowed the inspection agreed to in the Kennedy-Khrushchev understanding of 1962; that Khrushchev assists, and, through his intelligence services, actively participates in Castro's policy of encouraging and assisting insurrection (with Soviet bloc weapons) against legal Latin American governments; and that he otherwise encourages or allows Castro's vehement attacks on the US (even suggesting that the US prepares bacterial warfare -- a charge now appearing in SEA also).

Africa. In addition to vitriolic charges of imperialism against the West during his two-week visit to the UAR in May 1964, Khrushchev obtained Nasser's support in a joint communique which: claimed that the success of their economic and political cooperation were the fruits of the peaceful coexistence policy between countries with different social systems; charged that imperialists exploit other countries, interfere in Cyprus and abridge Cuba's sovereignty; stated that the CPS has the right to Taiwan; and opposed all forms of colonialism (i.e. the purported neo-colonialism of the US in particular).

In another communique signed with Algerian Premier Ben Bella in Moscow shortly before his African trip, Khrushchev secured Algerian agreement for practically his whole vehement anti-imperialist (West) campaign, and support for his own misleadingly labeled "national liberation" policy. For example, K and Ben Bella:

announced "solidarity with the peoples of Africa, Asia and Latin America heroically struggling against colonialism

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and imperialism and for national liberation, ....

"decisively condemn all forms of colonial oppression and neo-colonialism and are resolved to continue giving active support to the national liberation movement ....

"condemn attempts by the imperialists to violate the sovereignty of the Cuban Republic ...."

"expressed their belief that disarmament would "prevent colonial powers from using arms for repressing national liberation movements ...."

and hoped for strengthening the links between Algeria and Cuba, i.e. between Ben Bella and Fidel Castro.

Khrushchev, who has selected two good show cases from which to project an attractive Soviet image into Africa, paid well for the opportunity to further influence and penetrate the continent: a \$277 million credit to the UAR and a \$125 million credit to Algeria. Only Western aid is dangerous, imperialist and colonialist, according to Soviet propaganda.

Others. The USSR has supplied excessive quantities of military hardware for Sukarno's territorial conquests and Indonesia's confrontation with Malaysia. In Cyprus, where the UN has called for disarmament while seeking to mediate in that tragic island's problems, the Soviet Union supports a military solution by government leaders. The Soviet Union has consistently fought the UN General Assembly's peacekeeping functions, and on numerous occasions has sought to sabotage its attempts to prevent the outbreak of war. The USSR has, also, provided weapons for illegal aggression, against dissidents, in the Congo, to Somalia, and to the Kurds. The buzzing of US planes in air corridors over Germany and interference with convoys on the highway to West Berlin, the carrot and stick treatment of the Scandinavian countries and interference in the internal affairs of Finland, are but further examples of the CPSU's non-peaceful coexistence policy. [See summary checklist for the "Soviet Union's Not So Peaceful Coexistence"]

REFERENCE: BPG #132, item 725 of 12 January 1964, "Against Complacency in the Cold War."

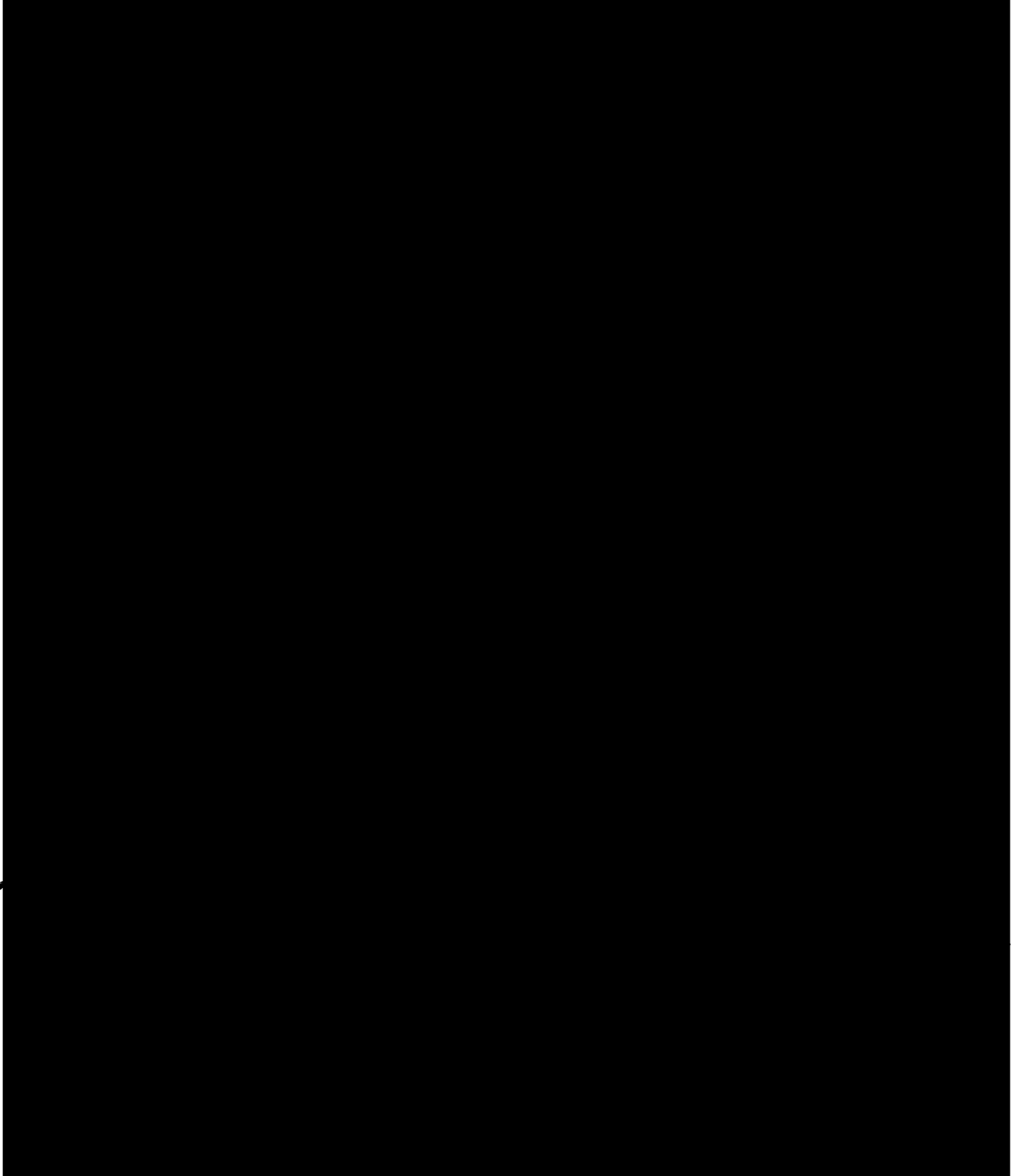
Also, Press Comment, current items on CPSU attacks on the free world and charges against the US.

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15 June 1964

795. The Succession Dilemma in Communist China

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BACKGROUND: When Lenin died and again when Stalin died, it appeared that the remaining Communist leaders were firmly united in their determination to carry on the ideas of the dead leader. And yet in both cases, shortly after the death of the leader his former subordinates were deeply divided and engaged in life and death struggles for power. What are the chances that the Chinese Communists will be able to avoid a severe crisis in the period after Mao dies? In view of Mao's advanced age--he was 70 last December--and his apparent mental and physical debilitation in recent years, the question has very real significance for the immediate future.

Heir apparent. The CCP has attempted to ease the situation by grooming Liu Shao-chi as Mao's appointed successor. In 1959 Mao turned over to Liu the chairmanship of the Government while retaining the more important post of party chairman. Although the duties of the CPR chairman are largely ceremonial, this transfer enhanced Liu's prestige by making him nominal chief of state. Liu has also been allowed to act as China's foremost ideological spokesman, after Mao of course. Liu however is 66, nearly as old and frail as Mao. Even if he should achieve a successful takeover from Mao it would necessarily be as a caretaker administration. Liu certainly does not have the status to appoint his own successor as Mao has done.

There are, moreover, other factors that make it uncertain whether even Mao can successfully install Liu as his successor. When a legendary leader like Mao has dominated the Party for such a long time, the moment he dies or is effectively removed from leadership, the environment changes so drastically that any comparison with the situation that existed just before his death is invalid. Many who were willing and able to work harmoniously together under Mao's tutelage may suddenly find that they are no longer able to find common goals and objectives. It is one thing to hold a regime together on the basis of revolutionary comradeship and zeal developed in the hard school of the Long March and the caves of Yenan. It is quite another thing to weld a new leadership out of those who have witnessed the tragedy and confusion of their elders during the recent period of high hopes and shattered dreams.

"Purged" leaders. The reckless and controversial policies that have led to such dismal failures in recent years are certain to have left strains and ill will among leaders and cadres.

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There is evidence of this in the fall from grace of Chen Yun, formerly China's top economic planner, and the dismissal of Defense Minister Peng Teh-huai. Chen Yun is thought to have opposed the communes and the Great Leap Forward. He spoke on that matter as China's foremost economic expert and it is reasonable to assume that many others in this group shared his views, but considered it futile to sacrifice themselves in use-less opposition to the Party ideologists. Peng Teh-huai also opposed the Great Leap Forward but the main point of his opposition to the Party authorities came when they sought to impose Party controls over the army and to divert men and material from the armed forces to industry and agriculture. There is also evidence that he opposed Mao's views on the relative role of men and weapons in modern warfare. Again, it is reasonable to assume that other army leaders shared (and share) Peng's point of view but find it expedient to bide their time until a more propitious opportunity presents itself. Such an opportunity could come when feuding political factions in the Party find themselves competing for the support of the People's Liberation Army.

