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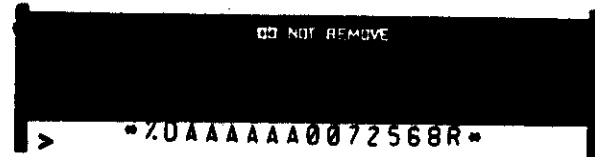
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# Chinese Nuclear Strategic Policies, 1958-1972: The Impact of External Threats, Internal Politics, and Technology (U)

W. W. Whitson

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A Report prepared for  
**UNITED STATES AIR FORCE PROJECT RAND**



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R-1232-PR

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**Rand**  
SANTA MONICA, CA. 90406

PREFACE

This Report is the first of a two-part analysis of Chinese nuclear policy and weapons options. It examines (1) internal political and ideological conflict, (2) alternative military strategies for coping with external versus internal threats, and (3) nuclear technological capabilities from 1958 to 1972; it assesses the historic impact of these factors on China's evolving nuclear policy; and it describes the history of the evolution of Chinese nuclear weapons in the broader context of shifting Chinese perceptions of threats from 1956 to 1972. The second part will consider Chinese choices among alternative nuclear policies for the future.

This research is being carried out as a part of the U.S. Air Force Project RAND's studies of the implications of Soviet and Chinese military policy and strategy for Air Force planning. It draws on Rand work on the domestic factional struggle, sponsored by the Department of State and ARPA and to be published in R-1091-DOS/ARPA, *Chinese Military and Political Leaders and the Distribution of Power in China, 1956-1971*, by W. W. Whitson. Other recent Rand studies on factors that affect Chinese defense policies are: R-776-ARPA, *The Chinese Communist Military Threat to Southeast Asia, 1975-1980* (U), W. W. Whitson, October 1971 (Secret); R-744-ARPA, *Land Reform and the Revolutionary War: A Review of Mao's Concepts and Doctrines*, K. C. Yeh, December 1971; R-1090-ARPA, *China's Internal Politics, External Threats and Allocations of Military Versus Propaganda Resources, 1965-1971*, W. W. Whitson, forthcoming; and R-1234-ARPA, *Communist China's Strategic Options and Priorities in Resource Allocations*, K. C. Yeh, forthcoming.

The material presented in this Report should be useful to Air Force officers and others in the U.S. Government concerned with Chinese military strategy and force posture planning.

SUMMARY

This Report examines (1) internal Chinese political and ideological conflict, (2) alternative military strategies for coping with external versus internal threats, and (3) nuclear technological capabilities from 1958 to 1972, and assesses the historic impact of these factors on China's evolving nuclear policy.

In May 1958, China's leaders decided to embark on a major program of self-sufficiency in nuclear weapons. By then, their internal controversy about the philosophy and style of Chinese military and economic development had become public knowledge. Although the controversy extended beyond nuclear weapons, the potential impact of the 1958 decision on China's entire economic and military future was so great that the major themes of that controversy deserve review.

Mdb  
v.  
Lui

In brief, Mao Tse-tung's priority goal was (and remains) the saving of souls, while Liu Shao-ch'i's was the clothing of bodies. Given this difference between the priest and the banker, linkages between goals and means inevitably brought conflict over threat perceptions, defense policies, nuclear strategy options, and actual weapon procurement.

Liuists, in their threat perceptions, tended to distinguish concretely between internal and external enemies. Their main emphasis being on organization rather than on ideology, they were less inclined than Maoists to accuse colleagues of treason for merely praising certain American managerial techniques or acknowledging U.S. military power. Liuist analysts and planners thus were able to recognize shifts in the priority of threats from internal to external and vice versa; Liu Shao-ch'i himself, for example, speaking about the Vietnam situation in 1966, found the threat from Southeast Asia far more important than any internal problem at that time.

Maoists, by contrast, have tended to perceive threats primarily in terms of the internal, ideological goals of mass mobilization. Mao (who

thanked foreign invaders for speeding up the Chinese revolution) always preferred a clear attack to an ambiguous posture, for an attack would draw a clear line between China and her adversaries, and heighten the people's commitment.

Between 1950 and 1972, the Mao-Liu conflict over broad analytical method, sociopolitical goals, priority and pace of economic development, and threat priorities was reflected in different attitudes toward available options on strategic defense and weapons systems. With respect to weapons and alternative strategies, those options could be defined in terms of roles and weapons for three principal forces: locally controlled (militia) forces; regionally controlled conventional (general-purpose) forces; and centrally controlled air and naval plus (potentially) strategic nuclear forces.

We may assume that three optional strategies were available to Chinese leaders after 1950. Of these, Strategic Option One would emphasize the gradual development of strategic forces at the expense of general-purpose forces -- an expression of the Chinese equivalent of the U.S. "massive retaliation" philosophy of the 1950s. Until such forces were ready to be deployed, China's defense would be in the hands of local militia forces, committed to "people's war," while regional regular forces would be downgraded to permit allocation of resources to the development of strategic forces.

One.  
Spart vs GPF.

Strategic Option Two would place less reliance on primitive local forces and "people's war" for China's defense and would promote the rapid modernization of regionally controlled general-purpose forces, while developing a substantial inventory of centrally controlled MR/IRBMs.

(2) modernize GPF + MR/IRBMs.

Under Strategic Option Three, the primary focus would also be on modernized regional general-purpose forces, but regionally controlled tactical nuclear weapons would have priority over MR/IRBMs, i.e., delivery system development would favor regional and decentralized over centrally controlled defense strategies.

(3) modernize GPF but add tactical, not MR/IRBMs.

The first strategy would release resources (budgets, trained manpower, plant facilities, electric power, transportation facilities) for application to the advanced weapons program, and would cut heavily into

the conventional forces. It would thus simultaneously accent the militia and nuclear weapons development. If ground forces could be diverted from costly programs involving artillery and tanks in combined-arms operations and maneuvers, and concentrated on small-unit operations, night training, and mobile guerrilla operations, the resulting savings might permit the gamble of a "great leap" in weapons development: self-sufficiency in nuclear firepower.

Strategy One thus embodies much of the Maoist vision: the utilization of ground forces for primitive warfare and revolutionary indoctrination; the prospect of saving national resources so as to be able to leap into the global political-military arena rather than wait for the slow (Liuist) progress of bureaucracy; the inspirational impact of such a leap on the Chinese people whose respect for foreign technology had made them doubt their own potential; and, perhaps most important, the challenge that such a program might present to the increasingly routinized, "Sovietized" internal bureaucracy.

To the Maoists, the militia/nuclear-weapons strategy would offer the "correct" combination of resource allocations and ideology that they strive for also in the economic field. "Walking on [the] two legs" of tradition and modernization, it would use the PLA for indoctrination and mass mobilization at limited cost -- decentralized for greater local initiative -- while concentrating the most modern military technology in the hands of a few political and military leaders, mainly at the Center and in military regions suitable as production centers and test sites.

In contrast, Strategy Three meets the notion of professional regional leaders as to the correct combination of resources and ideology. By drawing heavily on the Soviet Union's experience, equipment, and doctrine, the broad modernization and training of the regular ground forces might imbue peasant recruits with attitudes appropriate to a military force in technological transition. As a way of exposing the peasant masses to new machinery and thought patterns, the concept of a broadly based strategy of modernization of conventional weapons supported by the appropriate expansion of heavy industry might have a

more enduring impact on the peasants' acceptance of establishment rules and discipline than the lingering traditionalism of the Maoist program.

Trusting the Soviet long-range nuclear deterrent against the primary American threat, Strategy Three would modernize the regular forces while abandoning the militia, and would seek regionally controlled tactical nuclear weapons, thus providing China with a large standing army, widely dispersed geographically, and operationally controlled by powerful military regional commanders.

Whereas Strategy One would gamble on the ability of "people's war" to repel any ground invasion of China while nuclear weapons were still on the drawing board, Strategy Three gambled on the reliability of the Soviet deterrent while Chinese resources, rather than be applied to a homegrown deterrent, were being invested in a Soviet-model tank and artillery army supported by close-support aircraft and tactical nuclear weapons. Such an army, moreover, might threaten central control, with the added danger of its becoming separated from the masses with increasing specialization. Finally, it could serve to reinforce the relative independence of the wealthier military regions. And if military power were to be joined by political power, China might once again face "warlordism" -- the phenomenon that in the past has been due to precisely those reasons: the rise of a large standing army in metropolitan China and the simultaneous loss of civilian control by reason of rebellion, military coup, or other catastrophes.

Strategy Two would be a bureaucratic compromise between the two extremes of One and Three. It would accent the modernization of general-purpose forces, principally under the control of regional commanders, while largely ignoring the militia, but would focus on IR/MRBMs instead of either tactical or long-range nuclear weapons. Thus, it might partially satisfy the (Liuist) advocates of central Party control and discipline by ensuring the Center's control over mid-range missiles as well as the advocates of regional power (regional commanders and civil leaders), who would retain control over artillery, air, and tank armies. Given the ranges of available weapons, this strategy would clearly aim at a warfighting capability in East Asia rather than at global deterrence.

✓ In many respects, it would resemble the hostage strategy employed by the USSR against Europe and the United States in the 1950s.

The large ICBM force postulated for Strategy One would entail consequences unacceptable to advocates of Strategy Two as well as Three. From the viewpoint of the latter, a large ICBM force, if achieved too soon, might foster an enormous military-industrial complex under absolute, centralized control, which could dominate the entire economy and would threaten the power of regional leaders, forcing them to sacrifice plans and resources. Strategy Two advocates might welcome the idea of central control, but a military-industrial system of that kind probably would not conform to their priorities in economic development; nor would it permit them to create a force whose immediate mission was attainment of an East Asian regional warfighting capability. Together, Liuists and regional commanders might have been expected to compromise in favor of dispersion (rather than concentration) of MR/IRBMs and the earliest acquisition of mechanized, armored artillery and air defense forces. In short, like their Soviet counterparts twenty years earlier, regional leaders would probably have preferred to join the global nuclear club after their regular forces had been thoroughly modernized for internal security as well as border defense.

From the Korean War until 1958, given the availability of Soviet technology, Strategy Two seems to have been favored, with its acceptance of the Soviet model of economic and weapons development; primary emphasis on modernization of general-purpose forces under a Soviet nuclear umbrella; choice of the U-235 development route; and facilities close to the friendly borders of the USSR. The economics of uranium location, electric power requirements, and the proximity of heavy industry doubtless influenced choices of test and production centers, but Soviet preferences clearly played a role, and the promise and promise of continuing Soviet friendship had profound consequences for later developments. Without denying the importance of atomic weapons "someday," civil-military leaders in their pre-1958 advocacy of Strategy Two showed their preference for conventional weapons modernization applied to centrally controlled armed forces across the board: a combined-arms concept following the Soviet model of political-military power. Nor would they



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sacrifice economic development to national defense, but sought the mutually reinforcing development of heavy industry and a modern military. In their eyes, central Party control, balanced growth, professional specialization, and steady modernization would project an image of strength to conventionally armed adversaries in East Asia. The Soviet Union was counted on for much of the general-purpose-force technology and managerial guidance as well as for the nuclear umbrella. By 1958, these beliefs were beginning to give way to doubts. A conventionally modernized peacetime army, as it became more professional and specialized, threatened to lose contact with the populace, moving away from the Maoist emphasis on its local educational and mobilizing role in the political socialization of the "Maoist man." As in the sphere of economic development, even the demands of external threats might have to bow to the long-range principle that "politics must remain in command."

1960s, home made elite force + tech mod. of Navy + AD.

The compromise strategy and program for delivery system development that evolved in the 1960s came closer to Strategy One. A small nuclear elite force, regarded as adequate for China's participation in the global game of deterrence and political deception, was to be a homemade product, without Soviet control or influence. While it was being developed, elements of Strategy Two might be tolerated. Either because Mao had little concern about the American threat on the ground or because he wished to create a young military technocracy under Lin Biao, he pressed for modernization of air and naval coast defense, entrusting ground defense, in case of invasion, to the ability of the militia and the impoverished ground forces to wage "people's war."

Left Army as primary central force.

Such a combination of the primitive and the modern might not fully satisfy any faction -- Maoists, Liuists, or regional leaders -- but would at least prevent excessive specialization from threatening Mao's concept of the regular army as a great internal "school of revolution," and would also appear to Mao as the best combination of resources, given the available technology.

Between 1958 and 1966, this mixture in force postures and strategies resulted in a very limited defensive warfighting capability around China's borders, causing some startling outbursts of opposition from

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leaders (including Chief of General Staff Lo Jui-ch'ing) who feared the risk to China's security in the short run, the long-range ideological merits notwithstanding. Soviet leaders also opposed the strategy, fearing for their part that the low-cost wars of liberation (on which Mao relied to create buffer zones around China's borders) might escalate into a general nuclear war, given the limited combat capability of China's general-purpose forces.

The Mao/Lin Piao high-speed program of warhead development (unhesitatingly praised for its efficiency even by senior American officials) delayed modernization of the general purpose forces -- a reversal of the strategy of the 1950s. Within two-and-a-half years after the first explosion of a fission weapon, i.e., in less time than any other nuclear power, China had developed a fusion weapon. Indeed, the relationships among the external threat perceptions, internal political-economic constraints, and nuclear weapons choices of Chinese leaders would appear to reaffirm the "law of bureaucratic/technological momentum," by which a technological plan tends to develop a bureaucracy (and therefore a life) of its own, apart from any temporary compromises over threat perceptions and internal political controversy. Thus, once the Chinese R&D program had obtained an explosive device, in October 1964, the yield-to-weight ratio began to drop dramatically. From 1966 on, the Chinese employed plutonium; by June 1967, warhead yield had progressed to three megatons.

In the choice of delivery systems, though these too must reflect the realities of technological capability, threat perceptions and internal political and economic constraints probably had a greater impact. By late 1966 or early 1967, the forces of internal opposition, combined with shifts in both technology and external threats, demanded a new look at the program, which in nearly a decade had undergone few significant changes other than interruptions due to economic setbacks and the withdrawal of Soviet advisers. Border-defense military-regional commanders and their representatives on the Central Committee's Military Affairs Committee now began hammering away at the theme of war preparedness to justify postponing the Cultural Revolution in their regions

and modernizing general-purpose forces -- a shift of force postures and weapons choices toward Strategy Two. Central and regional commanders were warning Maoists about the Soviet threat at the very time that the American military threat, the original raison d'être of long-range nuclear forces, was being scheduled for withdrawal from Japan and Okinawa. Finally, Chinese warhead technology, having produced a plutonium device, offered the possibility of shifting to tactical nuclear weapons, which we have defined as the preferred option of Strategy Three (regional) advocates. And in 1967, military-regional leaders held unprecedented political power.