Potential Competing Groups: Liu Shao-chi and Teng Hsiao-peng, General Secretary of the CCP, are considered to be the leaders of a "hard" group that controls the Party apparatus and has used it in recent years to dominate Chicom policy-making. This group of die-hard Stalinists advocates overly ambitious industrial and economic goals, but a series of economic disasters in the past few years has forced them to retreat somewhat. They are concerned lest this period of retreat cause ideological deviations and bring "revisionism" into their "pure" Marxism-Leninism. That is why the Chinese Party and the Chinese people are still being subjected to political campaigns against "class enemies," e.g. the socialist educational campaign.

Premier Chou En-lai heads what is apparently a comparatively more moderate (or at least more realistic) group that includes Foreign Minister Chen Yi, Finance Minister Li Hsien-nien, and Li Fu-chun, China's top economic planner. Most of the better educated and more brilliant Party members adhere to this group. Chou's sophistication and international experience are unique among the top Chinese leaders, most of whom have never been outside China except for occasional trips to other Communist countries. Chou is thought to have special appeal for China's intellectuals and has appeared as the regime's spokesman when it is necessary to conciliate the intellectual class.

Little is known about the personalities in other groups that may play a role in the question of Mao's succession. It is likely that there are dissident groups in the military establishment and also in the government bureaucracy--the economic specialists and industrial technocrats who have seen their own economic plans and goals pushed aside to meet the demands of ideology. Still another faction, so vastly important in Communist countries, is the public security force. Of interest

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here is the fact that the fastest rising man in the regime in the past three or four years is Lo Jiu-ching, long-time commander of the Public Security Force and Minister of Public Security. He is currently the Army Chief of Staff and a member of the Party Central Secretariat. His support will be very valuable to any group in a struggle for power.

The Second Generation: Another major aspect of the succession problem in Communist China is the average age of the 13 members of the Politburo -- most are in their late 60s or 70s and the average age is over 65. No attempt has been made to bring gradually second echelon leaders into the top bureaucracy and train them for ultimate leadership. The top 40 men in the Party are all in the older age-group and only below that level are there any noticeably younger men, men in the 50-58 year age group. There is twofold significance in this fact: First, these younger men may react strongly when the legendary Mao is removed from the scene. They may rebel against the "Yenan caves" mentality of their elders and seek to put the nation on what they consider to be a sounder, more balanced economic path. Second, and perhaps even more important, this age gap would mean that the top post may change hands several times in the next few years. Because of the advanced age of the contenders for the top post, Mao's successor may find the extreme burdens of high command more than he can adjust to and carry successfully at such an age. If this should happen it would further stimulate second-generation leaders to seek the top post for one of their group. Thus it would not be unlikely to see three or four new Party chairmen rise to the surface in the period between now and 1968 or 1970.

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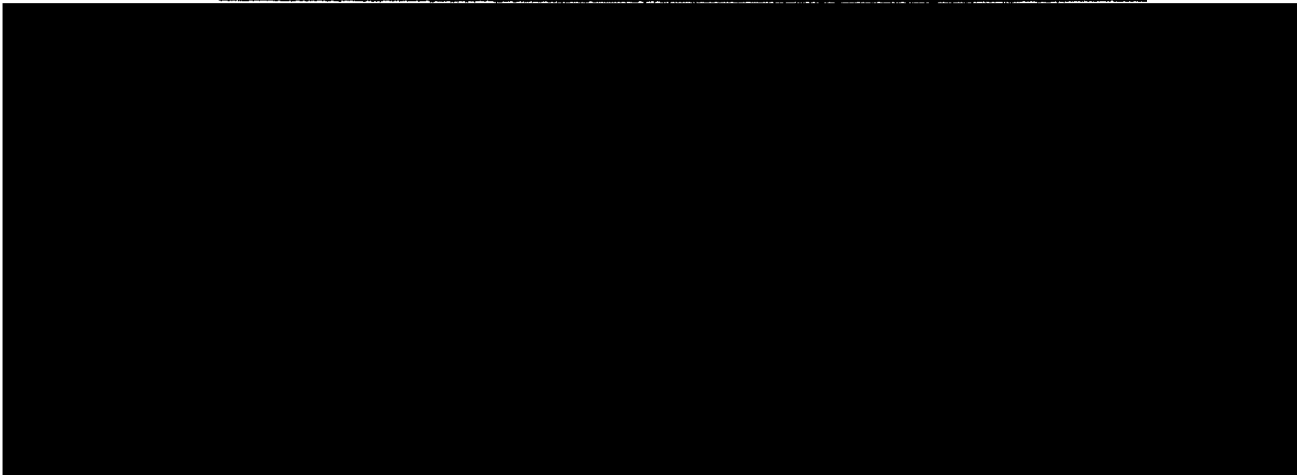
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797 W, e. Communists Foment Racial Hatred in British Guiana

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After living in relative harmony for many years, the two major races -- East Indian and Negro -- that make up the population of British Guiana are locked in a deadly struggle that has brought about the declaration of a state of emergency and the dispatch of additional British troops to the colony.

The immediate cause of the current outbreak is the strike of sugar cane workers, called 12 February 1964 by the Guiana Agricultural Workers Union (GAWU), a scab union controlled by the party in power, in protest over the fact that a rival union, the Manpower Citizens Association (MPCA) is and has for many years been recognized by management and by the British Guiana Trade Union Congress (BGTUC) as the responsible bargaining agency.

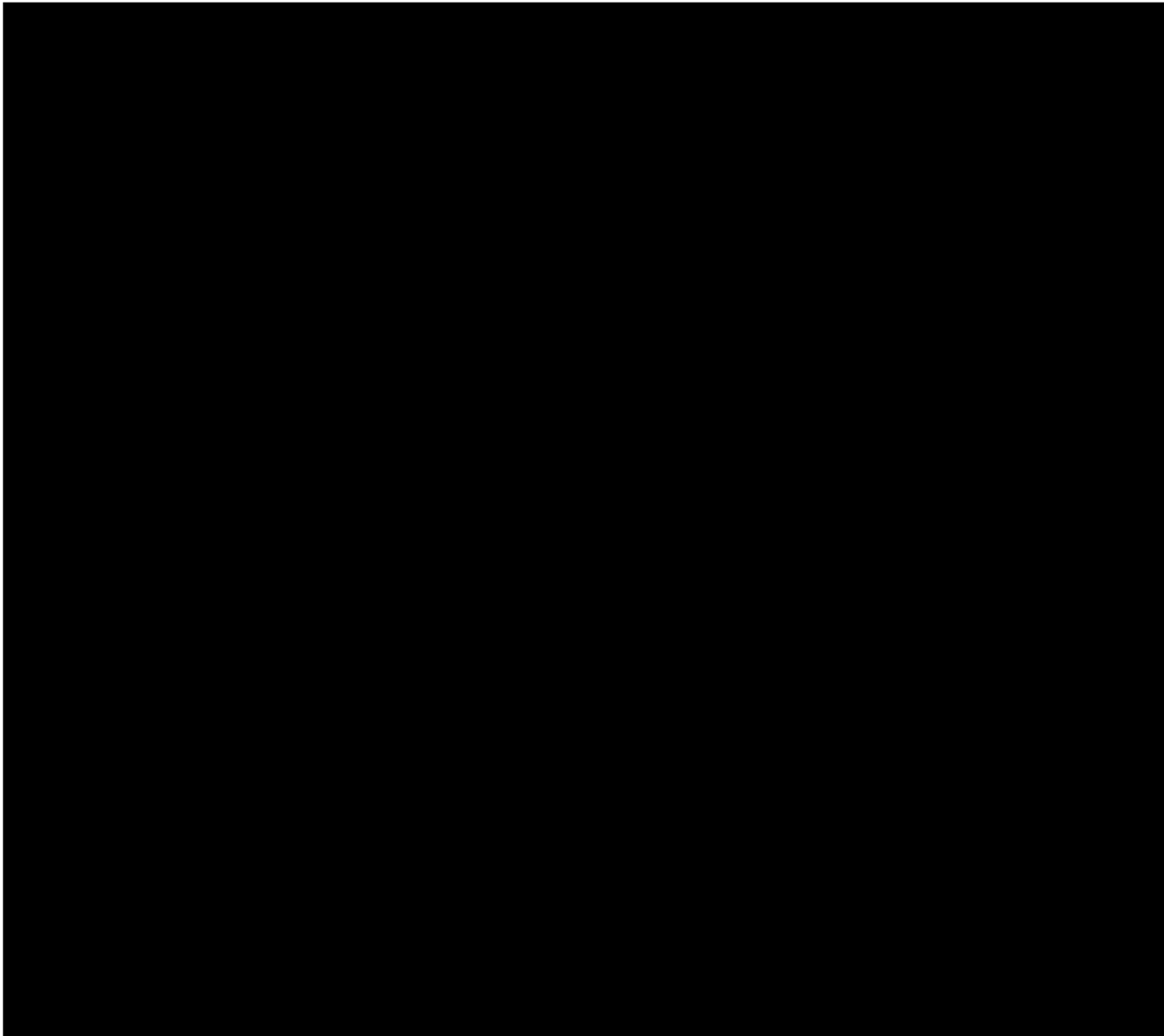
The current strike is more an excuse than a genuine cause. The subversive activities of the Jagan Party's Progressive Youth Organization (PYO), is a similar direct cause. The PYO is responsible for most of the atrocities committed against the Negro population and for the sabotage against the canefields. The roots of the conflict are rather political and ideological. They go back to the impasse created by the 1961 elections, in which the Peoples Progressive Party (PPP) of Cheddi Jagan won a majority of the seats in the assembly. Jagan, a self-confessed Marxist who has given every indication that he is a bona fide Communist, became premier and proceeded to consolidate his power and prepare the colony for eventual collectivization under a Castro-Communist government.

The 1961 elections were held under a district system, whereby the winner of the majority of the votes in a given electoral district -- whether by a large or a small majority -- would win the assembly seat. Such a system favored the Indians, who lived scattered in small towns with relatively small majorities, as against the Negroes (or Africans, as they prefer to call themselves), most of whom live crowded together in Georgetown. The PPP, with 42.6% of the votes, received 20 seats in the 35-man assembly against 15 for the two opposition

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Under proportional representation proposed by British Colonial Secretary Duncan Sandys last October 25, after the leaders of the three major parties who could not agree among themselves had asked him to provide a solution, a party will be given seats in proportion to the number of votes which it receives. This system will be in effect for elections, the date for which is expected to be set before the end of 1964. The opposition parties, the People's National Congress (PNC) and the United Force (UF) expect that their combined percentages will be sufficient to enable them to form a coalition government capable of removing Jagan and reversing the present disastrous leftward trend of Guiana politics. Jagan and his Communist line supporters have feared that they will lose under proportional representation. Therefore, the PPP and the PYO embarked on a campaign of sabotage, subversion, and disruption that has but one aim: to prevent elections they cannot be sure of winning.

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Polish Economist Says  
Communist Socialized Agriculture Cannot Succeed

The main theoretical organ of the Polish Communist Party Nowe Drogi has published a long article which shows, on the basis of Polish experience, why private farms are more productive than socialized (i.e. either collectives or state farms). This article is an extension of Mieczyslaw Mieszczankowski's argument presented in a series of Zycie Gospodarcze articles last year against reorganizing Polish agriculture. He has been a leading proponent of non-collectivized agriculture since the Polish 1956 uprising.

In the Nowe Drogi article, apparently written to counter proposals of dogmatic Communists to reorganize the private peasant farms into state farms, Mieszczankowski presents the following arguments:

- a. The nationalization of land and investment goods is not an end in itself; the main purpose of socializing agriculture is to ensure greater productivity.
- b. Poland, since 1956, has achieved greater productivity without nationalizing land and equipment, while at the same time avoiding "the negative effects which sometime accompany the socialization of production forces."
- c. Under present Polish conditions, large-scale collectivized agricultural units are clearly not superior to the peasant economy. Large socialist farms produce less at greater cost than medium (5-10 hectare) private farms. Until Poland has sufficient investment funds to pour into large enterprises, they will remain inferior as regards productivity to the smaller farms. "In this situation it is impossible to implement the socialization of land - - - it is impossible to replace the individual peasant farms by large agricultural enterprises."

The author recommends that State influence on agricultural production be along such lines as purchase of machinery and judiciously applied loans from the Agricultural Development Fund to loosely-knit country cooperatives.

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## THE CURRENT DIGEST OF THE SOVIET PRESS

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CPYRGHT

# A Criticism of the Lysenko Viewpoint in Genetics

**THE OUTLOOK FOR SOVIET GENETICS.** (By Zh. Medvedev and V. Kirpichnikov. Neva, No. 3, March, pp. 165-175. 5,000 words. Condensed text:) Genetics is the science that studies the phenomena of heredity and variability. Many people are acquainted with the controversy that has been going on steadily for more than thirty years now in the field of genetics. There are two schools of genetics in our country: classical genetics, which is often called "formal," and another school that rejects the chromosome theory of heredity.\*

At the much-talked-of session of the All-Union Academy of Agricultural Sciences in 1948 the principle of the class nature of biology—the principle that there are fundamental differences between Soviet genetics and the genetics of Western countries that must be recognized, the principle of the irreconcilability of various schools in genetics—was put forward and applied. This principle was vigorously endorsed at the time by Stalin. Classical genetics was pronounced a bourgeois science and thus found itself "outlawed."

Fourteen years have passed since then, and all this time the dominant positions, especially in the educational sphere, have been controlled in our country and the people's democracies by representatives of the new school of genetics. Meanwhile, classical genetics has continued to develop and has scored great victories. The greatest discovery of recent years has been the deciphering of the physical and chemical nature of the chromosomes, the cell (nuclear) structures that are the basis of heredity. The role of these structures in the synthesis of proteins has been clarified, and scientists are now at grips with the problem of controlling that synthesis. Genetic laws have been very important as clues to the nature of many serious diseases of man and for the improvement of methods of diagnosing, preventing and treating them. The progress of classical genetics has led to major advances in agriculture. There has been a revolution in the propagation of corn, sugar beets and other extremely valuable crops. Poultry and pig raising, the breeding of fur-bearing animals and many other branches of animal husbandry are being reorganized under the impact of genetics.

The time has come to take stock, to see the reasons for the burgeoning of classical genetics all over the world and to assess the outlook for the further development of this important branch of science.

\*[I.e., the Lysenko school. See Current Digest of the Soviet Press, Vol. XV, No. 5, pp. 3-10 for Lysenko's own statement of his theory, and Vol. XV, No. 16, pp. 23-25 for a defense and elaboration of that theory, as it applies to the role of DNA, by Mikhail Olshansky, present head of the Academy of Agricultural Sciences.]

†Current Digest of the Soviet Press, Vol. XV, No. 4, pp. 3-5.

In January of this year the Party Central Committee and the U.S.S.R. Council of Ministers adopted a special resolution on measures for the further development of biological science and the strengthening of its ties with practice.† A great deal of attention is given in it to genetics. Genetics should hold a fitting place of honor in the Soviet Union. All the advances of present-day genetics should be applied to our country's economy. This is the patriotic duty of Soviet scientists.

**The History of the Gene Theory.**—Classical genetics developed at the end of the 19th century as a unitary world science, like physics, chemistry, geology, botany and other branches of natural science. Its laws reflect the nature of certain biological phenomena and are therefore (like the laws of any other science) the same for the scientists of all countries. The basic postulate of genetics in the first half of the 20th century was, as we know, the theory of the genes—material, self-reproducing factors of heredity. The genes are localized in the chromosomes within the cell nucleus and influence the development of the various characters of the organism.

When all work being done in the U.S.S.R. using the methods of classical genetics was suspended in 1948, that science did not stop developing. The world is a big place; there are many scientists in it, and far from all of them took on faith the postulates of the new theory of heredity. Classical genetics proceeded to develop at an ever swifter pace. The number of publications and books confirming the existence of the genes and the correctness of the chromosome theory of heredity grew year by year. Every year brought reports of fundamental discoveries in the unraveling of the nature of heredity; geneticists were awarded Nobel Prizes for their work.

This process has gradually come to include our country too. After the 20th Party Congress a healthier atmosphere in the domain of science, and particularly in biology, set in. Free discussion of many key scientific problems became possible. A number of laboratories resumed genetic research, which was urgently needed by several branches of industry, medicine and agriculture. Controversy in the field of genetics also began to revive.

Well, what has happened? Why have the predictions of the sterility and degradation of "formal" genetics not come true? This question demands a clear-cut answer. Impartial analysis of the path traversed by classical genetics and by biology as a whole is essential, for only on that condition can all the achievements of this science be enlisted in the service of the Soviet people.

But first of all a brief account should be given of just what heredity is and why the study of heredity is of such great importance for both the theoretical and the practical aspects of biological science.

The concept of heredity boils down to an ex-

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planation of why individuals of one or another species reproduce their like, why children resemble their parents, why and how the characteristics and features of parents are transmitted to their progeny. A new organism develops out of a single cell (zygote) formed by the fusion of two reproductive cells (gametes)—a male and a female. The fertilized egg cell—the zygote—is comparatively simple: the membrane, liquid cytoplasm, a central nucleus, reserve substances and a number of other structures—this is the total extent of the microscopic morphology before the start of that speedy development which results in the appearance of an infinitely complex and perfect organism. To explain the mechanism of this development is to explain the nature of heredity, to unlock the basic mystery of the organic world, to find the keys to the control of heredity for the benefit of man. It was on this particular point that the basic variance of the two schools in genetics arose. One of them, without denying the great influence of the environment, attached primary importance to the structures of the egg cell and the spermatozoon, from which the new organism originates; the other focused its attention solely on the external conditions of that development.

The premise of classical genetics is that there exist in living cells special self-reproducible particles called genes, which are transmitted from one generation to another and the particular combination of which predetermines the character of the individual development of a biological system. It would probably be helpful to recall briefly how the concept of genes came into being in science. It originated, as we know, in the form of a hypothesis advanced to explain the laws of particulate inheritance in hybrids established in the classical experiments of the Czech scientist G. Mendel almost a century ago. ...

However, the so-called chromosome theory of heredity did not make its appearance until several decades after Mendel's first experiments, when a striking resemblance was discovered between the "behavior" of chromosomes and the nature of the inheritance of various characters.

The strides of cytology in the early part of our century showed that in every cell and its nucleus there is a particular set of chromosomes—small rodlike structures the number and form of which are constant for a given species. When cell division occurs, the constancy of the number of chromosomes is maintained by their self-replication. Each chromosome creates its like before the division of the cell begins. The organism's development starts, it will be recalled, as a result of the fusion of two cells, a maternal and a paternal; the number of chromosomes in the fertilized egg is double the number in each gamete. However, the number of chromosomes characteristic of the species remains at the former level, since in the formation of sex cells there occurs what is called reduction division, in which, as distinct from ordinary cell division, the paired chromosomes separate into daughter cells without prior doubling, each sex cell acquiring half a set of chromosomes. It was thus established that in every normal cell of any sexually reproducing living organism there is a quantitatively constant and always paired set of chromosomes. ...

In this early period of the development of genetics, the genes still continued to be hypothetical factors of heredity, although there was no longer any doubt about the localization of the genes in the chromosomes. Methods were even worked out for determining the continuity of genes in the chromosomes, genetic maps were made of the chromosomes, the relationship of dependence was discovered between the appearance of characters and changes in particular segments of the chromosomes, etc., but the chemical nature of the genes and the mechanism of their reproduction were not unraveled until much later.

The most important discoveries in this area have been made only in the past ten to 15 years, and these discoveries have been revolutionizing biology. Elucidation of the biochemical structure of the genes has resulted from the swift hand-in-hand development of the two sciences genetics and biochemistry, from the fruitful efforts of many laboratories and hundreds of scientists.