By mid-1968, Chou En-lai may well have needed the support of those regional leaders and been able to marshal persuasive arguments for a new mixture of weapons systems and strategies. The growing Russian threat, now increasingly an offensive general-purpose force military posture; the desire for a temporary détente with the United States; the need to relieve the Chinese economy, depressed in the wake of the Cultural Revolution, of further costs for the development and maintenance of a large ICBM program; and the wish to placate those regional leaders who felt inadequately equipped against either an American or a Soviet conventional invasion, made a combination of medium-range bombers and the more rapid modernization of general-purpose forces a reassuring departure from the Strategy One orientation of the previous decade.

The years 1968-1972 saw a subtle trend toward greater emphasis on low-yield tests, unprecedented combined-arms maneuvers with close-air support, a return to Liuist (now Chouist) specialization and professionalization, and a focus on East Asian regional security capabilities, all reminiscent of the pre-1958 (Strategy Two or Three) perceptions of major threats and "correct" internal administrative style. At the same time, expenditures on nuclear warheads and long-range delivery systems also continued high in 1970-1971. The long pause after the March 1972 test suggests that a new strategic mixture of such weapons may not have been decided upon, and that the internal power struggle in Peking and the regions remained unresolved. Indeed, the purge of Lin Biao in the autumn of 1971 may well have been associated

*Lin had sponsored the growth of the program*

with the nuclear weapons issue among other questions. That Lin had sponsored and guided the evolution of the Strategy One program from 1959 to 1971 is beyond doubt; what remains speculative is the particular aspect of that program, and the part of Lin Piao's rationale as to internal political and external strategic threats, that Chou En-lai wanted to change.

Hereafter, as long as regional military commanders remain as powerful as they had become by 1968, the ICBM program may suffer a slowdown, while combined arms receive greater attention and the emphasis on air defense remains high. Thus, we should not be surprised if such a shift in emphasis were to mean revival of interest in ground-force modernization, an increase in armor and artillery production, and a focus on tactical nuclear weapons and on the production and deployment of IRBMs instead of ICBMs. Given a renewed trend toward Strategy Three, the Chinese intercontinental threat would be in abeyance unless and until another debate within the high command once again shifts the focus from Soviet and Asian regional conflicts to more distant military threats.

**ACKNOWLEDGMENTS**

In the course of my research for this study, I received assistance from many specialists in the fields of Chinese Communist ideology, strategy, and nuclear weapons technology. I am especially grateful to Jack Harris for his many comments on facts and ideas contained herein. I am grateful to Thomas W. Wolfe and Richard Moorsteen for their careful reading of the final draft and their constructive criticism. To Sibylle Crane, the reader and I owe a debt for her editorial support and advice, from which the final draft emerged in its present form. Finally, I would like to express my thanks to Joan Allen for her many hours of typing and to Rosalie Fonoroff for her generous assistance in the proofreading of the final draft.

Needless to say, the author alone bears the responsibility for errors of substance.

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I. INTRODUCTION

The leadership of every society is confronted by the task of having to balance resources between the demands of military and those of economic modernization. Students of the less developed countries, in particular, have concerned themselves with this problem of allocating resources between the dual needs of military modernization and economic development. The question has broader implications, both short-term and long-term, than either productive facilities or hardware, since the entire strategy of economic development must reflect the contending values and goals of various political and military groups.<sup>1</sup>

In such a context of controversy over economic and social goals and relevant economic, political, and military means, the decision to embark on a nuclear weapons program may mean the death, not only of a preferred set of means for achieving certain goals, but also of political groups that have believed in those means and opposed nuclear weapons at the given stage in the nation's economic development. A nuclear weapons program, once it has proceeded beyond the research stage, may become so costly, in terms of its claims on surpluses available for capital investment, that programs competing for the same scientific manpower, industrial plant, imports from foreign technology, raw materials, electric power, and budgets to pay for the foregoing may be delayed or canceled altogether. In an underdeveloped country like China, such a delay can amount to treason in the eyes of those whose programs have been canceled; and it can generate political argument that may end in the humiliation, if not the dismissal, of leaders whose status and future have depended upon their ability to defend a set of viewpoints reconciling the conflicting demands of military and economic development.

One analyst, for example, has estimated that China's nuclear-plant development and maintenance prior to the first test (see Table 2, p. 40) in October 1964 cost approximately \$2.5 billion. With that amount the Chinese might have bought 38 fertilizer plants capable of producing nearly all of her fertilizer needs at that time; or they might have added 3.5 million tons (a 25 percent increase) of steel to their annual

opp. cost of CH N program to first test  
in to entire p. capacity  
fertilizer  
+ 1/4 of steel capacity

production capacity; or added 10 million kilowatts worth of electric generating power to the national grid by 1964; or trebled China's petroleum production in that time.<sup>2</sup>

W 10 GWe  
W 3 x 10<sup>6</sup> output

Whether or not Chinese leaders calculated in terms of such opportunity costs, those sacrifices in potential industrial or agricultural production for the sake of nuclear weapons development, given China's limited surpluses, could not have been demanded without costs in confidence among leaders. Indeed, to justify economic sacrifices, scapegoats were needed at the beginning and at several later stages of the nuclear weapons program. In short, decisions about nuclear weapons were shocks to China's internal political conflict system.<sup>3</sup>

Moreover, such decisions flowed from, and in turn had an impact upon, the elite's perceptions of external military threats.<sup>4</sup> To the extent that such threats served to rationalize or justify decisions to embark on a nuclear weapons program, one group might accentuate them, while ignoring or minimizing threats that would lend validity to the interests and arguments of opposition groups.

The technological development of China's nuclear weapons program has been predicted and described by U.S. Government analysts with varying accuracy over the past 10 years, most reliably in classified studies. Nonetheless, their analyses have frequently failed to predict or explain the timing of new developments in the Chinese program, developments that should have been foreseeable in terms of the time sequence imposed by technological trends. Deviations from such trends might be explained either by external threat perceptions or by internal political conflict over issues related to the nuclear weapons program.

if fail to  
predict eff  
R & D behavior  
then why can't  
we predict eff?  
N - eff  
behavior?

It is the purpose of this study to assess the relationships of external military threat perceptions and internal political conflict to military technological capabilities. These assessments can then serve as a basis for considering further developments in the Chinese nuclear weapons field in the 1970s.

Section II describes a host of ideological, economic, military, and political issues, including threat perceptions, that until 1958 divided Chinese leaders into two camps, each gravitating toward a particular array of viewpoints.



Section III discusses the main strategic options that were open to Chinese leaders before and immediately after the decisive year of 1958, when the Chinese decided to dedicate their energies and wealth to a nuclear weapons program.

Section IV goes on to describe shifting technological capabilities and the timing of resource allocations to nuclear weapons between 1958 and 1971.

II. CHINESE ECONOMIC AND MILITARY MODERNIZATION:TWO LINES

In May 1958, Chinese leaders made a decision to embark on a major program by which to achieve self-sufficiency in nuclear weapons.<sup>5</sup> Prior to that decision, the elements of internal controversy about the philosophy and the style of Chinese military and economic development had become public knowledge, thus establishing a base from which later developments could be assessed. Although, as already mentioned, not all elements of controversy within the leadership pertained directly to nuclear weapons, the potential impact of the nuclear weapons decision on all aspects of China's economic and military future was so great that the major themes of controversy deserve brief review before we discuss the events that occurred after 1958.

In its attempt to codify the two lines (see Table 1) around which attitudes about goals and means polarized, the following suffers from the shortcomings of any analysis that divides a leadership or a society into two ideological camps. Unquestionably, the groups that fought for their interests before and after 1958 actually shared some attitudes and disagreed bitterly over others. Still, there is value in identifying extreme differences in viewpoints as models -- stereotypes that approximate the opposing views of military and civil leaders when they were confronted by the need to decide about nuclear weapons and associated issues.

At the heart of the evolving controversy was a difference in intellectual approach to problem-solving. Whether for reasons of his long-term personal background and experience in the Communist movement or because of short-term political expediency, Liu Shao-ch'i preferred to approach problems armed with the "bourgeois" principles of costs/returns, both expressed in relatively quantifiable units -- money, hours of time, resources, etc.<sup>6</sup> From this "conservative" viewpoint, a program should or should not be undertaken only after its costs and returns had been measured against other options for achieving a finite goal.

Table 1

A COMPARISON OF LIUIST AND MAOIST ENDS, MEANS,  
AND ANALYTICAL STYLE

	<u>Liuists</u>	<u>Maoists</u>
<u>Analytical Style</u>	Finite goals Cost-benefits criteria Quantifiable standards	Ideological goals & values "Left-right" criteria Spiritual standards
<u>Internal Economic Goals</u>	Equilibrium -- quantitative goals Economic growth (production) Heavy industrial concentration Paced modernization	Disequilibrium -- qualitative goals Economic growth (distribution) Industrial dispersion Erratic modernization ("Great Leaps")
<u>Internal Economic Means</u>	Centralized Soviet-style planning Proletarian leadership Production in command Limited democracy Agricultural mechanization first	Decentralized planning Peasant leadership Politics in command Extensive democracy Agricultural collectivization first
<u>Internal Political-Social Goals</u>	Internal stability -- unity Routinized social change	Internal instability -- struggle Non-routinized change
<u>Internal Political-Social Means</u>	Intra-elite struggle Collective leadership Central elites & cadres in command Corporate Party/military structure Specialization -- discipline Moderate change Reliance on precedent	Popular struggle One-man leadership Regional elites & masses in command Individual initiative Generalization -- inspiration Radical change Destruction of precedent
<u>Internal Pace of Change</u>	Evolutionary	Revolutionary
<u>External Political Goals</u>	Power measured in political-military terms	Power measured in ideological-psychological terms

Table 1 (Continued)

	<u><i>Liuists</i></u>	<u><i>Maoists</i></u>
<u><i>External Political Goals</i></u> (Continued)	Support for internal economic-political goals Image of controlled strength East Asian regional balance of power Sino-Soviet equality  Global "peaceful coexistence"	Support for internal ideological goals Image of militant strength East Asian hegemony for China Chinese leadership of Communist world Global ideological struggle
<u><i>External Political Means</i></u>	"Correct" interstate relations Formal interstate structure  Routinized procedures Minimal violence Coalitions, even with a secondary adversary	Sponsorship of revolutionary groups Formal and informal structures (overt & covert)  Sustained violence Clear lines of conflict
<u><i>Military Goals</i></u>	Security of China primarily from <u>regional</u> , <u>external modern military threat</u> Asian regional military stability Emphasis on regional war-fighting capability	Security of China primarily from <u>internal primitive peasant and global nuclear threats</u> Asian regional instability  Emphasis on global deterrent capability
<u><i>Priority Threats</i></u>	Regional external military threat Internal economic & political instability "One divided into two"	Global ideological threat Internal routine  "Two combined into one"
<u><i>Military Means Command &amp; Control</i></u>	Corporate discipline Absolutely centralized command Clear division of responsibility Thorough staff planning Detailed orders	Individual initiative Decentralized command  Ambiguous responsibility -- dual roles Broad staff guidance Mission orders
<u><i>Military Personnel</i></u>	Professional specialization Weapons over man	Amateurism Man over weapons

Table 1 (Continued)

	<u><i>Liuists</i></u>	<u><i>Maoists</i></u>
<u><i>Organization of Military Powers</i></u>	<p>Forces for graduated war-fighting response</p> <p>Concentrated conventional forces</p> <p>Balanced conventional, combined-arms modernization; minimal militia</p> <p>Paced modernization</p> <p>"Regular" form</p> <p>Modern military logistical system</p>	<p><del>Forces for massive retaliatory deterrence</del></p> <p>Dispersed conventional forces</p> <p>Large militia, small standing army; small strategic rocket forces</p> <p>A <del>"Great Leap" to nuclear self-sufficiency</del></p> <p>"Guerrilla" form</p> <p>Simple rear services</p>
<u><i>Military Strategy</i></u>	<p>Regional hostage and war-fighting strategy</p> <p>War on enemy territory</p> <p>Offensive-Defensive</p> <p>Forward defense -- hollow center</p> <p>Battle on several fronts</p> <p>Clear tactical battle lines</p> <p>Concentration on the immediate military-political threat</p> <p>Warfighting</p>	<p>Global deterrent strategy</p> <p>War on Chinese territory</p> <p>Defensive-Offensive</p> <p>Defense in depth</p> <p>One strategic front at a time</p> <p>Ambiguous tactical battle lines</p> <p>Focus on the longer-term psychological-ideological threat</p> <p>Deception</p>

In contrast with this "systems analysis" approach to social and economic problems, Mao Tse-tung had moved steadily toward a set of ideological measuring rods for ascertaining the correct means among a range of options. The correct choice of means depended upon the analyst's appreciation of the attitudes of leaders and led in the social situation under scrutiny. What counted for Mao was how effectively the choice would change the traditional prejudices and the precedent orientation of those involved in executing the decision. The material goals of the program were thus less important than the program's effect on social values.

Mao's priority goal was the saving of souls. Liu's priority goal was the clothing of bodies. Between the priest and the banker, a conflict over goals and means would inevitably result from such diverse intellectual and analytical beginnings.

It does not strain the imagination to think of similar conflicts in American society. Indeed, in the election year of 1972, the United States was caught in just such a dilemma of incompatible political vocabularies and priorities. Much as some American candidates for office have sought to alter institutions and traditions in the name of reform of fundamental attitudes and "lifestyle," so Mao wished to transform the Chinese peasant, intellectual, soldier, and worker into a new "Maoist man." It would be inaccurate, however, to dismiss Mao as a hopeless visionary; skilled in the intricacies of political maneuver in China, he could appeal to the "realist" as well as the next man. But in 1958 time was running out for him at the age of 66, and drastic measures were needed if China was to extricate herself from the bondage of bureaucratic routine and social-economic precedent. For him, the revolution remained unfinished because its focus was psychological and ideological rather than material and power-political. In these terms of intellectual verve and élan, Liu was the conservative and Mao was the radical. These differences between them had profound consequences for the articulation of economic and military-political goals.

For Liu and men who calculated achievement in quantifiable terms, economic development was concerned with economic growth. High levels of Gross National Product and heavy industrial and agricultural

productivity, all measured in finite units of output, were the goals of Liu and state planners. In practice, they believed, *production* ought to be in command. As an ideal, Liu sought successively higher stages of "equilibrium," although he admitted in May 1958 that "equilibrium is always temporary, conditional and relative; there is no such thing as absolute equilibrium."<sup>7</sup> In measurable terms, Liu said at that time that China should aim at overtaking British production figures in 15 years. By September 1959, he would argue (in criticism of the slogging of the Maoist Great Leap Forward) that "balance can and should be achieved while developing our economy at high speed."