The development of classical genetics in recent decades has shown the vitality of this science, reinforced its link with physics and chemistry and brought about its extensive involvement in the practice of medicine and agriculture. The gene theory has successfully passed the test of time. The nature and mechanism of the operation of genes have in broad terms been established, and one would think the prolonged dispute over this problem might have been brought to an end. But the controversy over the gene theory continues and retains its acute character. What explains this?

Before answering this question, let us review those principal discoveries of classical genetics that have led to identification of the precise biochemical mechanisms of heredity.

Genetics and Cybernetics. The Concept of Hereditary Information.—The development of the embryo brings into being a highly complex living system made up of billions of cells interconnected in the most appropriate fashion. This development produces a miracle of nature—the thinking brain; optical perfection—the eyes; an acoustical device of the highest order—the hearing apparatus; and many other systems of the living organism, systems whose organization is always astonishingly appropriate. The development of this appropriateness in nature was explained by Darwin's theory of evolution and selection. Cumulative change in one or another direction has been going on for millions of years. Selection and the struggle for existence go on uninterruptedly. Bit by bit, detail by detail, change of one kind or another cumulates over thousands of generations, and as a result we observe the emergence of a new appropriate system. We live in a world made up of appropriately organized living creatures. But no one of them is everlasting; every individual, however viable it may be, grows old and dies. It cannot transmit to its progeny its brain, its liver, its eyes—all those perfected systems that have developed in nature in the course of evolution over many millions of years. The individual transmits to its progeny an insignificantly small bit of its body—the egg cell or the spermatozoon—which contains nothing but a nucleus with its chromosomes and cytoplasm. To the superficial observer it looks as if these microscopic sex cells have nothing to do with the grown organism, as if the brain, muscles and blood of the body that engendered them have disappeared without a trace and the development of these cells starts each time from scratch. The narrow-minded scientist is perturbed by the insignificant size and seeming simplicity of the sex cell; he looks at the perfected, infinitely complicated organism and exclaims: "They have nothing to do with one another!" It seems an absurdity to him that the insignificantly small chromosomes, visible only through a microscope, should contain a full store of information on the structure and functions of, for instance, an elephant or a whale. But if the elephant has developed as a biological species in the process of evolution over hundreds of millions of year, it would be an even greater absurdity for it to come into being as something really new in the space of the months that embryogeny takes. Unless one accepts the reality of a hereditarily fixed, "programmed" development, the development of so perfect and complicated a system as, for example, the body of a mammal in the space of some months of embryogeny is no more credible than the Biblical legend of the world's creation. Acceptance of such "programmed development"—of a program somehow coded in the chromosomes of the cell—is in most cases criticized from theoretical premises that are highly tendentious and show insufficient competence. Some people see a "dualism" in this conception, maintaining that two forms of one and the same system are impossible. Yet cybernetics and information theory have proved that one and the same item of information can be expressed by the most diverse means. An exact diagram of a complicated machine essentially contains all the information about that machine, and the machine can be replicated from this diagram. More than that, it is easier and simpler to replicate the machine from the diagram than from a finished model. But the machine may weigh many, many tons while the diagram can be accommodated on several frames of film, can even be made microscopic. The diagram is not the

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functioning machine, but it contains the information with which the machine can be built. If diagram equivalents of machinery were not produced, the development of technology would be impossible. If, for example, a country that had well-developed industry but no technical documentation for aircraft and no technical cadres familiar with the work suddenly decided to develop jet planes, a great deal of time would be wasted on trial and error and experiments, on the development of experimental designs. It is unrealistic to think that a finished, perfected jet plane could be produced rapidly. That is feasible, however, given the availability of diagrams and documentation reflecting preliminary research and development over a long period of time.

Something similar is the case in the organic world: In the processes of reproduction every organism transmits to its progeny a precise, miniature, extraordinarily economical genetic record of its structure, its characteristics and its composition. This record is concentrated in the chromosomes in the form of molecules of deoxyribonucleic acid, abbreviated as DNA.\* DNA is that mysterious "substance of heredity" whose existence was so long and fruitlessly debated. As was to have been expected, the debate was settled by the incontrovertible logic of facts.

It was only recently that skeptics were deriding the claim that a nucleic acid could control metabolism. Metabolism, they said, depended on proteins. Proteins—there was the basis of life.

But in the past decade this objection has been completely disposed of. Hundreds and thousands of investigations have shown that nucleic acids are polymers as complex as proteins, that their molecules are dozens and hundreds of times larger than those of proteins and that, just like the proteins, nucleic acids possess species, tissue and intercellular specificity. Moreover, rigorous research has shown that the proteins are formed from nucleic acids, that the surface of nucleic acids is a kind of template, which predetermines the structure of the synthesized protein in the same way that a typographical matrix predetermines the appearance of the newspaper text. And just as typographical matrices can be sent from the capital to other cities so that newspapers can be run off from them in large local editions, so ribonucleic acid (RNA)\* formed from DNA is sent from the nucleus of the cell to the periphery, the cytoplasm, where various protein molecules begin to form on its surface.

Despite the convincing, one might even say irrefutable, nature of this factual material, the skeptics have not given in.

"Let us assume," they have said, "that the nucleic acids do control the synthesis of proteins. But what controls the synthesis of the nucleic acids themselves? What determines the reproduction of their subtle structure, their specificity? This is surely accomplished by particular proteins." But this thesis, too, a purely polemic one, proved incorrect. First theoretically, then experimentally it has been shown that ribonucleic acid, which governs the synthesis of proteins, is formed from DNA, and that the DNA molecules are endowed with the capacity of self-replication. This self-replication is speeded up by a special protein, an enzyme, but the action of the enzyme is nonspecific, and the fidelity of the replication depends on the actual structure of the DNA. Such is the nature of the nucleotide building blocks that make up DNA that they form very specific pairs of combinations with each other. The whole DNA molecule is made up of two intertwining chains, one of

\*Deoxyribonucleic acid (DNA) is a complex polymeric molecule composed of a great many repeating structural units—nucleotides. Every nucleotide contains carbon (in the form of deoxyribose), phosphoric anhydride and a nitrous base (adenine, thymine, guanine or cytosine). DNA is found almost exclusively in the nuclei of plant and animal cells.

\*Ribonucleic acid (RNA) is a polymer similar in structure to DNA but containing ribose instead of deoxyribose and uracil instead of thymine.

which can be compared to a photographic negative and the other to the positive. Where the negative has a dark area the positive has a light, and vice versa. The same is true of DNA. Where thymine, for instance, is located on one chain, adenine is to be found on the other, and where adenine is to be found on one, thymine, and nothing else, can be located on the other.

When light is passed through a negative image we get a positive, and when it is passed through the positive film we get the negative again; similarly, in DNA the result of separating the double helix into the "positive" and "negative" chains is that a "negative" chain forms alongside the "positive" and a "positive" alongside the "negative," and we get two identical molecules.

The discovery of this phenomenon is unquestionably one of the greatest advances made in natural science; this discovery has explained the material, biochemical nature of the continuity of life on our planet, and perhaps in the whole universe.

The concept of "controlling" the synthesis of DNA thus proved to be superfluous. DNA is capable of exact self-replication; it itself "controls" its own synthesis, and if any proteins—enzymes—are needed to speed up that synthesis, they are created according to the "program" inscribed in DNA itself. The formation of proteins actually turns out to be the basic function of DNA, while RNA is the main intermediary helping DNA to control the process of metabolism. ...

Thus the abstract theoretical objections to the theory that genetic, hereditary species information is recorded in DNA molecules concentrated in chromosomes and transmitted from generation to generation have proved unfounded. Conversely, the hypothesis of the diffused distribution of the characteristic of heredity, alleged to permeate every "atom" and substance of the living organism—nucleic acids, proteins, polysaccharides, lipides, juices, etc.,—is theoretically vulnerable. This hypothesis, when applied to a complicated biological system, is no more credible than, say, the hypothesis that the organism of man has no specialized system of vision, hearing or thought, that man sees or thinks with all the cells and "atoms" of his body, that the characteristic of vision or thought is diffused throughout the body.

Heredity is the characteristic that ensures the replication of complicated biological structures at the molecular, cellular and higher levels. Replication can be based either on a model (self-replication) or on a "design." Replication based on a model is inherent only in the nucleic acids. Proteins, not to mention more complicated structures of the organism, are formed on the basis of a design.

Genetics and Biochemistry. Experimental Elucidation of the Biochemical Nature of the Genes.—The last doubts as to the existence of the genes disappeared back in the 1920s. Even at that time genetics had a number of irrefutable proofs of the key role played in heredity by the chromosomes, of the linear arrangement of the hereditary factors (genes) in the chromosomes, and of the preservation of the individuality of chromosomes and particular genes. Later these proofs became so numerous that a mere listing of them would take up a whole book.

It was a long time, however, before the biochemical nature of the genes was ascertained. Scientists knew relatively little about the subtle structure of the genes and chromosomes, and this sometimes enabled skeptics who were unfamiliar with genetics to pronounce the gene concept reactionary and idealist, without adducing any proof.

The brilliant work done recently by biochemists and geneticists has filled in this gap in our knowledge. We shall touch here on only a few illustrations characterizing the most recent stage in the development of biochemical genetics, a stage marked by elucidation of the biochemical structure of the genes, the mechanism of their reproduction and their role in the synthesis of proteins.

We might begin the story of these fundamental discoveries with the plant viruses, the simplest organic structures known on our planet.

One of the simplest viruses—the tobacco mosaic virus—consists of a few hundred nucleic acid molecules strung, as it were,

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hundreds of identical protein molecules which form a kind of sheath. The proteins of the virus are quite specific; there are no such proteins in the cells of the tobacco plant. And it was in this extremely simple structure that the separation was made between the "hereditary substance"—RNA—and the "soma"—the body of the virus, consisting of proteins.

In 1957, Frankel-Conrad in the U.S. and Schramm in the Federal Republic of Germany for the first time established that the RNA of a virus retains its infectiousness even though separated from the protein. Even if its protein sheath is removed, this protein-free virus RNA induces all the disease symptoms when introduced into a plant. Furthermore, typical virus particles accumulate in the plant complete with their protein sheath. The virus RNA replicates not only itself in the cells but also the virus proteins. It is, of course, the enzymatic activating systems of the plant cells that are used for the synthesis of virus protein, but the template of this synthesis is the virus RNA. The experiments to determine the infectiousness of "pure" virus RNA were quickly taken up and repeated for dozens and hundreds of viruses, and the result was always the same. We have put the word "pure" in quotes, because the absolute purity of so complex an aggregation as RNA cannot, of course, be guaranteed. However, even the presence of hundredths of a per cent of amino acid impurity was enough for the skeptics to voice doubt. "There, you see," they exclaimed, "the RNA was not absolutely pure!" Perhaps that very impurity was the most important factor? But to obtain absolutely pure RNA is quite impracticable, as it is to obtain absolutely pure protein. Biopolymers are highly delicate compounds, and at some stage of the purification the actual structure of RNA breaks down. Of course, the attempt to emphasize the hundredth of a per cent of impurity in RNA in the solution of the heredity problem was not to be taken seriously. And this objection fell flat just as soon as the mechanisms of loss of infectiousness began to be explored. Only those agents that had an effect on RNA destroyed the infectious principle of the preparation.

The experiments in the transfer of the hereditary characteristics of a species by means of nucleic acids were continued on more complex organisms—bacteriophages, made up of ten or twenty proteins plus DNA. The DNA is contained, as in a case, in the head of the phage, attached to which is a mobile tail.

It has been discovered that a phage particle, "swimming up" to a bacterium and "puncturing" it by a special process, injects into its cytoplasm only one gigantic molecule of DNA. The remaining portion of the body of the phage takes no part in its replication. Once inside the bacterium, the DNA molecule becomes intensely "active." Special configurations of RNA form on its surface—bearers of genetic information. They "settle" on the cell structures of the bacterium and initiate the synthesis of the phage's proteins. The DNA meanwhile begins to propagate, and by the end of this propagation the single molecule of phage DNA has been replaced in the cell of the bacterium by a score of phage particles. However, experimental attempts to infect a bacterium with phage DNA that had been artificially isolated from phages initially failed to yield positive results. Phage DNA is a very large, long polymer with a molecular weight of tens of millions. Isolating this DNA in pure form and undamaged proved a difficult task; furthermore, without a special puncturing process involving lysozyme, an enzyme that dissolves bacterial membranes, it could not penetrate the cytoplasm. In normal infection an insignificant quantity of protein—only about 1% of the weight of DNA—gets into the cell of the bacterium along with the DNA. But for the skeptics this, too, proved a pretext for doubting that the "hereditary substance" was DNA. However, minute phages with smaller DNA molecules have recently been discovered and investigated. The DNA of these phages has proved to be infectious even in the absence of proteins, especially if "naked" bacteria—bacteria whose tough membranes have been removed beforehand with lysozyme—are treated with it.

Scientists have succeeded in proving the special functions of DNA in the transfer of hereditary characteristics even on the level of bacteria. They have learned that if to a nutrient medium being used for the cultivation of certain bacteria is added an extract containing DNA from another bacterial strain, this results in the transfer of a number of characteristics of that strain to the basic culture (experiments in transformation). They have discovered and investigated the nature of the sexual process in bacteria. It turns out that bacteria in fusing interchange their DNA, and that simultaneously there is a transfer of the hereditary features of the strains. The role of DNA in the mechanism for synthesis of adaptive enzymes\* has also been shown.

These new data have proved the special role of DNA and brought to light previously unknown peculiarities of the workings of the genetic system. The problem of protein synthesis has been solved in its fundamentals.

The only thing the opponents of the gene theory have contributed to the speedy advance of biology has been artificially inflated doubts. They have exulted over every blank spot on the map of scientific discoveries. They have sought to convince everyone that the solution to the whole problem, vindication of their own ideas, lies in the area of these blank spots. But these spots have been growing fewer and fewer.

An especially graphic illustration of how progressive and worthwhile have been the new discoveries in the field of genetics is the progress made in the research effort to uncover the mechanism of hereditary variability. From the viruses to the higher animals, the mechanism governing the emergence of inheritable changes (mutations) has proved to be one and the same: For a mutation to occur, there must be a change in the DNA of the reproductive cells of organisms or the DNA of phage particles, or in the RNA of particles of certain viruses. In viruses and phages the production of mutations can now be brought to a degree of perfection where a juxtaposition reveals what change in the position of one or another amino acid in the protein chain has resulted from changing a particular nucleotide in the RNA or DNA chains.

This was how scientists in 1961 began deciphering the nucleotide code of hereditary information and ascertained the dimensions and bounds of the genes in the DNA molecule. Every gene proved to be a section of the DNA molecule (or RNA molecule, in the case of certain viruses) responsible for the formation of one protein. The mystery that had shrouded the concept of the "gene" vanished. Earlier pronounced "unknowable," the genes proved amenable to investigation and alteration. But a diffuse, mysterious property of heredity, permeating every tiniest particle of the living organism and alleged to reside in the need of these particles for certain totally unidentified prehistoric conditions, conditions "under which they originated"—this did remain unknowable.

#### Genetics and Medicine.† Genetics and Space Exploration.—

The unlocking of subtle mechanisms of biological phenomena invariably has practical consequences. A major discovery in the field of biology always produces a chain reaction of discoveries in fields of applied knowledge that are closely connected with biology.

Genetics in the 20th century is playing the same revolutionizing role in the advance of medicine and the mastering of the organic world as has fallen to atomic physics in the technical sciences.

The unlocking of the biochemical nature of the gene has made an especially powerful impact on many fields of medicine. We can show this with several examples.

\*Adaptive enzymes is the name given to those enzymes that are produced in organisms only when the surrounding medium has substances on which they have an effect. These enzymes are consequently of great adaptive importance in the life of an organism.

†[For an article on the application of genetics in medicine, see Current Digest of the Soviet Press, Vol. XV, No. 11, pp. 12-14.]

1. Cancer—that frightful scourge of mankind—has not yet been conquered. Many hypotheses have been advanced to explain the causes of this grave disease, but the most promising and most thoroughly reasoned has turned out to be the genetic theory of cancer. This was acknowledged at the international cancer congress recently held in Moscow. This theory has unified all the other cancer concepts—virus, carcinogenic, etc.—and provided realistic premises for a more systematic attack on cancer. The genetic theory of cancer is based on a large body of precise facts. According to this theory, the appearance of a cancer cell is the result of several induced somatic mutations of normal cells in tissues and organs. A certain percentage of mutations—changes in the composition of the cell DNA—is inevitable, since absolutely exact reproduction of complex polymers in all cells is an impossibility. Inside the billions of cells in a living organism trillions of reproductions of individual DNA molecules occur daily, and needless to say they cannot all be exact—mistakes are unavoidable in the world of living matter. Changes may be effected in certain sections of the DNA molecules by the influence of the so-called “free radicals” always found in cells, by the action of admixtures of nucleotide analogues and, finally, by internal and external radiation. Consequently cell mutation goes on in a living organism all the time, roughly one cell in a thousand proving to be “spoiled.” Among these mutants some may appear which reproduce and grow faster than normal cells and which the regulating systems are unable to control. This is the kind of stray cell from which a tumor develops.

Scientists are currently engaged in unraveling the nature of cancerous mutations, uncovering the factors that cause them. To establish just which chromosomes and genes cause malignant growths in undergoing change is to open the door to a radical solution of this problem. It was recently found that chronic myeloid leukemia, one of the grave cancerous diseases of the blood, is invariably preceded by a mutational change in the individual's 21st chromosome and the selective propagation of the blood-producing cell containing the altered chromosome.

2. The appearance of immunity, both hereditary and acquired has turned out to depend on gene changes. Immunology is henceforth closely and indissolubly bound up with genetics; the problem of immunity in man and animals has become a genetic problem.

3. Genetic methods have been successfully applied in work done on substances that produce antibiotics. With the help of ultraviolet irradiation and chemical treatment, it has proved possible to obtain many mutant forms of fungi, actinomycetes and bacteria that produce tens and even hundreds of times more penicillin, streptomycin and other major antibiotics. Everyone is aware that the discovery of antibiotics was probably the most important event in the history of medicine in the 20th century; few people realize, however, that their broad use has become possible only because of the achievements of the geneticists. For instance, the work done in the U.S.S.R. (by Alikhanyan and other scientists) on the genetic selection of penicillin producers has made possible a manyfold reduction in the cost of producing this preparation.

4. Particularly large gains have now been registered in the investigation of hereditary diseases of man. More than 500 diseases showing clear-cut heritability have already been described in the literature. All of them are caused by changes in the structure of the genes and chromosomes.

It has been discovered in recent years that several serious diseases of man are caused by the appearance of an extra chromosome or the absence of a chromosome in the cell nucleus of the human embryo. Diagnosis of such diseases can now be made very early and treatment started in good time. Thus an average of one out of every 500 to 700 newborn children has a serious defect of the sexual system caused by a change in the set of sex chromosomes. In Turner's disease there is no Y chromosome in the nucleus and only one X chromosome (XO); in the Klinefelter syndrome there are two X chromo-

somes and one Y (XXY); the appearance of a set of three X chromosomes (XXX) is also fraught with serious consequences. In all these cases simple cytological methods can be used for diagnosis.