On the other hand, Mao and other men whose idealism outweighed their caution advanced the theorem that *politics* must be in command in the definition of economic development goals (and methods). In January 1958, Mao hailed disequilibrium as a universal objective law, stating that "disequilibrium is constant and absolute; equilibrium is temporary and relative."<sup>8</sup> For Mao, the Liuist criterion of profit was not to be applied mechanically. While *economic quantification* might validate certain combinations of factors to achieve a desired level of productivity, *social considerations* might dictate other, less efficient combinations. Maoists were thus increasingly preoccupied with economic goals and techniques that would "transform" men's long-term value goals, possibly at the cost of their short-term physical well-being.<sup>9</sup> While such an awareness on Mao's part may not have been fully formulated as early as 1958, his overriding interest in the political socialization of China's peasant millions would soon lead him to bitter conflict with Liu, who did not believe that such a qualitative goal should take priority over the quantitative aim of steady industrialization.

In the sphere of political-military affairs, great-power status for China was not the issue between Liuists and Maoists. What ultimately divided (and continues to divide) the two groups was the standard for measuring great-power status. Reflecting their more cautious, bureaucratic, and systems-analytic approach to goal definition, constrained by a focus on feasibility, Liuists and military professional administrators defined great-power status in terms of an image of power that would be visible and attainable relatively quickly and at

Mao aimed to minimize this.

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the same time would foster professional competence and specialization within the civil and military bureaucracies on the one hand, and develop industrial strength on the other.

Concerned with the balanced development of a national army, Marshal Liu Po-ch'eng, leader of the Second Field Army "party,"<sup>10</sup> typified the military "Liuist" when he said in 1955:

It is anticipated that war in the future will be a combined operation by the land forces, naval forces, air forces, parachutists and air defense units carried out on the land, at sea and in the air. The extent of the fronts, the size of the armies and the use of material supplies will all be greater than heretofore.<sup>11</sup>

The concern of this group with industrial development for military purposes was reflected in Marshal Yeh Chien-ying's statement at the same time:

. . . the present stage of industrial development is still inadequate for the production of large quantities of the most modern equipment for the army. . . . To improve this backward situation, we cannot but accelerate the development of our industry, particularly heavy industry.<sup>12</sup>

Apparently agreed on an image of military power appropriate to China's place on the East Asian strategic stage, Liu and Yeh did not deny the importance of atomic weapons. But their emphasis seemed to be on conventional weapons modernization applied to the armed forces across the board -- a combined-arms concept following the Soviet model. Neither Liu nor Yeh wished to sacrifice economic development in favor of national defense. Indeed, both wanted a mutually reinforcing development of heavy industry and military modernization. Balanced growth, professional specialization, and relatively fast but steady modernization were feasible goals that would convey an image of strength to conventionally armed adversaries in East Asia. The Soviet Union would provide the nuclear deterrent necessary to cope with nuclear-armed adversaries.

Conversely, Maoist advocates of political-military power feared a large conventionally modernized standing army in peacetime, lest such an

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army, in becoming too highly modernized and specialized, lose contact with the populace. It must be emphasized that the Maoist concept of the role of the military in society focuses on its educational and mobilizing functions; that is, its functions in achieving the Maoist aim of political socialization of the "Maoist man," and not primarily the professional aim of defense against external threat. If external defense considerations demand certain military combinations, these may have to be altered, even at the cost of short-term defense, for the sake of long-term political socialization. Politics must remain in command. Indeed, Mao has stated his personal vision of priorities as follows:

Weapons are an important factor in war but not the decisive one; it is man and not material that counts. The contest of forces is not only a contest of military and economic power, but also one of the power and morale of man. Military and economic power must be controlled by man.<sup>13</sup>

*Maoist  
Voluntarism.*

The "man over weapons" theme is the military counterpart of Mao's concern for "man over production" in economic development. The Maoist vision of military power is thus the nation in arms: a powerful and politically socialized militia, supported by a small military elite trained in the use of the most advanced weapons. This vision received its prototypical expression from the Minister of Defense, P'eng Teh-huai, who argued in July 1955:

To have powerful armed forces does not mean relying on the numerical strength of an oversized peacetime army; for this is not only disadvantageous to the productive pursuits of the people and to national construction but is also of limited military significance. Powerful armed forces primarily depend on a combination of strong active units and strong reserves. . . .

With large, well-trained reserves and a sufficient number of reserve officers, with the material support guaranteed by our growing Socialist state-owned industry, we can defy aggression by the enemy. . . . It is precisely in this way that we can in peacetime appropriately reduce the number of military personnel in active service and save the manpower and financial resources to be concentrated

on Socialist industrialization which will lay down a strong technical and economic foundation for modernizing our national defense.<sup>14</sup>

Given these differences in analytical method and economic, political, and military goal orientation, it was inevitable that the years after the Korean War should bring similar dissimilarities in threat perceptions; that is, the extent to which threats take priority over the fulfillment of the foregoing goals. Concerned with the achievement of measurable standards of economic production, civil bureaucrats ("Liuists") were most dismayed at the prospect of instability and disequilibrium. As the years went by after 1954, they espoused a philosophy of combining "two into one": the compromise of blending diverse techniques and values into an efficient unity (especially within the Party) in order to minimize the waste, delays, and duplication of "struggle." The principal threat for these men, as for their military professional counterparts, lay in amateurism -- the failure to specialize and learn technology in depth.

More inclined to data collection and evaluation, Liuists sought to draw careful distinctions among concrete enemies, opposing the tendency of Maoists to enhance threats by an excessive emotional investment with pseudoreligious overtones. Just as the Liuists were opposed to slo-ganeering in the selection of means, so they aimed for cool evaluations of threats, without the burden of slogans. It was important for them to arrive at a clear picture of the enemy, both his weaknesses and his strengths, and to avoid subjectivism. To the Liuists, as might be expected, the greatest threat, internal or external, was whatever endangered the unity of the Party. Thus, in 1956, Liu was especially concerned about counterrevolutionaries, degenerates, and other bad elements who had sneaked into the Party and had to be weeded out.<sup>15</sup>

Liuists thus tend to distinguish explicitly between internal and external enemies. Since their intellectual and cognitive emphasis is on organizational rather than abstract ideology, they are less inclined than Maoists to accuse a colleague of being a traitor and KMT stooge simply because he has mentioned good points about American managerial

techniques or military power. Thus, Liuist analysts and planners are capable of seeing the priority shift from internal to external threats and back again. Liu Shao-ch'i himself, for example, made remarks about the Vietnam situation in 1966 that may indicate that he found that threat from Southeast Asia far more important than anything internal at the time.

Needless to say, the Maoists' threat perceptions reflect the primacy of their internal and ideological goals. As Edgar Snow has pointed out, Mao repeatedly thanked foreign invaders for speeding up the Chinese revolution and for bestowing similar favors in Southeast Asia in the 1960s.<sup>16</sup> Indeed, Mao favored an outright attack over an ambiguous posture, for an attack would draw a clear line between China and her adversaries.<sup>17</sup>

Because Mao prefers clarity, seeing it as a means of inspiring revolutionary sacrifices and ideological victories in China, his followers tend to underrate the utility of forming coalitions with the enemy temporarily. Liu, on the other hand, could advocate that foreign revolutionary groups work temporarily with the national bourgeoisie to defeat the primary enemy, imperialism. In a broader sense, he sought to create stable institutional relationships for the defeat of concrete threats, measured in concrete terms of money, ships, divisions, and aircraft.

Internally, just as the goal of socialization was the alteration of peasant values, so the chief obstruction to the realization of the Maoist utopian man was the conservatism of the peasant *and* the bureaucratic mind. For the Maoists, the threat of greatest consequence was *routine* and excessive stability -- a threat that came from the "right"; that is, from that "class" of people whose minds and vision had been molded by experience into a straightjacket of routine, precedent, and tradition, some of it perhaps worth saving, but most of it obstructive of revolutionary pace, spirit, and achievement. It was inevitable that military and civil bureaucrats should clash with the Maoist ideologues, not only over issues of analysis, goals, and threat priorities, but ultimately over administrative style.

In style of administration, the Liuists, whether military or civilian, accent discipline and central control. More broadly, they believe

in the power of organization, be it Party or military or government. Thus, while admitting that bureaucracy might have its drawbacks, Liu argued in May 1957 in favor of "limited democracy"; that is, the right of a limited elite to debate goals and means while imposing their decisions on the masses.<sup>18</sup> Doubting the political maturity of the masses, Liu thought that the dedicated cadre should take responsibility for resolving "contradictions among the masses" through the method of a "gentle breeze and a light rain." More important, Liu believed in *system*. Stressing economic incentives and rewards, he said in 1960 about the problem of recovering from the disastrous years of the Maoist Great Leap Forward (1958-1959):

We must set up a suitable system of rules; we must organize production in a suitable manner; for it is only thus that the activism of the masses can be called forth. If there is no system, the masses will pay no attention to production.<sup>19</sup>

Criticizing the administrative style of the Great Leap period, Liu is supposed to have said:

The Great Leap Forward was carried out somewhat too fast, for equilibrium was destroyed; so that after three years of leaping, it will take eight to ten years, starting from the present, to put things in order. This doesn't add up.<sup>20</sup>

Liu and his intellectual followers are elitists and disciplinarians who believe that everyone must be subject to the rules and decisions of the Party leadership. One-man rule by men such as Mao does not appeal to them, because they regard society's problems as too complex for easy solution by the slogans of one visionary.

The Maoists, on the other hand, are fundamentally egalitarians, advocates of "extensive democracy" and "the mass line." While Liu could argue in September 1964 that "to unite 95 percent of the cadres is a precondition for uniting 95 percent of the masses,"<sup>21</sup> Mao was so dissatisfied with the Party that he was already considering ways of dismantling it.<sup>22</sup> Believing in one-man rule at the top accompanied by an

appeal to the masses at the bottom (sometimes with but often without benefit of Party intercession), Mao advocated decentralization of authority and a greater responsiveness of cadres to mass values and needs. He retained his special faith in the peasant masses to guide China's leaders along correct lines of administrative style. Despite his admission that after 1949 the center of gravity of the revolution had shifted from the villages to the cities, Mao continued to give priority to village problems and village needs, while Liu, perhaps because of his own background of revolutionary experience in the cities, accented the role of the urban proletariat, following the traditional Marxist-Leninist scenario of urban leadership of the peasants.

Perhaps the most important distinction in administrative style between Liuists and Maoists concerns the question of pace. For Liu, the pace of social and economic change must be managed, and never be allowed to get out of control. It must therefore be governed by thorough planning. In December 1948, Liu said:

The revolutionary situation is now developing very fast, faster than we had imagined. At present what we need fear is not that it will go too slowly, but that it will go too fast. If it goes too fast, we will have many difficulties. It is better if it goes a bit slower, so that we can make thorough preparations.<sup>23</sup>

As suggested earlier, adherents of this line of thought and style prefer to consolidate gains and proceed with careful calculations of tradeoffs among options; and only well-trained Party cadres (or military professionals) are likely to be capable of such self-restraint and disciplined activity. Maoists dare to take "great leaps," upsetting established traditions and rules to gain shortcuts. In terms of his preferred pace, it would be wrong to characterize the Maoist as an entrepreneur. He is a gambler, who is prepared to risk previous material gains for the exhilaration and spiritual enrichment he derives from sheer daring. The slogan "It is right to rebel," which gained popularity during the 1965-1968 Cultural Revolution, reflected Mao's willingness to risk social and political stability (as he had done in 1958 at the beginning of the Great Leap Forward) in return for the psychological stimulus

imparted to youth and the masses by "times that try men's souls." Thus obsessed with men's souls, Mao inevitably differed from Liu in the specific strategies, both economic and military, by which they sought to achieve their different goals.

Both groups are versed in the Marxist-Leninist concept of *struggle* as the engine of change and of goal achievement. But Liu focused his vision of struggle on the Party elite; the struggle for correct priorities, pace, and administrative style was to be confined almost entirely to the Party.<sup>24</sup> Also, in traditional Marxist fashion, the elite of that Party should be drawn from the urban proletariat: "All Party members who do not come from the ranks of the industrial workers possess non-proletarian characteristics and therefore need all the more to be remolded."<sup>25</sup> If the political structure and administrative style of the Party were altered, Liu felt that struggle (by which he meant the intra-Party struggle) could be minimized. A unified Party could then lead the masses in all fields toward economic and military-political goals.

Mao, concerned with the entire society, visualized "struggle" on a much grander scale than merely within the Party membership. To him and his followers, the Party might even interfere with the effort to spread the tumult -- and the benefits -- of struggle across all institutions and social classes in order to achieve the socialization of China's masses in the Maoist image of the Communist man. Liu, the elitist, was concerned with the elite; Mao, the populist, was concerned with the whole of society.

By 1956, Liu felt that the greatest tests of class struggle had been met. He praised the total and decisive victory in the "socialist transformation of agriculture, handicrafts and capitalist industry and commerce."<sup>26</sup> Landlords had been eliminated as a class; bourgeois elements were becoming working people instead of exploiters; and intellectuals had changed their character.<sup>26</sup> He thus saw the chief form of class struggle as the contradiction between the working class and the bourgeoisie: a relatively concrete conflict between private and state authority structures over administrative authority and method. The strategy for achieving concrete goals became a process of imposing structure on and gradually altering a partially hostile environment.

To Mao, the period around 1956-1957, especially after the "Hundred Flowers Campaign" had evoked an unexpected torrent of criticism for the regime, appeared as a climax of major ideological contradictions. As he put it in August 1959,

With the cessation of the old social struggle, new social struggle will arise. . . . The form of the struggle varies with the times. In the present case, although the social and economic systems have changed, the reactionary ideology left over from the old times remains in the minds of a large number of people.<sup>27</sup>

To achieve his goal of the new Maoist man, Mao envisaged a strategy of deliberate periodic instability, preferably one that affected every individual. In such a context, no one was secure; no one could ever be sure that he had achieved the right mind-set, combining the right proportions of the old and the new, since "the form of the struggle varies with the times." Nevertheless, tapping the energies of youth, the under- and unemployed, and the peasant masses through a process of "controlled revolution," whereby mass initiative would be engendered and sustained, was the vision of Maoist "radicals." For Mao, the Party was less of a structure of people loyal to its corporate being, its rules, and its constitution (designed by Liu, naturally) than it was "an assemblage of like-minded people" who shared a common commitment to the revolution. The classic analysis of Soviet party organization as applied to China may have had merit to the extent that it reflected the Liuist ideal. It was clearly inaccurate in its portrayal of the Maoist ideal, whose proponents became increasingly suspicious of the "revisionist" tendencies of the systems, systems-analysis, and party orthodoxy of the Soviet Union.

III. CONFLICT OVER STRATEGIC OPTIONS

In 1958, what concepts for strategic defense and offense were open to Maoist and Liuist military thinkers, respectively?