Several hereditary pathologies, for instance sickle-cell anemia,\* have been found in tens of millions of persons living in tropical and subtropical regions. The inheritance of sickle-cell anemia has been studied in detail. The presence of one hereditary factor of anemia leads to a change in the chain of the DNA-RNA-protein synthesis. Abnormal hemoglobin appears in the blood. The malaria plasmodium is unadapted to this hemoglobin, so that carriers of the anemia factor are protected against deadly tropical malaria, and although children bearing two sickle-cell anemia genes die, the number of persons with the anemia gene is not declining in malaria regions. Knowing that in marriages of persons heterozygous with respect to this gene every fourth child dies of anemia, a doctor is now able to warn the parents of the danger and prevent the appearance of afflicted children.

It has been calculated that on the average every twentieth person born on earth suffers from some hereditary ailment. Only genetics can help the scientists discover the nature, ways of treating and, most important, methods of preventing these anomalies. Schizophrenia, manic-depressive psychosis, idiocy, imbecility, neurofibromatosis, cerebral diplegia, the Down syndrome and hundreds of other terrible and hitherto incurable diseases oppressing the human race can be eradicated by medical science only if it works closely with genetics. The mistaken idea that these diseases are all a purely social phenomenon should be forgotten. And there is no comforting ourselves with the hope that they will give ground by themselves. We must declare all-out war on these diseases, and along with it a campaign against those irresponsible critics who have long declared the science of human genetics—the science whose advance is shaping the future of medicine—to be racism.

In recent years hardly any medico-genetic research has been carried out in the Soviet Union. No textbooks on medical genetics have been published. A scientific and practical effort must be organized in this field with the shortest possible delay. Arrangements must at the same time be made to produce cadres of physicians trained in genetics and to set up a broad network of medico-genetic consultation centers to forestall the emergence of hereditary diseases and keep records of their spread.

5. Man's penetration into outer space is impossible unless a number of medico-genetic problems are solved. Radiation, even in small doses, increases the number of mutations in an individual's chromosomes. Most of these mutations are harmful; some of them cause serious diseases which thereafter are consistently transmitted through the mechanism of heredity. On the very first satellites launched by the U.S.S.R., Soviet scientists sent into space some plants and small animals (flies, rats and mice) as well as test tubes containing DNA. Their object in sending up these first space travelers was to study the speed of the mutation process in living creatures in near-earth space, which has belts of high radiation running through it. The genetic investigation of the little “cosmonauts” helped ensure safe flights for the Soviet conquerors of space—Gagarin and Titov, Nikolayev and Popovich.

Genetics and Agriculture.—Heredity is the key to control of the vital activities of living systems; it is the key to the alteration of forms in desired directions. Naturally, the discovery of the molecular mechanisms makes many times easier and greatly accelerates the development of new animal breeds and plant varieties. The systematic remaking of the organic world for the benefit of man is becoming feasible.

\*Sickle-cell anemia is a disease in which the shape of the blood corpuscles changes and normal hemoglobin is replaced by abnormal hemoglobin that is an inferior oxygen carrier.

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The opponents of classical genetics, who still today deny the paramount role of DNA in the transmission of hereditary characters, dismiss the chromosome theory of heredity as erroneous and reactionary. Maintaining that the unit of heredity is the whole cell, that heredity changes quickly and easily under the impact of the environment, and that these changes are adaptive, they are vigorously pushing their "new" methods of selection, methods of developing new strains through directional "nurture." At the same time they insistently argue the thesis that classical genetics has yielded agriculture nothing. Is this contention valid? Without touching on the question of whether it is possible to develop breeds and varieties by the agency of nurture, we shall try here to show, on the basis of several concrete examples, that great and often decisive successes in the selection of the broadest variety of plants and animals may be laid to the application of classical genetics. As far back as the mid-1930s the great Soviet geneticist and plant breeder N. I. Vavilov noted as among the greatest achievements of classical genetics the development of crossed-line hybrid corn and the production, by means of simple Mendelian interbreedings, of grain varieties resistant to rust and other parasites. Let us dwell first on hybrid corn.

1. The first corn-breeding work was done in the 1920s by the prominent American geneticist Shull. First, "inbred" lines were developed—layers that propagated solely by self-pollination. These lines were outwardly poor-looking: The plants were puny, only a small number of kernels developed in the ears, and the yields dropped off markedly. After eight to ten generations of "in"-breeding, the lines were crossed with one another and the best hybrids were intercrossed again. In this way so-called "double-crossed" hybrids were obtained which were actually hybrids of four lines. The quality of the ears in the crossed-line hybrids sharply improved and the yield increased by an average 20% to 30% over the starting variety.

On N. I. Vavilov's initiative, similar work was begun in the U.S.S.R. Several excellent crossed-line hybrids (VIR-42 and others) were soon obtained. However, all corn-hybrid work was later pronounced harmful and stopped; it was declared, without any basis in fact, that the prolonged breeding of related lines of corn could yield no good results.

Only a trip to the U.S.A. by our experts and the active backing of hybrid corn by N. S. Khrushchev made it possible to resume the breeding of new Soviet hybrids. Though it has been delayed almost two decades, the large-scale use of commercial hybrid corn has now begun in Soviet agriculture. In the U.S., "double-crossed" hybrids account for 90% of all the corn planted, and the increase in the yields has netted American farmers profits of hundreds of millions of dollars. The benefits from the growing of hybrid corn have also been very substantial in the U.S.S.R., and they will unquestionably increase.

Utilizing genetic methods, the Soviet geneticist-selectionist M. I. Khadzhinov has succeeded in introducing the hereditary character of male infertility in several of the best varieties of corn. In the hybridization of corn, to avoid self-pollination, the pollen-bearing tassels must be torn off all the maternal-parent plants by hand. The existence of male-sterile lines makes this work unnecessary, releases manpower and yields large money savings.

2. Through the use of colchicine and other alkaloids that inhibit cell division, it is possible to obtain plants with a doubled set of chromosomes (tetraploids); the chromosomes divide, but the cell is unable to do so. Tetraploid sugar beets have been developed this way, i.e., through the use of colchicine. By crossing such beets with ordinary beets, the selectionist gets triploids—plants in which the number of chromosomes has been increased by half. They usually reproduce poorly and are often quite sterile, but they frequently yield bigger crops. Triploid sugar beets are very stable and have a higher sugar content.

Extensive and successful sugar-beet breeding work has been done in the Soviet Union by a group of selectionist-geneticists of the Novosibirsk Institute of Cytology and Genetics working under the direction of the gifted scientist A. N. Lutkov. The

triploids they have obtained have been tested in 18 different areas of the U.S.S.R. The three best hybrids ensure a 15-20% increase in sugar yield per unit of area.

Triploid sugar beets are not the only example of practical utilization of polyploids.

Splendid results have been obtained in Japan in the cultivation of seedless triploid watermelons containing 20% more sugar and with almost twice the yield. In Sweden tetraploid rye, developed by the prominent selectionist Montsing, has given a good account of itself. The Soviet geneticist G. D. Karpechenko was the first to succeed in showing that sterile plant hybrids can be made fertile by the doubling of the chromosome set. Such "amphidiploids" have been obtained in the case of many plants. To A. R. Zhëbrak goes the credit for breeding valuable fertile amphidiploid hybrids of hard wheat and Timofeyev wheat, the latter being resistant to many diseases.

The Soviet scientists V. V. Sakharov and A. R. Zhebrak have produced higher-yielding polyploid forms of buckwheat and are working for their adoption in agricultural production.

It should be added that many of the best varieties of fruit trees are triploids (bananas, for instance), while in the case of flowers the overwhelming majority of the double varieties are polyploids. In general, the phenomenon of polyploidy is quite common in nature. For example, wheat represents a natural series of diploid (one-grained), tetraploid (hard) and hexaploid (soft) species, with 14, 28 and 42 chromosomes.

In January, 1963, a conference on polyploidy was held in Leningrad. The report by Hero of Socialist Labor V. Ye. Pisarev on some remarkable polyploid rye-wheat hybrids and another by one of our oldest selectionists, M. F. Ternovsky, on polyploid varieties of tobacco should be singled out for special mention from among the numerous papers read at the conference.

3. The resistance of plants to parasites is very often inherited according to simple Mendelian laws, in the 3:1 ratio. This enables selectionists, by means of simple crossings, to make a valuable, high-yielding variety of barley, wheat or other cereal resistant to a specific dangerous disease.

A parasite is usually adapted to the host plant, to the protein composition of its cells. A small change in the set of plant proteins resulting from a mutation disturbs this adjustment and can make the plant resistant. This has given rise to a new method of selection for resistance. It consists in treating plants of a high-yielding but unstable variety with a powerful mutagen (for example, gamma rays)\* and then searching out the resistance mutations. In recent years varieties of rust-resistant barley, wheat that is proof against fungus diseases, and other plant varieties have been developed by this means.

The selection of disease-resistant mutants is also being carried out for domestic animals, with particular success in poultry breeding. Here, too, resistance is sometimes determined by the presence of just one particular gene.

4. The methods of commercial crossing that were first worked out on corn (double-crossed hybrids) later began to be used extensively in animal husbandry as well. The interbreeding of closely related lines is being practiced for obtaining so-called "inbred lines" (in poultry farming, pig raising, the breeding of fish, etc.). The intercrossing of lines not infrequently yields hybrids notable for greater productivity and hardiness (heterosis). Such crossed-line hybrids are being bred in chicken farming (U.S.A., Britain, Holland, Belgium, the U.S.S.R. and other countries), pig raising (U.S.A.), and in several other branches of animal husbandry and in carp farming (U.S.S.R.). The benefits from commercial crossing are quite substantial. Commercial hybridization is being practiced more widely year by year and is being extended to more and more domestic animals. The bases for this method were

\*A mutagen is a chemical substance, radiation or some other agent that acts on an organism to produce chromosome changes—mutations.

worked out in all their details by Soviet geneticists.

5. Fur-bearing animals—the rabbit, the mink and others—offer a splendid example of the direct utilization of simple genetic differences, the selection of particular genes in the breeding process. The mink is an especially good case in point. In Sweden, the U.S.A., Canada and other mink-breeding countries furs with wonderful new colors have been obtained in recent years on the basis of conventional gene recombination. Skins of these colors are in great demand and cost 15%-20% more than the usual skins. The same work is being done successfully with other fur-bearing animals.

6. Very important methods have been worked out by the Soviet scientist B. L. Astaurov for the control of sex in silkworms, and these are now being applied to large animals as well. These methods are wholly based on the chromosome theory of sex.

We shall confine ourselves to these few examples. Classical genetics has already exerted enormous influence on such important branches of agriculture as the cultivation of corn and sugar beets, poultry farming, the breeding of fur-bearing animals and others. In many cases the influence of genetics is not manifested so clearly, and tells only in the acceleration and improvement of selection methods; but neither crop cultivation nor animal husbandry can get by today without drawing widely on the data and methods of genetics. The myth of the "fruitlessness" of classical genetics in the field of agriculture must be shattered; it is doing our country a great deal of harm.

Conclusion.—In this article we have touched on only a few of the practical and theoretical aspects of present-day genetics. We have seen that this science is really making a searching and comprehensive investigation of the laws of heredity, and from materialist positions. Thanks to the strides of biochemistry, molecular biology, cytology and other sciences, genetics has in recent years been able to uncover the intimate mechanisms governing the transmission of characters from one generation to its successors and to identify and investigate the structures that perform the functions of a special genetic "memory" and efficiently coordinate the processes of metabolism, growth and development in all living creatures inhabiting our planet.

By having mastered these profound mysteries of biochemistry, genetics has now assured itself a central place among the biological sciences and has become closely involved in the accomplishment of a number of cardinal practical tasks in medicine and agriculture.

All attempts to ignore the practical and theoretical significance of present-day genetics and to confine the development of Soviet biology within the narrow framework of a single school should be resolutely rebuffed. All the resources of Soviet scientists and all the methods and achievements of biological science that have been tested by time and world experience should be marshaled to serve the Soviet people.

How is it that the progress of modern genetics has been held back for so long in our country? Why have we so long let the capitalist states hold a large and productive sector of the scientific front on the pretense that classical genetics was a bourgeois science? After all, we do not talk of "bourgeois physics," "bourgeois chemistry" or "bourgeois physiology"! On the contrary, in these and other spheres of knowledge we keep close track of all the advances abroad and try to make speedy use of everything new and interesting. Moreover, we strive in the Soviet Union to ensure the advance of scientific research on an up-to-date level in all branches of science without exception. Only in biology do some individuals persist in trying to draw a sharp line between Soviet and world science and in ignoring anything done by representatives of other scientific schools.

The answer to these questions seems to us a very simple one. All this could have happened only in a setting of perversions—those perversions that were observed in the period of the cult of the individual. The attempt by some scientists to isolate Soviet biology from world science is a harmful survival of the cult; it shows loss of contact with reality and fear of openly and honestly admitting and rectifying mistakes made in the



The Soviet Union claims that its foreign policy is peaceful coexistence, that it seeks normal relations with free world countries and peaceful, negotiated solutions to problems which threaten the security of the world. However, in practice, the USSR is engaging in hard line aggressive tactics where it suits their goals of world domination, for example: by encouraging and supporting insurrection by dissident elements against legal free world governments; and by supporting government leaders in aggressive actions to annex territories belonging to other countries. A few cases are summarized below.

Indonesia. Credit extended to Sukarno over a period of years by the USSR has been used primarily in purchasing military hardware from communist countries. These loans now amount to a staggering debt of some one billion dollars. The service on the debt alone is an almost insupportable burden on the Indonesian economy, long ailing for lack of attention. Sukarno, aware also of the need to divert his people's attention from his failure to alleviate their own economic plight, is now pursuing his territorial expansion in a confrontation with the Federation of Malaysia. Only massive Soviet support has permitted Sukarno to mount and continue his military aggression against neighboring countries, -- a policy which also weakens the country internally and creates the conditions for a communist takeover.

Laos. The USSR has supplied the Pathet Lao with significant amounts of the large military hardware which they are using in their attempt to take the country by force and destroy the coalition government established and guaranteed by the 14-nation Geneva Conference in 1962. The Soviets have encouraged and supported the Pathet Lao in their recent attacks violating the truce agreement; and the USSR has not supported the legitimate demand by the Laotian Premier that they return to the position held prior to their truce violation.

Cuba. Khrushchev, through his intelligence services, economic and military support, actively participates in Castro's policy of instigating insurrection against legal Latin American governments. The USSR's massive aid program frees Castro's limited economic resources for military uses. A scant 20 months ago the United States cut short the Soviet's attempt to place offensive missiles in Cuba. At that time (October 1962), Khrushchev agreed that Cuba would be inspected to ascertain the removal of such missiles. This agreement has not been fulfilled, and Khrushchev is now saying (Izvestiya "observer" article 25 April) that US overflights contravene the US-Soviet October 1962 agreement and that Castro has the right to use Soviet weapons against reconnaissance planes.

Iraq. The Soviets, who had foresightedly supplied the Iraq army with Soviet-bloc arms, withheld vital supplies of spare parts and ammunition needed by the government's armed forces when the Kurds rose against it a few years ago. They

(Cont.)

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have from time to time supported the Kurds in their revolts against the government. The Soviets arbitrarily support legal governments or rebellious minority groups, as suits their shifting tactics.

Congo. Soviet official installations in the Congo were closed when the newly elected government (June 1960) uncovered the USSR plot to take over the country. Soviet arms were illegally flown into the country to support ill-fated communist Patrice Lumumba. After his downfall, his successor, pro-Communist Antoine Gizengo continued efforts to unseat the legal government with Soviet arms, agitation and other assistance. The USSR, refusing to support the UN peacekeeping mission, continued its efforts to stimulate insurrection and subvert the country. Khrushchev, actively supporting anti-Adoula elements in Brazzaville, has once more been exposed: documents recently found in the possession of two Soviet intelligence officers contained evidence of Soviet involvement in plans of the dissidents to overthrow the Congolese government.

Somali. The USSR offered Somali some \$31 million of military arms and equipment in 1963. The purpose of the hardware: to support that government's illegal subversive and aggressive efforts to take over lands occupied by nomadic Somali peoples in neighboring Kenya and Ethiopia. The Soviet Union has also taken some 400 Somali officers and men to the USSR for training -- in pursuit of these same aggressive actions against peaceful neighbors. At the same time, official representatives of the USSR in Ethiopia were expelled for subversive activities against that government.

Zanzibar. Soviet arms shipments were sent to pro-Communist leaders who attempted to take over the newly independent government of Zanzibar. After the initial failure of the coup, a build up of Communist advisers, arms and official representatives started. President Karume then signed articles of union with Tanganyika on April 22nd in a move to strengthen his country. Since that time the Soviets have continued to supply weapons and advisers to Communists who are working assiduously to sever the ties between the two countries.

Other. The Brazilian press recently exposed the heavy Soviet involvement in subversive activities in that country, which bore a resemblance to their efforts in the Congo. US planes have been buzzed in the air corridors over Germany, truck convoys have met with interference on the highways to West Berlin and other physical harassment has been used to remind the allies of Communist military capabilities in the German problems. The Soviet Union does not support the UN efforts to settle the Cyprus problem, but on the contrary encourages a military solution -- including willingness to supply hardware.

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Communists Exploit East African Vulnerabilities

East Africa, from the oldest kingdom in the world to the newest nation, is beset by a stepped up Communist offensive to influence or even, perhaps, to overthrow her weaker governments under the guise of friendly assistance. The Soviet Union needs an East African base, UN support from the African members, allies in the Sino-Soviet conflict and African mineral sources. Communist China has much the same goals and, in addition, is bidding for leadership of the world's revolutionary forces.

Arms shipments, press and information and manipulation of political sympathizers have been widely used weapons in the Communist offensive. The following are typical examples:

Somali Republic. Somali's efforts to take over lands and tribesmen of the nomadic Somali peoples now living in eastern Ethiopia and northeastern Kenya are being extensively supported by the Soviet Union. In 1963 the USSR offered some \$31 million worth of military arms and equipment and took some 400 Somali officers and pilots for training in the USSR.

Ethiopia. Two Soviet "diplomats", Second Secretary Valdimir Styckov and Attache Safar Abdilov were quietly expelled from Ethiopia after the government security services discovered that they had been distributing anti-government literature. Their activities allegedly included local travels under assumed names.

United Republic of Tanganyika and Zanzibar. Zanzibar achieved independence from Britain in December 1963 with a traditional Arab government. On January 12th, Soviet-trained Manga and China-financed Mohammed Babu organized a revolt under nominal leadership of African nationalist Abeid Karume who had become president. An immediate build-up of pro-Communist power took place, supported by arms shipments from the USSR and a large influx of advisors and technicians from European Communist countries. President Karume, unable to cope with the growing threat to Zanzibar independence, signed articles of union with Tanganyika, later ratified by the Zanzibar Revolutionary Council.

However, the Babu group has worked strenuously against the April 22nd union with considerable assistance from bloc countries. Communist weapons and diplomatic and technical personnel continue to arrive in large numbers from the Soviet Union and China. The May Day parade revealed a well equipped military organization. Aid offers were immediately forthcoming from Moscow and East Europe. Many Communist country diplomatic staffs were suddenly and greatly increased, including that of East Germany, its only Embassy in the non-Communist world. A large scale propaganda barrage on the benefits of Communist ties is directed by East Germans and aimed at countering the African desire for non-alignment and at denying the Zanzibari

the stability of alignment with Tanganyika. The intensive efforts to make Zanzibar a Communist base -- which could become the "Cuba of Africa" as Babu once predicted -- are in interesting contrast to the Soviets' demands for removal of foreign bases from North Africa.