THE DEFENSE

As suggested earlier, Chinese leaders have been most concerned with the strategy of defense against superior forces. Although Mao Tse-tung discusses the offensive in several brief passages, the bulk of his military writing is directed to the broad issue of strategic defense. Mao's thoughts on this subject are now a matter of common knowledge among most professional military men, but they merit a brief review here.<sup>28</sup>

Starting with the First Encirclement Campaign in Kiangsi in late 1930, when Mao was first in a position to challenge the preferences and style of professional military leaders, until Lin Piao's famous September 1965 speech on "people's war" -- and, indeed, up to the present time -- Mao has adhered to the strategic defensive-offensive. In so doing, he has never abandoned the main principles of defense taught by Soviet advisers, though largely rejected by the Soviet Union itself in the early 1930s. Having criticized those who overstress the lessons of Soviet revolutionary and civil-war experience and having insisted that laws for directing war have different applications to different situations over time, Mao, in the very continuity and uniformity of his thought, strikes at first glance a self-contradictory note in the dialogue among Chinese military strategists since 1938.<sup>29</sup>

*Sept-65  
Lin Piao's  
speech*

In his 1936-1938 lectures ("Problems of Strategy in China's Revolutionary War," "Problems of Strategy in Guerrilla War," "Protracted War," and "Problems of War and Strategy") to students at K'ang-Ta, Mao stressed the notion that 15 years of experience (1921-1936) had finally laid the foundation for a Marxist military line in China. Deriving his exposition principally from his experience in Kiangsi, Mao severely criticized the Communist strategy against the Fifth Encirclement Campaign. He believed that the war must be protracted on the strategic stage, but brief at the campaign and tactical levels.<sup>30</sup> He argued that future



operations should have a "guerrilla character"; campaigns should avoid fixed battle lines, absolutely centralized command, the purely military viewpoint, "bandit ways," and "warlord ways." Instead, they should stress fluid lines and the annihilation of the enemy army by concentrating the main Communist thrust against only one "front" at a time, while relying on only a very small rear-service organization.<sup>31</sup>

Although Mao frequently mentioned the need for a strategic counter-offensive once the Red Army had attained the requisite superiority in manpower and firepower, his writings generally emphasized defense and, specifically, the strategy for either the first phase of defense -- the stage of strategic withdrawal -- or what he later called the "stale-mate phase." Referring in his 1936 speeches to the two-stage enemy attack and to the Red Army's counterattack pattern as a "law of repetition," Mao noted that it would not be possible to end this repetitive pattern until the Red Army became the superior force.<sup>32</sup> Meanwhile, the "primary problem," in Mao's view, was the conservation of resources until there was an opportunity to annihilate the enemy. A related problem was timing. Assuming a strategic cycle of enemy attack, Red Army counter-attack, enemy attack, and so forth, Mao sought to relate the question of the proper time to halt a counterattack and prepare for the next enemy attack to his concern for military resource conservation. His resolution of the problem was: "Better too early than too late."<sup>33</sup>

Conscious of pre-1936 criticism, especially from professionals but also from civil Party officials at all levels, Mao directed special comment to the regrettable fact that the strategic retreat looked like "pure defense," which he rejected out of hand. Instead, he drew on classical references, such as his favorite novel, *Shui-hu Chuan* (Water Margin), and even Chinese boxing (*t'ai chi ch'uan*, literally, the "world in your fists"), to justify "luring the enemy in deep" as a prelude to defeating him.<sup>34</sup> Quoting Sun Tzu's admonition to avoid the enemy when he is "full of vigor," Mao argued that the retreat must continue until the Red Army has achieved two or more of the following conditions: active popular support, favorable terrain, a concentration of its main forces, a clear identification of the enemy's main vulnerabilities, the fatigue and

demoralization of the enemy, and a clear enemy record of strategic and tactical errors reflecting the presence of the other factors.

Despite his opposition to fixed lines of battle, Mao visualized a vague "terminal point of retreat" and cited the first three Encirclement Campaigns as good examples.<sup>35</sup> The creation of a base around a hard core of popular support on familiar terrain would constitute such a terminal point, thus providing at least two of the conditions required for shifting to the counterattack. The concentration of the Red Army would automatically result from the contraction of the "front." While this sounds like the 360-degree perimeter defense familiar to all soldiers, but especially to strategists of airborne strikes, its contradiction with the Maoist aversion to fixed lines might be resolved in terms of the dichotomy between strategic and tactical (campaign) deployment and style. A general theater-level contraction of fluid tactical lines would thus emerge as the Maoist vision of the defense.

In any case, Mao tended to reject any effort to put up a firm defense "in front of" the base area; he preferred to sacrifice some of the people's "pots and pans" (i.e., their personal property) within the base area in order to create the conditions for a victorious counterattack somewhere near "the middle of" the base area.<sup>36</sup> Such a counterattack would be climaxed by a "decisive battle," but it had to begin with an initial victory, carefully planned as the prelude to the entire counterattack campaign.<sup>37</sup> Preferably, that campaign would be a series of tactical envelopments to erode and finally fragment the enemy's strategic envelopment of the base. Mao thus spoke of blockades within a blockade, and tactical exterior line operations within enemy strategic exterior line operations.

In view of China's military weakness, Mao necessarily stressed the "guerrilla character" of the Red Army and urged his commanders to avoid battle if the enemy force was too large or too strongly entrenched, or if there was no prospect for victory. While noting that positional warfare might be used with caution under certain circumstances, Mao also warned his readers to be prepared to disengage on short notice. Furthermore, battle should be terminated in a matter of days unless the position defense or attack around a key point was an essential first step in the

classic Chinese Communist strategy of striking a key point in order to ambush expected reinforcements (*wei-tien ta-yllan*). As Mao put it, "guerrilla war must break out of the bounds of tactics and knock at the doors of strategy."<sup>38</sup>

This "guerrilla character" of Chinese military style was not to be confused with "guerrillaism," however, which Mao criticized for its lack of uniformity, its absence of discipline, and its simplistic methods of analysis, planning, and work.<sup>39</sup> Speaking in May 1938, Mao said that "regular" warfare must be primary and guerrilla warfare supplementary, especially during the first and third phases of the defense.<sup>40</sup> Once again, Mao's attitude toward the conversion of guerrilla forces into regular forces turned on the question of timing. Agreeing that the 1938 Red Army must "reach for" more centralized, disciplined, regular, and unified organization and style, Mao nonetheless cautioned against "premature regularization" and advised steering a middle course between "too much" guerrillaism and "too much" regularization.<sup>41</sup> Anticipating, in his 1936 lectures at Yen-an, that by 1937-1938 a war with the Japanese would be waged by regulars at the strategic level and by guerrillas at the tactical level, Mao thus had been persuaded by, or forced to compromise with, his professional military colleagues on a Chinese military style that combined regular and extensive low-level guerrilla warfare in, it was hoped, mutual support. By November 1938, however, he was urging military commanders to use regular forces to execute guerrilla missions -- an extension of his philosophy of defense that was never generally accepted by Chinese professional military leaders.

Despite his statement that 15 years' experience had provided the foundation for a Marxist line on warfare in China, there is thus some doubt about the clarity of Mao's thinking and his confidence in his strategic planning and operations during 1936-1938. At the time of his meeting with Chang Kuo-t'ao at Moukung and Maoerhkai, in 1935, Mao had a very bad reputation as a strategic planner. He had either assumed too much responsibility for planning details or had issued such vague instructions to subordinates that his true strategic objectives remained unclear.<sup>42</sup> He had wavered between excessive confidence and excessive self-doubt. His understanding of staff action and thorough planning

was apparently elementary, and occasioned much criticism from Russian-trained military men such as Yeh Chien-ying and Liu Po-ch'eng. Although Mao preached guerrilla warfare at Moukung, he yearned for aircraft, tanks, and artillery with which to avenge the losses suffered at the hands of the Kuomintang.

Mao's emphasis on the need for thorough planning, like many other aspects of his 1936 speeches at Yen-an, seem to reflect his need after 1936 to capture and retain the professional respect of his best military commanders, whose disdain for guerrillaism had remained essentially unshaken since they expressed it publicly at Ningtu in 1932. At the same time, Mao's efforts to stretch his own experience in low-level guerrilla actions into the more complicated realm of campaign and grand strategy produced insights into warfare that were at once brilliant, contradictory, and erratic.

His aim was evidently to discover "principles" that would resolve the Liuist (professional) versus Maoist controversy and would be equally applicable to guerrilla and regular forces. He thus attempted to "raise guerrilla warfare to the level of strategy," accenting the concentration of firepower, the tactical offensive, and, in deference to regulars, the goal of regularization and careful, thorough planning. At the same time, he insisted that, although mobility was the special feature of guerrilla warfare, it should be employed equally by regulars and guerrillas to disperse, concentrate, and shift the locus of tactical engagement.<sup>43</sup>

Yet Mao repeatedly tried to distinguish between guerrilla and regular warfare, lest a confusion of "form" render each type of force incapable of victory.<sup>44</sup> He thus revealed his own intellectual difficulty in defining the precise difference between guerrilla and regular warfare, and was forced to turn the discussion to "form," while leaving the substance of tactics and the responsibility for coordination between guerrilla and regular forces to regular commanders.<sup>45</sup> By distinguishing between "base areas" and "guerrilla zones," he tried to use geography to help differentiate the two forms of warfare. The former was a behind-the-lines enclave firmly under the control of either regular or guerrilla commanders, whereas the latter was held only sporadically, being

traded back and forth with the enemy.<sup>46</sup> The aim of operations was to convert guerrilla zones into base areas.

This process, when carried out in conjunction with regular forces "on interior lines" and guerrilla operations on "exterior" (behind the enemy) lines, might gradually reduce the area under enemy control and expand the area and population under Communist control. Guerrillas would generally have the task of pinning down or otherwise diverting regular enemy forces or disrupting their supply lines. Their function would be to expand their control over the gaps between enemy-held strong-points, a process which Mao related to the aim of the offense in the famous Chinese war game *Go (wei ch'i)*.<sup>47</sup> Mao wished to avoid frontal attacks and to concentrate instead on replenishing his forces, building new guerrilla units and a reliable intelligence and logistical system, and generally expanding the Communist presence in the "empty spaces."

Ultimately, while urging an avoidance of either excessive "localism" or the "purely military approach," Mao sought to place a regular "main" military force in each base area, either by shifting such a force from an interior-lines position or by converting a resident guerrilla force into a regular force. This main force would be clearly distinguishable from local guerrilla forces or part-time militia and would serve as a concentrated reserve at the disposal of the senior and presumably regular commander.

Despite compromises with the professionals, Maoist defensive strategic thought remained fundamentally unchanged between 1930 and 1958. Whether from his own convictions about their essential validity or from a desire to rationalize a determination to postpone modernization and proliferation of *conventional* weapons in order to allocate major resources to the *advanced weapons* program, Mao's arguments were still used continually after 1950 to convince both an internal and an external audience that "people's war" was not only the most suitable strategy for the defense of China but was also the only feasible means for projecting Chinese military and political influence onto the intercontinental stage.<sup>48</sup> In one form or another, Maoists even dared the United States to stage an invasion of the mainland, in the belief that U.S. troops could be lured "in deep" and destroyed according to the scenario described above.

Lin Piao's speech on "people's war" of September 1965 was so phrased as to generate confusion among analysts about whether it was designed to sponsor uprisings abroad or to convince an internal military opposition that the Maoist national defensive strategy and associated programs must prevail until China acquired a nuclear weapons arsenal. In the context of the 40-year controversy over military ethic and style between Mao and his professional military colleagues, it seems that Lin's speech was aimed principally at the internal opposition, since it did not promise any material assistance to national liberation movements abroad. Yet it certainly attempted, as Mao had done in his 1938 writings, to apply the lessons of the Kiangsi campaigns to the global stage, identifying agricultural societies with the peasantry, and industrial societies with the hated landowners, revisionists, and imperialists. According to Lin, the former would inevitably surround and strangle the latter.

Lin's formulation thus carried Mao's strategic thought to the ultimate in global strategic logic, or lunacy, during a period (1958-1965) when Chinese forces were weak in both the conventional and the strategic sphere. It was an exercise in eloquence, reasoning, and rationalization to which Lin may have been driven by his efforts to achieve compromises between contending military-political factions and philosophies. It remains for us now to review the Liuist opposition's philosophy of defensive strategy and some of its most recent manifestations.

Mao himself, in his early writings, outlined most of the essential elements of opposition to his theories of strategic defense.<sup>49</sup> Characterizing these elements as "new principles" or "regular principles" in opposition to his own "old principles," which had been criticized as "guerrillaism" in 1930, Mao attacked the professionals' bourgeois pride in the status they assumed in November 1931 as the defenders of the newly sovereign Central Soviet Republic. Their "regular line" was and remains the antithesis of the Maoist view: fight "beyond the gates," that is, outside Communist borders; do not abandon territory unless it is absolutely necessary; speed the regularization of all forces; attack on several fronts at the same time; gain mastery by striking first (preemptive attack was already an important issue in 1930); maintain a large rear-service organization and an absolutely centralized command.

In some measure, these ideas reflected the training that a few professionals had received in Moscow in the late 1920s under Shaposhnikov. But they also reflected any professional soldier's impatience with logistics and the prolonged political maneuvering for popular support that Mao advocated, a process that was ridiculed as "shadowboxing" in 1930.<sup>50</sup> From the perspective of a "modern" logistician, however, shadowboxing may have been no less important than the essential logistical base-building that characterized Western strategy in World War II, in Korea, and in Vietnam. Just as American strategists since 1941 have given increasing attention to the logistical dimension of theater and strategic military operations, so Mao directed his military colleagues (especially the commissars) to mobilize the peasantry for logistical support.

Against the background of Mao's portrayal of his opponents in the 1930s, it is interesting to read Red Guard criticism of Lo Jui-ch'ing and P'eng Teh-huai in the late 1960s. It is evident that the viewpoint of the professionals had not shifted perceptibly in the intervening decades; their evaluation of Mao's formula for defending a base area, or the whole of China, remained essentially reserved, if not outspokenly critical. Their image of an army's role coincided with that of the professional military establishment of any sovereign state: defending the state against foreign invasion by fighting campaigns in enemy territory so as to spare one's own populace -- a preference that Mao had been forced to argue down at the beginning of the First Encirclement Campaign in Kiangsi, in late 1930, when he had encountered a strong propensity among senior commanders to thwart a Nationalist attack by launching a first strike against Nanch'ang.

Although Mao regarded Communist strategy at the outset of the First Encirclement Campaign as "correct," the initial Communist move was actually a preemptive thrust to a point outside the Kiangsi Soviet, where it was believed the major Nationalist attack would come. Informed that they had waited in vain, the best units then shifted to the west and surrounded the most aggressive Nationalist force in a conventional battle, whose only noteworthy feature was the Communist monopoly on surprise. The Second Encirclement Campaign was remarkably similar to the First.

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The Third applied Maoist theories of extensive maneuver and deception by guerrillas to confuse the superior Nationalist invader.

By the end of the Third Encirclement Campaign, however, Mao's military star was already on the wane. Soon thereafter, professional military and Party leaders were engaged in a campaign to regularize and reorganize all military resources available to the Central Committee. The Fourth Encirclement Campaign involved extensive combat outside the Kiangsi Soviet, included several non-Maoist sieges of major Kiangsi cities, and reflected the mounting influence of Chou En-lai and the Comintern representative Li Te (reputedly a graduate of Frunze Military Institute in the Soviet Union). The Fifth Encirclement Campaign (against which Mao directed his most bitter criticism in his 1938 writings) violated every principle that Mao had preached at K'ang-Ta in late 1936. An initial brief foray by Lin Piao against a secondary front (the Kwangtung troops on the southern border of Kiangsi) was followed by a preemptive attack into Nationalist-held territory and a series of highly controlled, set-piece defensive actions under "absolutely centralized command" involving almost no guerrilla actions. This terribly costly effort was sustained by such slogans as "defend every inch of soviet soil."

Following the "Long March," which was planned and executed under professional military control because necessity and circumstances so indicated, the defense of the weak Yen-an base against the combined forces of Chang Hsueh-liang (to the south) and the weaker Yen Hsi-shan (to the east) involved another spoiling attack against Yen in February 1936 -- a strike that reaped few benefits, except the addition of about five thousand recruits from Shansi. Within a matter of months, the arrival of Chang Kuo-t'ao and Ho Lung reinforced the position of the advocates of conventional strategy and tactics. A reorganization of the Red Army followed in early 1937.

At the Loch'uan Conference of the Central Committee, in August 1937, professional commanders and Party leaders challenged Mao's plea for immediate reorganization and prosecution of guerrilla warfare and forced a compromise, under the terms of which the best-trained, best-armed regular divisions were sent to the Shansi front in September. By

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February 1938, after a combined Nationalist-Communist force had failed to retake Taiyuan, a working compromise emerged between Maoist and professional concepts of defensive strategy. It envisaged relatively independent base areas and border regions, within which regular officers could behave like regulars, while guerrilla forces were organized, partially trained, and generally managed by young nonregulars, who were graduates of K'ang-Ta. These nonregulars, by their zeal and idealism, brought about an expansion of guerrilla forces that was undoubtedly welcome to the senior regular commanders, who were determined to regularize the guerrillas and expand their own forces as soon as possible. The climax to their efforts came in late 1940, when the Hundred Regiments Campaign concentrated nearly every regular unit of the Eighth Route Army to challenge Japanese control over the rail network north and east of the T'ai-Yüeh Military Region. Speeches and memoirs provide further evidence of the essentially professional style of warfare that characterized the first four years of the Sino-Japanese War in North China. Only the effects of the 1941-1942 Japanese "Three-All" Campaign finally forced the regular commanders to fall back on what has been called a "strategy of poverty."<sup>51</sup> In December 1941, the *Liberation Army Daily* explicitly called for guerrilla warfare as the principal form of defense.

For the next two years, Maoist strategy dominated the behavior of the high command, principally because the Japanese onslaught left them no alternative. But it should be noted that senior military leaders again advocated a concentration and expansion of the regular forces in 1944, when the American advance in the Pacific forced the Japanese to shift some of their power out of China, thus affording the Communists an opportunity to reassemble their scattered forces.

The beginning of the civil war was marked by several dramatic cases of "defense beyond the gates" (if that phrase is defined as an offensive-defensive outside the boundaries of separate border regions, since Communist-held North China had not been a political-military entity at any time during the war and was not one in 1945). Thus, Ch'en Yi launched immediate attacks against Nationalist forces approaching his New Fourth Army area. Likewise, Liu Po-ch'eng rapidly mobilized every man in the Chin-Chi-Lu-Yü border region to fight, not a defensive-offensive guerrilla operation, but a hard-striking offensive-defensive

against well-armed Nationalist columns approaching the Yellow River along the railroad from Wuhan.

Throughout the remainder of the civil war, as during the strategic defensive phase of the anti-Japanese struggle before mid-1938, guerrilla and local forces barely had time for organization and training before they were "regularized" and driven into conventional offensive actions which, repeatedly, aimed at throwing Nationalist plans and troop deployments into confusion. Far from fighting on a single front or concentrating for a single blow, however, the Communist military leaders repeatedly dispersed their forces to isolate or divert potential Nationalist reinforcements, while launching a main force against a primary target. The 1947 battle of Mengliangku was one of the best examples of this offensive-defensive strategy. Thus, counter to Maoist dicta, they fought on many fronts and "with two fists" more often than they fought on a single front. While they did so in 1945 partly in response to the initial Nationalist strategy of "advancing on all fronts," they were also attempting to tie down Nationalist forces wherever possible in order to give Lin Piao time to consolidate a bridgehead in Manchuria. However, Communist style thereafter was one of mobile conventional battle in independent theaters of operation against Nationalist armed forces, rather than the seizure or defense of key points. The Communist shift to the strategic offensive in late 1947 will be discussed below.

The year 1950 conferred new status on the leadership of Communist China and introduced a novel concern with national and regional defense. The decision to defend China by launching a preemptive strike against United Nations forces approaching the Yalu River was hardly the defensive prelude to a Maoist "people's war." Like the initial "beyond-the-gates" offensive advocated and executed by professionals in the Fourth and Fifth Encirclement campaigns, the 1936 attack against Shansi, the 1937 campaigns in Shansi against the Japanese, the Hundred Regiments Campaign, the initial campaign of 1945, and many later civil-war campaigns, the thrust into Korea would seem to fit a non-Maoist pattern of strategic defense: the offensive-defensive style that characterized the professional school of thought within the PLA high command.

Indeed, the 1962 thrust against India would also appear to be in this tradition, and provides another strange contrast to the oft-quoted Maoist preference for "luring the enemy in deep." In this instance, Chinese military leaders may have perceived a two-front threat. On one front was the increasingly ominous Soviet posture on the Sinkiang borders, where several thousand members of national minorities, including General Zunum Taibov (then deputy chief of staff of the Sinkiang Military Region), escaped to the USSR between May and June 1962, leaving behind a chaotic political environment of bitter minority hostility to Han dominance. The other front involved the militarily weaker adversary on the Sino-Indian border. There, the Indians seemed to be provoking incidents, as if to elicit a Chinese response that might permit a simultaneous and coordinated Soviet-Indian attack. Within four months after Zunum Taibov's escape from Sinkiang, the Indian Army was moving forward toward the Ladakh-Aksai Chin area, employing aggressive Indian patrolling that marked an ominous departure from normal border relations between Indian and Chinese troops. The simultaneous activation of several new corps in India's Northeast Frontier Area (NEFA) must have further increased Chinese fears. After India's lamentable performance during the ensuing campaign had been followed by Soviet aid to India in the form of helicopters and a MIG-21 manufacturing capability, Chinese military planners probably felt that their worst suspicions about a Soviet-Indian conspiracy had been confirmed.

For our purposes, the Indian campaign is of special interest, because it seems to mark a continuity in the Chinese professional preference for the offensive-defensive, in which the initial spoiling attack is staged against the weaker adversary on the eve of an assumed coordinated attack against China. We would note further that the Chinese capability for coping with this threat, whether perceived as a one- or a two-front threat, was apparently severely limited by what forces were available. The Chinese corps immediately deployed were the 54th in Chengtu and the 18th in Lhasa; the operation thus was apparently the regional responsibility of Chang Kuo-hua, commander and commissar of the Tibet Military Region.

THE OFFENSE

It is noteworthy that Maoist thinking about the strategic offense has tended to mirror Chinese professional military practice. In great part, the similarity of thought may be ascribed to Mao's belief that an offensive cannot be contemplated until the Communists enjoy superiority in firepower. As Mao put it as early as November 1938,

During the stage of the strategic counteroffensive, given up-to-date equipment, a great change will take place both in the army and in its operations. Our army will then attain a high degree of centralization and organization, and its operations will lose much of their guerrilla character and attain a high degree of regularity . . . the Chinese type of regular warfare will change into the general type.<sup>52</sup>

In December 1947, after nine more years of warfare and controversy with his professional military colleagues, Mao had acquired enough experience in tactical offensives to draw up his famous ten points of strategy, all aimed at the great strategic offensive that would soon carry Communist field armies to major triumphs in separate theaters of operation: the recovery of Manchuria by the Fourth Field Army; the conquest of Tientsin and Peiping by the Fourth and Fifth; and the conquest of the provinces north of the Yangtze River by the Second and Third.

It seems likely that Mao's ten points represent fundamental agreement with the high command. They are, therefore, useful as expressions, not of the special outlook of Chairman Mao, but of contemporary Chinese military perceptions. As with the Maoist exposition of strategic defense, the ten points are concerned with theater rather than intercontinental operations. They thus reflect the Chinese Communist experience and primary concern with civil war, or at least warfare on Chinese soil. Their importance merits quotation in full:

1. Attack dispersed, isolated enemy forces first; attack concentrated, strong enemy forces later.
2. Take small and medium cities and extensive rural areas first; take big cities later.

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3. Make wiping out the enemy's effective strength our main objective; do not make holding or seizing a city or place our main objective. Holding or seizing a city or place is the outcome of wiping out the enemy's effective strength, and often a city or place can be held or seized for good only after it has changed hands a number of times.
4. In every battle, concentrate an absolutely superior force (two, three, four, and sometimes even five or six times the enemy's strength), encircle the enemy forces completely, strive to wipe them out thoroughly, and do not let any escape from the net. In special circumstances, use the method of dealing the enemy crushing blows, that is, concentrate all our strength to make a frontal attack and an attack on one or both of his flanks, with the aim of wiping out one part and routing another so that our army can swiftly move its troops to smash other enemy forces. Strive to avoid battles of attrition, in which we lose more than we gain or only break even. In this way, although inferior as a whole (in terms of numbers), we shall be absolutely superior in every part and every specific campaign, and this insures victory in the campaign. As time goes on, we shall become superior as a whole and eventually wipe out all the enemy.
5. Fight no battle unprepared; fight no battle you are not sure of winning; make every effort to be well prepared for each battle; make every effort to insure victory in the given set of conditions as between the enemy and ourselves.
6. Give full play to our style of fighting -- courage in battle, no fear of sacrifice, no fear of fatigue, and continuous fighting (that is, fighting successive battles in a short time without rest).
7. Strive to wipe out the enemy when he is on the move. At the same time, pay attention to the tactics of positional attack and capture enemy fortified points and cities.
8. With regard to attacking cities, resolutely seize all enemy fortified points and cities which are weakly defended. At opportune moments, seize all enemy fortified points and

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cities defended with moderate strength, provided circumstances permit. As for strongly defended fortified points and cities, wait till conditions are ripe and then take them.

9. Replenish our strength with all the arms and most of the personnel captured from the enemy. Our army's main sources of manpower and materiel are at the front.
10. Make good use of the intervals between campaigns to rest, train, and consolidate our troops. Periods of rest, training, and consolidation should not in general be very long, and the enemy should insofar as possible be permitted no breathing space.<sup>53</sup>

Having expressed these principles, with which hardly any military man, Chinese or Western, would disagree, Mao then notes that their successful application against the Chiang Kai-shek regime and its professional American advisers must ultimately be ascribed to the close bond established between the PLA and the people. He thus returns to the masses and to "people's war" as the logistical and replacement system essential to operational success.

In addition to Mao's earliest and his civil-war comments on the strategic offensive, we have the evidence of the high command's campaign behavior between 1928 and 1948. As suggested earlier, the Communists did not until 1948 enjoy the superiority in manpower and weapons necessary for a nationwide strategic offensive. Nevertheless, the deployment of forces and the combat objectives of that great civil-war offensive are so obviously related to patterns of earlier *tactical* offensives that we may conclude that the high command had indeed achieved a distinct professional offensive style prior to the great 1948 campaigns of Liao-Shen, Huai-Hai, and Peiping-Tientsin.

Analysis of the enemy and the battle area is the first element of that style. The Chinese habitually divide a strategic battle area (or theater of operations) into tactical battles and phases. Since they have generally enjoyed the benefits of a superior intelligence system, they have been able then to identify and classify major enemy forces according to location, relative strength, mobility, and, therefore, potential ability to influence any given tactical battle.

Proceeding from this initial survey of the enemy's dispositions, the Communist pattern of tactical or strategic attack has usually been either swiftly to seize key terrain with the main force while using secondary forces or even guerrillas to delay or prevent the timely arrival of enemy reinforcements, or, conversely, to threaten key terrain with a secondary force while seeking to annihilate enemy reinforcements with the main force. In most cases, the Communists selected key terrain on the basis of its value to the enemy as an avenue of withdrawal, that is, because of its being on a major avenue of approach into or withdrawal from the overall (strategic) area of operations. The objective in seizing or threatening such a point was to force the enemy to attempt to recover the point by moving in a predictable direction through terrain where the Communists could select the site for a decisive tactical battle (point 7 of Mao's ten points).

While these tactics characterized Communist behavior in countless isolated tactical battles during the Kiangsi and Sino-Japanese war periods, they were translated onto a vast strategic stage only during the civil war. In the initial phase of the Liao-Shen campaign, Lin Piao threw a secondary force against Shanhaikuan and Chinchou in order to isolate the strategic area of operations from further Nationalist reinforcements from south of the Great Wall. While secondary forces threatened the major Nationalist garrison at Changchun, the main Communist force moved toward Chinchou in anticipation of a decisive battle against what they assumed would be a major reinforcing Nationalist column from Shenyang. At the outset of this campaign, the Communists sought to isolate the entire Nationalist force by closing off its main land avenue of approach and withdrawal. The Huai-Hai campaign also began with a main-force attack against Huang Po-t'ao, whose troops, located on the eastern flank of the Nationalist army, were most likely to escape along the Lung-Hai railroad to the east coast. While secondary forces harassed other, more powerful units along the Lung-Hai railroad, Huang's force was isolated and defeated piecemeal.

Once again, the Peiping-Tientsin campaign began with swift strikes by secondary forces against both the western and eastern flanks of Fu Tso-i's army, to preclude his sudden escape in either direction. Finally,

the great offensive against the Southwest began with a secondary force attack in northern Szechwan against the army of Hu Tsung-nan to delay his withdrawal and preclude his linking up with Pai Ch'ung-hsi's forces south of the Yangtze River.

In all the abovementioned cases, the Communists' objective of isolating selected forces on a given hill, or in a particular city or province, reflected a keen appreciation of prevailing tactical and strategic time-space factors, and an understanding of Nationalist factional disputes that might cause certain commanders to delay their response to central orders. Thus, each initial move in the four major campaigns cited not only sought to isolate the strategic theater of operation from all other theaters but also tried to insulate the specific tactical battle area against any potential reinforcements from within the theater.