The former Tanganyika was granted independence from the British in late 1961 under Julius Nyerere who is now President. The difficult job of building political and economic strength was interrupted by echoes of the Zanzibar revolt -- a Tanganyikan army mutiny of mid-January, followed quickly by similar revolts in Kenya and Uganda. The governments had to turn to Britain to put down the mutinies quickly and without bloodshed. But the mutineers and their countrymen remain unhappy over the failure of independence to bring an immediate and magical improvement in their lives. Their frustrations make them vulnerable to Communist exploitation.

One most significant area of penetration is the press, heavily influenced by staffs trained in Communist countries and by use of Free TASS news services. Communist correspondents use Dar-es-Salaam as a base for their contacts with exiles and dissident leaders in neighboring countries. Kao Liang, the NCNA correspondent expelled earlier from India for "unjournalistic activities", acted for the Chinese Communist government in getting money into Zanzibar for the January revolution via NCNA representative Babu.

Kenya came to independence in December 1963 to face, inter alia, an insistent Somali Republic seeking to annex the Somali tribesmen and their grazing lands in Kenya. The battle consisted largely of propaganda and brief territorial incursions but suddenly increased in scope when the Somali Republic turned to USSR for arms. As they thus increased the military threat against Kenya, the Soviet Union began a program to propagandize the Kenyans and subvert the government.

Large scale efforts are being made in the information and communications field. The Soviets have offered a radio station capable of broadcasting into many of the neighboring countries of East Africa and money, from Bulgaria as well as the Soviet Union, to publish Pan Africa, a pro-Communist English language biweekly, edited by a British Communist.

The Kenyan Home Affairs Minister, Oginga Odinga, the Communists' best friend in Kenya, has obtained Communist money, technical advisors and press equipment. He brought both the Kenya Broadcasting Corporation and the Kenya News Agency under government control so that he could appoint Communist sympathizers to staff them and obtain Communist training for employees.

Uganda, independent since late 1962, has also been the object of Communist attention. Individual leaders of the Uganda Peoples Congress (UPC) have received varying amounts

of cash and other assistance from the Soviets. Notable are "Jolly Joe" Kiwanuka and John Kakonge. The latter was ousted from his position as UPC Secretary General in May 1964 for Communist subversive activities.

An East African Federation which would join Tanganyika, Kenya and Uganda has been discussed for some time by the three leaders. Their customs union provides a first stem and they recognize that their common problems suggest cooperative solutions. The practical steps required to bring a federation into being may be a long way off but a rapidly increasing Communist threat, both internal and external, might provide an impetus to greater combined East African action.

COMMUNISTS FOMENT RACIAL HATRED IN BRITISH GUIANA

For many years, the several races that make up the population of British Guiana lived in relative harmony. As Great Britain's policy of "decolonization" began to take effect, the one thing that the vast majority of the inhabitants had in common was a desire for national independence. This drew the two major ethnic groups -- East Indians and Negroes -- together for a time in a common cause. Today, after only a few years of experience in limited self-government, British Guiana is torn by racial strife that would plunge it into a bloody civil war but for the presence of British troops.

The immediate cause of the current outbreak of violence is the strike of sugar cane workers, called on 12 February 1964 by the Guiana Agricultural Workers' Union (GAWU), a minority scab union controlled by the party in power, in protest over the fact that a rival union, the Manpower Citizens Association (MPCA) is recognized by both the employers and the British Guiana Trade Union Congress (BGTUC) as the responsible bargaining agency. By 1 June, with the strike in its 111th day, at least 33 Indians and negroes had been killed, 464 injured, 963 arrested, 841 houses destroyed or damaged by fire, and over a million dollar's damage done to the cane fields.

Nearly half of British Guiana's population of 600,000 are descendents of East Indian laborers. Most of them live in the rural areas and work in the sugar cane fields. Negroes, descendents of African slaves, make up about 35% of the population and live mostly in Georgetown, the capital. The other 15% approximately of the population is composed of whites, Amerindians, and persons of mixed ancestry.

The two principal political parties follow almost mathematically the racial constitution of the population: the People's Progressive Party (PPP) is predominantly East Indian; the People's National Congress (PNC), almost entirely Negro. A third party, the United Force (UF), draws its strength from the managerial class, which generally cuts across racial lines.

The leader of the PPP and premier of the colony's government is Dr. Cheddi Jagan, an East Indian dentist educated in Chicago. An avowed Marxist, Jagan has given every indication over the years that he is a bona fide Communist and intends to make of British Guiana, as soon as it attains complete independence, a Soviet enclave on the coast of South America. His wife, née Janet Rosenberg, of Chicago, was a member of the Communist Youth prior to her marriage. She is even more radical than her husband and is considered the brains behind his political organization. Until she resigned on 1 June, she was Minister for Home Affairs in her husband's government. (The national police force, largely composed of Africans, as the Negroes prefer to call themselves, is under that ministry, and it was her contention that the police were discriminating against the East Indians. In reality, her ministry was not cooperating with the police.)

The leader of the PNC is Forbes Burnham, a 41-year-old Negro lawyer who calls himself a "left-wing democratic socialist". He has been the principal force opposing Jagan's efforts to bring Castro-Communism to British Guiana. Burnham was one of the founders of the PPP, but broke off with Jagan in 1955 and formed his own Peoples National Congress.

The United Force came into being in the elections of 1961. It is led by Peter D'Aguiar, a self-made businessman of Portuguese descent. At first regarded as unrealistically conservative for the practicalities of Guianese politics, the UF has recently modified its views, and D'Aguiar is recognized by all elements as a progressive knowledgeable industrialist.

Although the current strike was the spark that ignited the racial violence, it should be considered more an excuse than a genuine cause. The roots of the conflict are rather political and ideological. They go back to the impasse created by the 1961 elections, in which the PPP won a majority of seats in the assembly. Jagan thus became premier under the impartial eye of the British Governor and proceed somewhat too hurriedly to consolidate his power and prepare the colony for eventual collectivization under a Castro-type Communist government.

One of Jagan's first acts was to take over the school system, which included assuming control and management of some fifty denominational, or parish, schools. The opposition had feared all along that the minister of education would seize the schools and convert them into Godless institutions. Parents protested, citing one of the clauses of the United Nation's Declaration of Human Rights that: "Parents have a prior right to choose the kind of education that shall be given to their children."

As the party of the government in power, the PPP has been granted facilities over official radio stations not available to other parties. Now, the government has announced its intention of taking over all of the stations and has notified the British Guiana Broadcasting Co., LTD., a station used at one time by the opposition, that its franchise, due to expire at the end of 1964, will not be renewed.

Control over both education and communications, implying control over the minds of the people, represents a giant step toward total power for Jagan.

On the economic front, the Jagan government has established close ties with Castro and Cuba. Through GIMPEX (Government Export-Import Corporation), which is more an arm of the PPP than a private agency, as Jagan claims, the government has received a million-dollar loan from Castro. This was ostensibly for railroad cross-ties, and the government has been paid for them. However, few have been delivered yet. The logical conclusion is that the funds are intended to strengthen the PPP and further spread subversion in British Guiana.

Other, more direct, causes of the present stalemate of violence and terror are the subversive activities of the Progressive Youth Organization (PYO), the activist unit of the PPP. The PYO is generally believed to be responsible for most of the atrocities committed against the African

population and for the sabotage against the cane fields. Many of their members have received guerrilla warfare training in Cuba and are suspected of smuggling arms into British Guiana. Several small caches of weapons, including four sub-machine guns and 2,000 rounds of ammunition were found by police last April. Much to the chagrin of Janet Jagan, the police announced that they had been hidden by members of the PYO. Following the pattern of extremists in other areas that are targets for Communist takeover, the PYO is reported to be organizing a secret military force, the "Guiana Liberation Army."

Since the majority political party derives its power from the majority ethnic group, and since it is apparently determined to impose a Communist-type government upon the country as soon as it is given complete independence, the non-Indian elements in the population are perturbed and determined to resist by any means.

There is a possibility that the means was given to them last fall in London. Unable to settle their difficulties, the three political leaders (Jagan, Burnham and D'Aguiar) met on 25 October with British Colonial Secretary Duncan Sandys, and all agreed -- even Cheddi Jagan -- to abide by whatever solution Sandys should choose. To the delight of both Burnham and D'Aguiar, he chose proportional representation.

The 1961 elections were held under a district system, whereby the winner of the majority of the votes in a given electoral district -- whether a large or a small majority -- would win the assembly seat. The African delegates, in Georgetown, polled heavy majorities, but got few seats; while the Indians, living in small towns and villages, got smaller majorities but more seats than even their greater numbers would justify. For example, the PPP, with 42.6% of the votes, received 20 seats in the 35-man assembly, while the PNC, with 41% of the votes got only 11 seats. The UF, with 16.4% of the votes won 4 seats. Under proportional representation, which will be in effect in the elections to be held late in 1964, a party will be given seats in proportion to the overall number of votes which it receives. Its strength in the assembly, therefore, will more nearly reflect its popular strength. The assembly will then be more truly representative.

More importantly, however, the combined percentages of the PNC and the UF would be sufficient to form a coalition government that could remove Jagan and reverse many of his ruinous policies.

This has been the real bone of contention. Jagan and his Communist-lining supporters know that they cannot win under a system of proportional representation. Therefore, the PPP and the PYO have embarked on a campaign of sabotage, subversion, and disruption that has but one aim: to prevent elections that they are almost certain to lose. To accomplish this aim, they have resorted to the most cruel of means: race warfare. From the beginning, Jagan has relied on his Indian backing to stay in power through the ballot box. Now, he has threatened that in a physical clash, his Indians will outnumber and outfight the others.



Whether Jagan and his followers will create enough confusion to cause Great Britain to postpone the elections remains yet to be seen. On 22 May, a state of emergency was declared and more British troops were dispatched to the colony. They now number over 1,100 and are actively patrolling the troubled areas. One thing is certain, according to Duncan Sandys: Great Britain will not grant full independence to the colony until elections are held and until a responsible government is in power capable maintaining order with justice.