After assigning this initial objective to a well-armed, mobile, but usually secondary force, the Communists dispatched other forces to the piecemeal delay or defeat of any reinforcements. The history of Communist campaigns in Kiangsi and North China offers many examples of this style. In addition to the cases already cited, the Communists' great victory at Mengliangku exemplified their willingness to commit the majority of their force to block the arrival of Nationalist reinforcements, provided they could still maintain local tactical superiority over their main strategic target. Mao had often criticized such behavior as the use of "two fists" and "fighting on many fronts," but the high command persisted, and Mao ultimately had to accept the essential validity of these tactics against an enemy who refused to concentrate.

This is not to say that the high command preferred using the bulk of its forces to divert potential Nationalist reinforcements from its main target. Indeed, the Communists' appreciation of the principle of economy of force was precisely the basis for their acceptance of guerrilla operations even when they enjoyed parity with or slight superiority over the enemy. Thus, guerrillas, local forces, and militia might help destroy bridges, tear up railroads, and harass reinforcements on the move, if regular forces were unable to isolate the theater



of operations or the tactical battle area. But successive campaigns during the civil war revealed a Communist pattern of initial attack by a secondary force against a key city, terrain feature, or isolated major unit, while the main force remained relatively concentrated so as to be ready to destroy expected reinforcements.

The Communist technique of concentration on the battlefield, another distinguishing feature of offensive style, may benefit from many years of experience with mobile warfare, wide-turning movements, and small-unit concentration and dispersion. As contrasted with concentration off the battlefield (or battle area), this complex technique demands careful coordination of moves by separate columns, lest each be defeated before it reaches the assigned battle area. It also requires several preconditions, of which superior intelligence is probably the most important. Given such intelligence, however, including thorough familiarity with obstacles, avenues of approach, and key terrain features, the sudden concentration of a powerful force from many directions may yield maximum surprise and benefits. Evidently confident of themselves and their knowledge of the enemy, the Communists employed this technique in all of the major campaigns cited above.

In addition to these distinctive features of Communist offensive style, the Maoist emphasis on the annihilation of the enemy combat force contrasts not only with Mao's focus on the seizure and control of territory during the strategic defense but also with the classical Chinese penchant for leaving a domestic enemy with an honorable exit. Indeed, whenever the Communists seemed to offer the Nationalists such an exit, the latter could usually expect an ambush along their route of withdrawal.

#### FACTORS INFLUENCING CHOICES AMONG STRATEGIC OPTIONS, 1958

By 1958, given their deepening disagreements over a wide range of issues and their historic conflict over defensive strategy in particular, Liuists and Maoists were in conflict over at least eight key factors that would influence the choice of options among alternative strategies and allocations of resources for national security, including nuclear weapons development. Three of these factors pertained to the external environment: external goals; conflicting perceptions of external threats

to those goals; and disagreement over the reliability of Soviet support. Four factors pertained to the internal situation: conflicting internal goals; disagreement over the perception of threats to those internal goals (including the balance of power among contending interest groups); conflicting estimates of China's economic capability; and disagreement over the choice of weapons systems. In May 1958, compromises among these factors resulted in a decision about nuclear weapons development which was not seriously challenged again until 1965 and once more in 1969.

### External Goals

Three major external objectives (listed here in summary form and in the approximate order of priority) guided decisions in May 1958: deterrence of an American attack; support to current and future "Third World" aspirants to "national liberation"; greater influence in the Communist world on the global stage.<sup>54</sup>

3 external goals.

That the threat from America's airpower and nuclear arsenal was perceived as the primary external military threat at this time is clear. Indeed, this theme was to remain consistent through the next few years, though it became increasingly strident. In 1964, at the time of the first test, the Chinese announced: "The development of nuclear weapons by China is for defense and for protecting the Chinese people from the danger of the United States launching a nuclear war."<sup>55</sup>

explicitly anti-US.

Asian regional security and even dominance, as against global competition with either the Soviets or the Americans, was a priority objective for most Chinese leaders during the 1950s. Resources did not permit them to entertain broader aspirations, at least in the short run. Nor had China's military-political traditions provided a basis for her seeking a global status before she had taken care of economic, political, and military problems closer to home. Of special concern, related to the first objective, was the American military presence in Asia, a presence which during and after the Korean War had escalated sharply in the fields of naval and airpower. Thus, China's principal obstacle to achievement of the second objective was linked to the first: American and American-allied (especially Japanese) military power.

regional goals - virtual effect on US intervention?

1. The power.

It is important to examine that linkage briefly, because it may have provided the Chinese with an argument for designing a particular weapons development objective and strategy. Technological and economic capability notwithstanding, a logical strategic option for nuclear weapons advocates in mid-1958 would have been a hostage strategy similar to the strategy employed by the Soviets against the United States and European allies in the 1950s, when the Soviet nuclear arsenal and inventory were still under development. Indeed, by the late 1950s Soviet generals had become so committed to that strategy that a shift to an intercontinental strategy and weapons posture under Khrushchev proceeded only at the cost of considerable opposition from the spokesmen for Soviet ground and armored forces. Similarly, it would have been reasonable for Chinese defense- and ground-oriented traditionalists to seek a compromise with nuclear weapons advocates for the earliest attainment of mid-range (1000 nm) weapons or even tactical nuclear weapons; that is, weapons that would be most useful to ground forces protecting China's borders. By threatening Japanese and Okinawan bases hosting American nuclear-capable airpower, such a weapons capability might be an effective deterrent against an American first strike and at the same time might force host governments in Asia to reconsider their policies of harboring American imperialists.

GP goal  
 ↓ HAN  
 support for US;  
 ↓ US alliance

At least in terms of the prestige accorded a nuclear power, if not in actual military power, attainment of nuclear status might also enhance the image of the Chinese in the eyes of leaders of national liberation movements, that is, in the eyes of the "Third World." Possibly as a form of reassurance to those revolutionary groups still striving for victory through wars of national liberation, the Chinese stated in October 1964: "The mastering of nuclear weapons by China is a great encouragement to the revolutionary peoples of the world in their struggles and a great contribution to the cause of defending world peace."<sup>56</sup>

prestige  
 on TW

#### Perceptions of Threats to Goals

In 1958, as China saw it, her adversaries in Asia were clients of either the United States or the USSR. Although the USSR still retained the status of an ally, with a diminishing interest in supporting wars

of national liberation that might escalate into general war, it was increasingly important to the Maoist ideologues, intent on spreading the gospel and the attitudes of the new Communist man, that China be capable of sponsoring such wars without fear of great power intervention. After 1960, until the first Chinese explosion, the Sino-Soviet split accentuated the two countries' divergent views on revolution in the Third World and reinforced China's determination to give at least moral support to liberation movements threatened by the great-power "nuclear monopoly." This is not to say that the Chinese ever had any illusions about the direct utility of nuclear weapons in wars of liberation. Indeed, they publicly acknowledged that the close intermingling of forces in such a war precludes the effective use of such weapons. But they soon disagreed violently with the Russians over the likelihood of escalation of local wars. If they were to offer Third World movements an alternative violent (if conventional military) channel to independence, they felt that their credibility would be enhanced by their possession of nuclear weapons.

|| Δ in USSR over regional conflict  
of these rules

The foregoing paragraphs obviously bear on China's burgeoning competition with the Soviet Union for leadership in the Communist world. In 1958, "revisionism" was a term yet to be employed against Moscow; it would soon enter the Communist lexicon as a term of Maoist condemnation of an alleged compromise with capitalist attitudes toward profit, discipline, authority, peaceful coexistence, and even war, attitudes which tend to accompany the technological revolution. As with the Third World, China's acquiring a nuclear capability was to result in a more credible image of power among socialist countries.

→ rivalry &  
SU in TW.

#### Reliability of Soviet Support

From 1957 on, the USSR, in turn, became increasingly reluctant to foster an independent Chinese strategic nuclear delivery system. Indeed, the climax of Sino-Soviet collaboration in developing a Chinese bomb probably was reached in October 1957, when Moscow reportedly agreed to provide China with a sample of an atomic bomb. (57) Prior to that time, an October 1954 agreement on scientific and technical cooperation had brought China various benefits related to nuclear technology. These included control

1957 peak  
SU-CH N  
cooperation  
(according to  
CH govt.)

over the uranium mines at Tacheng, Sinkiang, under the auspices of the Sino-Soviet Nonferrous Rare Metals Company (originally set up in 1950), and the training of some Chinese specialists (beginning in March 1956) and Soviet advisers. An isotope-producing atomic research reactor was finally completed in Peking in 1958 (see Table 2), probably the first step toward implementation of the October 1957 agreement and a follow-on phase under the 1954 agreement. Thanks to these agreements, three additional research reactors (all of the 10 megawatt MTR-type) would become operational in Shenyang and Chungking in 1959 and in Sian in 1960 (see Fig. 1).

(U) These early initiatives of the Soviet Union were paralleled by a reluctance to encourage Chinese confidence in nuclear weapons strategy and diplomacy after October 1957, and this should have warned Liuists and Maoists alike that early Chinese attainment of a nuclear weapons capability was not a Soviet objective. Later Chinese statements indicate that the Soviet Union was willing to station some weapons on Chinese soil provided it retained complete control over the weapons. Certainly the Maoists (and possibly the Liuists) rejected such a plan. Then, as an alternative to that approach, the Soviets began reviving the concept of a nuclear-free zone for East Asia in January 1959.<sup>(59)</sup> Earlier, during the August 1958 Taiwan Straits crisis, the lack of Soviet support of the Chinese in their potential confrontation with American nuclear "massive

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Jan 1959

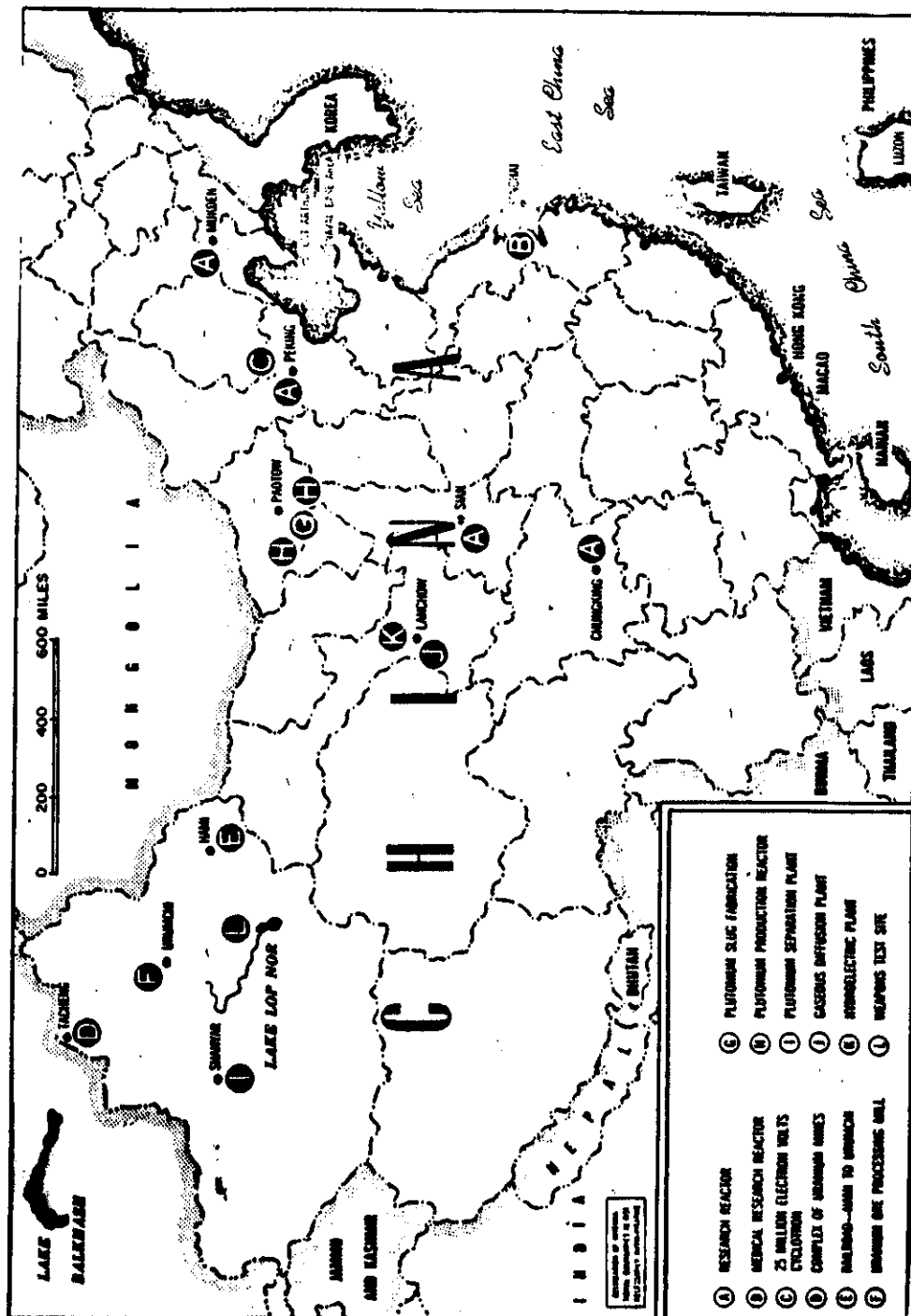
Table 2

**COST ESTIMATE: CHINESE COMMUNIST NUCLEAR DEVELOPMENT  
TO OCTOBER 1964**

Description	Location	Date Completed				Capital Cost (Millions)			Operating Cost to October 1964 (Millions)		
		Year	Month	Day	Date	US Dollars	Manpower	Technicians	Annual Operating Cost	US Dollars	October 1964
<b>RESEARCH FACILITIES:</b>											
Research reactor, 10 megawatt MTR-type <sup>a</sup>	Peking	1958				18			20	50	90
Research reactor, 10 megawatt MTR-type	Mukden (or Harbin)	1959				18			10	25	50
Research reactor, 10 megawatt MTR-type	Chungking	1959				18			10	25	50
Research reactor, 10 megawatt MTR-type	Sian	1960				18			10	25	45
Research reactor, Walker Reed type	Shanghai	1961				10			10	25	40
25 million electron volts cyclotron	Peking	1961				10			20	25	30
2.5 million electron volts electrostatic accelerator	Unknown	1960				3			10	15	36
											32
<b>PRODUCTION FACILITIES:</b>											
Complex of uranium mines	Tacheng	1957				10			40	200	105
Railroad (300 miles)	Hami to Urumchi	1961				8			10	150	30
Ore processing mill, 1,000 tons per day	Urumchi	1959				11			20	200	50
Uranium refining plant	Unknown	1957				25			20	500	105
Slag fabrication for plutonium	Pautow	1960				70			40	300	15
Plutonium production reactor 200 megawatt	Pautow	1964				50			50	200	60
Plutonium production reactor 200 megawatt	Pautow	1961				50			50	200	50
Plutonium separation plant	Tarim River in Sinkiang Province	1962				70			50	200	150
Gaseous diffusion plant	Lanchow	1962				500			100	500	100
Hydroelectric plant, 750 megawatt	Liu-Chia Gorge on Yellow River	1960				225			20	60	40
Uranium conversion plant	Unknown	1962				25			20	100	90
Weapon assembly plant	Unknown	1963				27			100	300	25
<b>TEST FACILITIES:</b>											
Weapons test site	North shore of Lop Nor	1963				40			80	400	20
						\$1,203				\$470	\$1,258

SOURCE: James W. Barnett, Jr., "What Price China's Bomb?" *Military Review*, Vol. 47, No. 8, August 1967, pp. 16-23.

<sup>a</sup>Materials testing reactor.



**SOURCE:** Barnett, op. cit.

retaliation" should have confirmed suspicions among certain Chinese groups that Soviet support could not be relied upon. In 1959, according to later Chinese statements, the Soviets unilaterally tore up their October 1957 agreement by announcing that the spread of nuclear weapons to other socialist countries (including China) would not be in the interest of the world socialist movement (a theme which prevailed until 1963), since "an increase in the number of socialist states possessing nuclear weapons would immediately give rise to a chain reaction in the camp of the imperialists, the atomic cancer would spread throughout the globe, and the threat of nuclear war would spread manyfold."<sup>60</sup> In particular, the Soviets seemed to be concerned about what they perceived to be a Maoist penchant for adventuristic sloganeering, and a tendency to ascribe greater strength (vis-à-vis the United States) to the latest developments in Soviet nuclear and missile technology than the Soviets did themselves.

1959. JD  
cancelled 1959  
agreement.

Proof +  
dictated of  
CH.

### Internal Goals

Section II has outlined the essential preoccupation of Liuists with Party control and discipline, internal political stability, routinized social change, economic equilibrium, heavy industrial concentration and growth, and paced modernization. In contrast thereto, as already discussed, are the Maoist preferences for internal instability and a new form of establishment based on nonroutinized change, industrial dispersion, and economic disequilibrium with an emphasis on leveling of distributive shares, increased by rapid economic growth.

### Perception of Threats to Internal Goals

Liuists perceived major internal threats to their goals to be instability and repeated movements, and purges that could only undermine people's confidence in the leadership. Maoists perceived the greatest threats to be routinization and a top-heavy bureaucracy, leading to a slowing down of revolutionary pace. In 1958, these viewpoints probably permeated and divided opinion among leaders of each of the five major civil-military interest groups then coalescing and competing for power in China, and, depending on their own position, individuals undoubtedly



found either threats or opportunities implicit in the debates over the correct strategy for weapons development. || XX

For example, Nieh Jung-chen, Chairman of the Scientific Planning Committee of the State Council, wrote in August 1958:

We must focus our efforts on stepping up research work in the newest branches of modern science and technology. We should and absolutely can master, in not too long a time, the newest technique concerning atomic fission, thermonuclear reaction, the use of atomic energy in all fields, radio and electronics, jet propulsion, rockets and the conquest of outer space.<sup>61</sup>

In March of the same year, Marshal Yeh Chien-ying had been appointed Director of the new Academy of Military Science in Peking. Yeh had urged that the Academy make full use of Soviet technological advances so as to accelerate military modernization in China.<sup>62</sup> In May, Lin Piao, who had been absent because of illness during earlier debates, returned to active participation in the dialogue over new directions for the PLA. These were articulated at an enlarged conference of the Military Affairs Committee convened in May 1958 to review past PLA development and establish guidelines for the future.<sup>63</sup>

#### Economic Capabilities

As to the capability of the Chinese economy to sustain a nuclear weapons program, we indicated in Section II that this issue deeply divided the Chinese leadership. In the light of events dating from the beginnings of the Cultural Revolution in 1966, it is clear that Chou En-lai and Liu Shao-ch'i among civilians as well as P'eng Teh-huai and other military leaders were primarily concerned with a steady growth of heavy industry, each for his own reasons.<sup>64</sup>

In the context of two major trends that had been under way since 1957, concerns about the ability of the economy, which still was deeply dependent on Soviet assistance, to support ambitious new weapons programs were legitimate. The first trend was one of economic decentralization, primarily for the purpose of breaking administrative bottlenecks which had developed under the strict central controls of the first

five-year plan. The second trend was the Great Leap Forward (GLF), proposed by Maoists in 1958 to convert China's vast supply of labor into production. Both trends had the effect of focusing the attention of the provincial Party committees on local management. In such a context, it would have been very difficult for central leaders to find surplus resources with which to buy foreign technology that was lacking in an incipient nuclear weapons program, had not the Soviets given it as part of their assistance.<sup>65</sup> The failures of the GLF were to become apparent by early 1959. In May 1958 there must already have been strong doubts about the advisability of moving ahead on major new investments. Indeed, the process of forced collectivization prior to 1958 had antagonized the peasants and many top cadres such as Liu Shao-ch'i, who believed that agricultural mechanization should precede collectivization.

#### Weapons System Options

The options among weapons systems realistically available to Chinese planners in May 1958 included two nuclear devices and three delivery systems.

The Chinese could have chosen either a plutonium (Pu239) device for small tactical nuclear weapons or a larger enriched uranium device (U-235) for larger weapons. The plutonium weapon offered several advantages: that of relative cheapness (perhaps less than one hundred million dollars for a processing plant, as contrasted with several hundred million for a U-235 processing plant); its suitability for small bombs (and therefore its utility in small rockets that the Chinese would be able to produce quickly, or in existing aircraft already available); the availability of a reactor in Peking capable of producing enough plutonium for a bomb by 1961;<sup>66</sup> and its internal political usefulness in satisfying the demands of military traditionalists and Liuists for cost-effective, relatively short-range weapons of primary advantage to the ground forces and conventional forces protecting China's immediate borders. The principal disadvantage of the plutonium option were the need for a large amount of Soviet-produced enriched uranium as fuel, and the uselessness of plutonium for larger weapons.

(U) The U-235 route offered the major long-term advantages of a fissionable material that could ultimately be produced in larger quantities than plutonium and would be suitable for thermonuclear bombs. The disadvantages included its high costs in terms of money, time, and electricity. A single plant might cost several hundred million dollars. Money would be needed also to construct a gaseous diffusion plant for enriching natural uranium, a complex process requiring technology and enormous amounts of electricity.<sup>67</sup> But once the Chinese had built such a plant and had begun producing large quantities of U-235, it might then be possible to produce plutonium without depending upon the Soviet Union.

(U) Among the delivery systems that must have been considered in 1958-1959, three are worth mentioning: manned aircraft, missiles, and submarines.

(U) In the category of manned aircraft, the USSR had assisted the Chinese in the development of an aircraft industry in the early 1950s. But they still were producing only around 50 aircraft per year as late as 1963,<sup>68</sup> when small transports, helicopters, and MIG-17s were in production. Although some Russian IL-28 light bombers (around 150) and two TU-16 medium bombers were available to the Chinese, China had no immediate prospect of developing an indigenous capacity for producing medium-range bombers such as the TU-16.

(U) Although the Soviet Union had also given the Chinese some assistance in the field of rocketry, missile development posed major problems in the fields of propulsion and guidance systems.<sup>69</sup>

(U) Because readily available and low-cost liquid propellants promised high performance, large thrust levels, ease of handling of relatively large vehicles during the launching phase, and ease of thrust modulation, it seemed probable that the Chinese would employ liquid propellant engines. From the viewpoint of the guidance technology then available, thanks to prior Russian experience with 700 nm and 1100 nm missiles and plans and components of surface-to-surface missiles, the Chinese could proceed without interruption to develop such systems more easily than longer-range vehicles. Under 1000 nm, assuming that a 1.5 to 2.0 nm impact error was permissible, fairly routine instrument performance, using either radio or inertial guidance systems, could be

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relied upon with the existing Chinese technology.<sup>70</sup> For longer ranges, a greater focus on electronics research would be required.

(U) A submarine program might have promised the greatest strategic flexibility, without the cost of fixed systems, if China had had the shipbuilding capability in 1958. The Soviets had provided a "G" class conventionally powered guided-missile submarine. But such vessels in series production were clearly years away, and priority requirements in naval construction seemed to accent defense.

#### Alternative Strategies (U)

(U) In 1958, the foregoing conflicts (the Liuist versus the Maoist analytical and administrative style; a pro-Soviet versus a more traditional Chinese perception of military organization, role, and strategy; and the historic conflict between Chinese professionals and Maoist strategists) structured Chinese military strategic options in terms of resource allocations to three major forces: the locally controlled militia, modernized regionally controlled conventional forces, and centrally controlled advanced nuclear weapons.

(U) Strategic Option One. The Liuist preference for organizational division of labor clashed with the Maoist preference for ambiguity of function and for multi-role generalists simultaneously concerned with defense and mass mobilization and indoctrination. Statements by P'eng Teh-huai in 1955 reflecting the Maoist interest in a large reserve supported by a small elite force and focused on the external threat seemed to give priority to a model of military organization and strategy (Strategy One) that would reduce the size of all regular forces, especially those conventional forces within the interior of metropolitan China, in favor of smaller, highly trained forces poised on China's borders and backed up by a large reserve. Being primarily concerned with the relationship between the troops and the masses, Maoists, especially the commissars, in their desire to minimize elitism through specialization, sought to maximize contact between conventional forces and reserves, and to arm only a small advanced force with the doctrine and weapons appropriate to modern warfare.

This military deployment of trained men and equipment would obviously accent "people's war," the classic Maoist defensive-offensive, in which the enemy would be invited in to be consumed in a sea of guerrillas and "sparrow tactics." This strategy had been employed with varying success in the past, but with diminishing frequency after the campaigns against the Nationalists in central China in the early 1930s. Indeed, such a strategic concept had been employed neither in the civil war (1945-1950) nor in Korea (1950-1953), when "fighting beyond the gates" had been the preferred (professional) approach to military resource allocation and concentration, rather than the "people's war" that would have required dispersion of resources.

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The advantage of this strategy, in the context of the nuclear weapons controversy of 1956-1958, would be the release of resources (budgets, trained manpower, plant facilities, electric power, transportation facilities) for application to the advanced weapons program. In other words, the relative impoverishment of conventional forces, especially ground forces, would accent and benefit the militia and nuclear weapons development. Indeed, if the regular ground forces could be diverted from costly training and weapons development programs involving artillery and tanks in combined-arms operations and maneuvers to a focus on small-unit operations, night training, and mobile guerrilla operations, savings might be applied to a Maoist gamble -- a great leap in weapons development: self-sufficiency in nuclear firepower. That the two programs -- militia training and nuclear weapons development -- could well go hand in glove has not been evident to all analysts of that period. Yet both programs represented most of the characteristics of the Maoist vision: the proper utilization of ground forces for more primitive warfare and indoctrination in the role of a great school of revolution; the prospect, therefore, of saving resources for a daring great leap into the global political-military dialogue, rather than wait for the slow, wearisome progress of bureaucracy in the Liuist style; the inspirational impact of such a leap on those Chinese whose traditional respect for foreign technology had blinded them to their own capacities; and, perhaps most important, the destabilizing effect that such a new

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program might have on the most important threat in the Maoist schema -- the increasingly routinized, Sovietized internal bureaucracy.

Strategic Option Three. An extreme alternative strategy (Strategy Three) of modernization (largely dependent upon a Soviet long-range nuclear deterrent against the primary American threat) would be the broad modernization of regular forces with a focus on tactical nuclear weapons while abandoning the militia -- a process which would inevitably provide China with a large standing army. This strategy would be disadvantageous to Liuist central planners because forces would be dispersed geographically and therefore likely to remain under the operational control of powerful military regional commanders. In addition to their threat to central control, such forces would tend to become more widely separated from the masses as the army became more specialized.

Comparison. Strategy One would involve a major gamble; it presupposes that any ground invasion of China during the period when nuclear weapons were still on the drawing board could be repelled by "people's war." But Strategy Three also would be a gamble; it assumes that the Soviets would provide a reliable deterrent while resources that might have been applied to a homegrown deterrent were being invested in a Soviet-model tank and artillery army with close-support aircraft and possibly tactical nuclear weapons.

In the broadest terms, the militia/nuclear weapons mix of Strategy One would offer Maoists a "correct" combination of ideology and resource allocations between the military and the economic field. In the name of "walking on two legs" (tradition and modernization), this strategy would preserve, at limited cost, the PLA's power in an indoctrination and mass mobilization role, decentralized so as to inspire local initiative toward the solution of local problems. At the same time, it would concentrate the most modern military technology in the hands of a few political and military leaders, mostly at the center, or in favored military regions where production centers and test sites might be installed.

Strategy Three would offer regional military professionals *their* notion of the correct combination of resources and ideology. By drawing

heavily on the experience, equipment, and doctrine of the Soviet Union, the broad modernization of the regular ground forces through an ambitious program of training might imbue peasant recruits with attitudes appropriate to a modernizing society in technological transition. As the military equivalent of the Liuist argument that immediate agricultural mechanization should precede any leap into collectivization so as first to expose the peasant masses to the new machinery and thought patterns, the concept of a broadly based conventional and tactical nuclear weapons modernization strategy, supported by an appropriate military defense/heavy-industrialization strategy, might have a wider, more favorable, and more lasting impact on peasant attitudes toward the rules and discipline of the governmental establishment than would the lingering traditionalism implicit in the Maoist program.

In 1956-1958, the premises, advantages, and disadvantages of the two extreme strategic options thus offered mixed blessings to contending groups in China. Relatively poor military regional commanders might gain the status and the real wealth of a nuclear-related installation if they supported the Maoist formula. Yet most advocates of regional power, especially those with substantial industrial facilities, could expect to have to sacrifice some of their wealth for the sake of the nuclear program, even if the program brought expansion to their own regional industry. Ultimately, the local power elites might profit from the deployment of these weapons (especially in their tactical mode) in their regions. But even that potential return was bound to be suspect, since the specially trained elites and centrally controlled rocket forces could be expected to pledge their loyalties to political powers external to the region. On the grounds of regional defense alone, most military regional staffs would probably have liked a program of rapid conventional and gradual tactical nuclear modernization, a posture of graduated response, rather than the Chinese equivalent of "massive retaliation."

On the other hand, a program directed to ICBMs might provide opportunists with the budgets and priorities with which to upset traditional elites, and the traditional distribution of power. Revolutionary in its military-technological dimension, it might also prove to be

politically revolutionary. Thus, Lin Piao and many of his civil and military followers at the center and in the central south (Canton Military Region) may have seen the program as enhancing their individual and collective power.

As the youngest branches of the armed forces, the air force and the navy also could be expected to respond favorably to the weapons acquisition program of Strategy One once the thrust of military resource priorities had become established. Likewise, research and development leaders were certain to support most aspects of the program, especially those concerned with electronics and guidance systems, metals, fuels, and nuclear research. Ideologues in both the civil and the military hierarchy might be called upon to foster the sense of revolutionary daring and stress the need for revolutionary sacrifice that the program would demand.

Conversely, individuals whose political status and future depended upon a military modernization process that proceeded gradually through emulation of the Soviet model -- toward a distant day when long-range nuclear weapons would be an integral part of the arsenal, but meanwhile consolidating gains in doctrine, training, and thorough preparation for a combined-arms strategic and tactical campaign -- would not welcome a sudden shift of resources to the nuclear weapons field.

The Compromise: Strategic Option Two. Reflecting their professional and administrative propensities, men like Liu Po-ch'eng, Su Yu, and Yeh Chien-ying argued in 1956, 1957, and 1958 for a variation of Strategy Three -- a compromise which we will label Strategy Two. It would match presumably available Soviet nuclear deterrent power with a more broadly modernized organization of Chinese military power -- a combined-arms strategy in which military power would be concentrated against any concrete external threat. Less concerned than the Maoists with indoctrination and the internal revolutionary victory over men's minds, they preferred to prepare China to approach quickly the Soviet model of armor- and artillery-heavy mobile forces, closely supported by air defense and tactical rather than strategic airpower. Indeed, these men repeatedly cited the military example of the USSR as the model for doctrinal, organizational, and strategic emulation.



Strategy Two was probably supported also by Defense Minister P'eng Teh-huai, although some analysts identify him with the Maoist model of military strategy during the period before 1958, basing their view on his report on the draft military service law.<sup>71</sup> Aside from the fact that P'eng was purged in 1959, apparently because he had opposed many aspects of the Maoist image of military strategy and defense economics, his long record of opposition to Maoist military thought would argue against his having been affiliated with the Maoist Strategy One in the 1950s, unless he was attempting to reconcile the irreconcilable elements of Strategy One and Strategy Three.

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We may recall that P'eng Teh-huai had been a professional adversary of Lin Piao throughout their careers. As late as the Korean War, he was chosen to succeed Lin after Lin's initial efforts in Korea brought terrible casualties. P'eng was chosen over Lin as the first minister of defense. Working closely with leaders from Second, Third, and Fifth Field Army units during the Korean War, P'eng, Liu Po-ch'eng, Su Yu, and a host of senior commanders must have shared many views in the late 1950s on the necessity of modernizing the ground forces, and conventional weapons systems in general.

P'eng's attempts to modernize the PLA during and after the Korean War according to Soviet doctrines and practices involved close association with Liuist state planners, who shared his faith in Soviet organizational experience. That P'eng should praise the concept of a reserve did not necessarily mean that he disagreed with such men as Liu Po-ch'eng and Yeh Chien-ying. The occasion of the draft military service law demanded that P'eng make the appropriate noises about the utility of a reserve. While he may have disagreed with Liu, Yeh, and others about the *relative* size of regular forces, his views on military organization, on the role of the military in society, and on strategy and tactics were very similar to the beliefs of those who had participated in the Korean War and had faced the devastation of American firepower.

P'eng -  
Liuist  
alliance.

The Maoists probably faced the most pressing demands for Strategy Two resources from the military regional commanders of the coastal military regions, those regions which contained the bulk of China's military and industrial resources: Shenyang, Nanking, Peking, Wuhan, and Canton.

For, while the more globally oriented Maoists sought a great leap into nuclear weaponry, the regionally oriented commanders could point to *immediate* requirements for new equipment for coastal defense on the sea and in the air.

Nevertheless, the decisions of 1958-1959 must be perceived in terms of a compromise between central and regional leaders over resource allocations -- a compromise as to the pace and direction of weapons development that favored the Maoist Strategy One, would impoverish the ground forces, and would assume that an actual invasion could be handled by "people's war" if temporarily ill-equipped but modernizing border forces failed to hold the line.

The May 1958 decision to invest more heavily in a Chinese-developed, long-range nuclear weapons system thus evoked bitter opposition from some, joy from others, and confusion from most. Although the program showed progress, the roots of the controversy about it continued to sustain debate over the next twelve years.

IV. THE TECHNOLOGY OF NUCLEAR WEAPONS DEVELOPMENT:  
1958-1972 (U)

(U) The initial phase of the nuclear weapons program demanded a decision about fissionable materials. Perhaps because the Soviet Union wished to delay Chinese plans, or perhaps because China recognized that the requisite technology for delivery systems also needed further research and would require several years of testing before IOC (initial operational capability), the Chinese opted for the U-235 process. By 1959, thanks to Soviet assistance, they had completed a uranium-processing mill at Urumchi (see Fig. 1, p. 41) and a uranium-refining plant. The processing plant originally had a capacity of 1000 tons of ore per day.

(U) While research reactors were being completed in Peking, Chungking, and Sian, a missile test site was under construction with Russian assistance at Shuangch'engtzu. Also, at the infant airframe industry at Shenyang, MIG-17s and various propeller-driven aircraft were in production.

(U) Abruptly, in the summer of 1960, Soviet advisers withdrew from China. This action prompted China to review her strategic weapons planning, the more so as the disastrous economic radicalism of the Great Leap Forward had begun to have a major impact on Chinese productivity and morale. In contrast with the period between 1952 and 1958,

when the economy had enjoyed an annual growth of about 8 percent, the 1958-1961 period brought an average annual decline of 6 percent.<sup>72</sup> It was during this period also that the Maoists' efforts to minimize the damage of their economic strategy provoked Liu Shao-ch'i into defending P'eng Teh-huai, who had predicted the disaster and had criticized the Maoist penchant for sloganeering when the situation demanded practical plans and actions.

(U) Under these circumstances, it appears that the aircraft industry suffered the most in the next three years. In some cases, production stopped altogether, as did the addition of new facilities.<sup>73</sup> Plans for the production of MIG-19s were delayed by at least three years. Only the production of small transports (AN-2) continued.

(U) Yet the nuclear research program added three new facilities during this difficult time: a 25-million electron-volt cyclotron in Peking, a Walter Reed research reactor in Shanghai, and a 200-megawatt plutonium production reactor in Paotow.<sup>74</sup> (See Table 2, p. 40, for these additions.)

(U) During the same period, combined-force commanders, including Chief of General Staff Lo Jui-ch'ing, posed increasing opposition to efforts on the part of Lin Piao, the new minister of defense, to revive the authority of the commissars in the PLA. In the face of widespread economic adversity and a certain malaise of morale among civil cadres, Lin was devoting himself to the creation of *Mao's Thoughts*, the little red book that was to become the primer of devotion for so many millions of Red Guards six years later. Lin's efforts are understandable, however, when we recall that in 1961 military supplies, fuel, ammunition, etc. had reached such low levels that pilots were restricted to less than 15 hours per month of flying, and commissars and even commanders were deprived of vehicles during maneuvers.<sup>75</sup> Something had to be done to inspire confidence and a spirit of sacrifice in what amounted to a major economic depression.

(U) Although the American threat had not altered perceptibly, and air- and sea-based nuclear power still appeared as the major menace to Chinese security, a subtle shift in American perceptions was under way, thanks to the complaints of American generals such as General Maxwell

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Taylor about the American inability to respond to foreign threats by "graduated escalation." In early 1961 President Kennedy took office, with the conviction that the American armed forces must alter their doctrine and structure so as to be able to cope with wars of national liberation, especially in the Third World. While the Chinese central leaders were conscious of these new viewpoints, they did not believe that any president would be so foolish as to commit American ground forces to the Asian mainland.<sup>76</sup> The ability to wage a "people's war" was thus only partly reassuring to a country in whose threat perception the firepower of the modern U.S. Air Force and Navy loomed large.

US threat no longer growing in Asia but nation's bombing, naval, & N.

Lacking other production facilities for either aircraft or nuclear weapons, the Chinese could only turn out tanks, artillery, and small arms until the dramatic year of 1962, when external threats assumed so ominous a form as to provoke China into responding to what she evidently perceived to be a conspiracy of America, the Soviet Union, Nationalist China, and India. In quick succession, during that year, forty thousand minority tribesmen from Sinkiang migrated to the USSR; regimental and division commanders on Taiwan were closed into a single camp for a preinvasion planning conference, and Indian border patrols began very aggressive patrolling along the Sino-Indian border. The Sino-Indian war, fought on a military-logistical shoestring in the late autumn of 1962, afforded central military and civil leaders, especially Maoists, a chance to parlay tactical success into a nationwide campaign aimed at reviving confidence in the PLA's war preparedness generally and the viability of Maoist strategic planning in particular.

In one sense, it might be argued, the Sino-Indian war and its unexpected success for the Chinese in the face of Indian inaptitude and weakness shielded the Chinese nuclear weapons program from interference. For, if the war had gone badly, concerned military regional commanders might have demanded a greater share of the military budget for conventional force modernization. On the other hand, it would appear from subsequent allocations of military budgets that the war may have had the reverse effect on professional thinking; namely, that the 1962 sequence of threats had demonstrated the grave risks inherent in the 1958 decision to allocate maximum surpluses to the nuclear weapons

program. In any event, small-arms production increased dramatically in 1962, 1963, and 1964, a reflection of the Maoist Strategy One emphasis on militia defense.

Yet, in the field of artillery production, annual output was kept at a small fraction of an estimated 10,000 tube capacity, only about 500 tubes (howitzers, 85 mm, 100 mm, and 57 mm antiaircraft) were produced in 1963 and 1964.<sup>77</sup> Thus the accent remained on arming and training the militia and keeping the regular ground forces in a secondary defense role, while plans for reviving the Chinese aircraft industry continued.

(U) In 1961-1962, a gaseous diffusion plant, originally started with Soviet assistance, was completed at Lanchow (see map on p. 41). Another plutonium production reactor was completed at Paotow. The huge hydroelectric plant was opened at the Liuchia Gorges to serve the Lanchow gaseous diffusion facility, the two facilities probably costing nearly 60 percent of the total capital investment in the nuclear program prior to 1964 (see Table 2). Indeed, it is a commentary on the power of bureaucratic momentum in China as well as the relative rigidity of threat perceptions of China's central leadership during this period that they should have continued building such expensive installations so close to the Soviet border at the same time that they were preparing for a war in the Himalayas. Actually, aside from their concern about Soviet interference with minorities in Sinkiang, the Chinese had less reason to fear Soviet military aggression than American-sponsored Taiwanese and Indian aggression on two fronts. Their determination nevertheless to complete the Lanchow and Liuchia facilities suggests that they did not intend to let anything interfere with the progress of the program.

(U) Indeed, if we may credit the analyses of competent observers, the Chinese program in 1962 was no more than a year behind the 1958 plan. Predicting that the Chinese would employ the Pu239 route to develop a weapon, John Berberet argued in late 1960 that China should be able to explode a device by late 1963.<sup>78</sup> Given the fact that the U-235 process involved a longer lead-time in weapons production, it may be argued that the program had not deviated materially from its original design, in 1957-1958.

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(U) After the spring of 1963, when production at Lanchow began, 300 lb of weapon-grade U-235 could be produced annually; by 1966, production had risen to 600 lb per year.<sup>81</sup> Slightly more than a year after going into production, on October 16, 1964, the Chinese tested their first U-235 device, a 25 KT tower shot at Lop Nor, in a bomb that weighed about 3000 lb (see Table 3). At the 300-lb per-annum level of production, China would have to wait many years before she could gain a respectable inventory of weapons, for each bomb required about 40 lb of U-235.<sup>82</sup>

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U235  
prod =

(U) Still constrained by their very limited advanced conventional weapons inventory of modern aircraft, tanks, and artillery, some Chinese military leaders raised their voices in protest against the sacrifices that apparently were being made in this area for the sake of attaining self-sufficiency in the nuclear field. Perhaps to demonstrate the PLA's *ineffectiveness* in modern (especially combined-arms) warfare, Chief of General Staff Lo Jui-ch'ing called for weapons tournaments in 1964 and 1965. Later, Red Guard press statements criticized him for having done this without the prior approval of Mao and Lin Piao.<sup>83</sup> Lo's concern for war preparedness during this period of mounting tensions in Southeast Asia (1965) did indeed call for greater attention to advanced conventional weapons, especially interceptors and air-defense radars deployed southward, to prepare for the American attack that was thought to be coming. The Maoists, on the other hand, apparently were reluctant to alter force deployments which might threaten prevailing

To this end, in September 1965, Lin Piao again emphasized the power of "people's war" as the most effective defense strategy for China. Several months earlier, a second U-235 device (20-40 KT) had been dropped by a TU-4 medium bomber at Lop Nor.

(U) Did the economy constrain the further development of the nuclear weapons program? Between 1961 and 1966, thanks to administrative efforts on the part of central and provincial managers, the GNP grew at an average annual rate of about 8 percent.<sup>87</sup> While the economy was recovering from the setbacks of the Great Leap Forward, economic factors apparently had no impact on the pace and direction of the program.



(U) Needless to say, these studies did not anticipate the interference that the economy and the program were to suffer from the Cultural Revolution. Nor would Chinese economists have projected such economic setbacks during their force planning of 1965-1966.

(U) In 1966, despite the threat of Red Guard interference, three tests were made: one in May, one in October, and one in December. The third device tested reportedly weighed 7000 pounds; but its yield of 250 KT marked a major advance from the first test of Chinese technology in weight-to-yield ratio, which continued to fall throughout the next five years (see Table 3). The fourth test was missile-delivered from Shuangch'engtzu in a liquid-fueled, single-stage missile similar to the Soviet SS-4/SANDAL, with a 600 nm range. The completion of the testing facilities at Shuangch'engtzu and the fourth missile-delivered test prompted many American analysts to predict a relatively rapid deployment of MRBMs with nominal-yield warheads.<sup>90</sup>

(U) Did conflicting Chinese strategic concepts (discussed in Section III) or threat perceptions dictate the decision against immediate deployment of MRBMs with fission warheads, in favor of delaying until a thermonuclear device might be available? Or did internal conflict between Liuists and Maoists have a bearing on the decision? In May 1967, Vice-Premier Nieh Jung-chen told a meeting of the State Scientific and Technological Commission that there had been "capitalist" and "revisionist" restrictions on scientific progress.<sup>91</sup> Later, in April 1968, Chou En-lai denounced Ho Lung and Lo Jui-ch'ing for imposing "bourgeois" restrictions on nuclear weapons development.<sup>92</sup>

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\* (U) Cf. Figs. 3, 4, 5, and 6, in which Fig. 3 shows a general mix of ICBMs, IRBMs, SLBMs, and a force of TU-16 Badgers, and Figs. 4 to 6 show alternative simpler mixes.

Certainly, from a strictly "bourgeois," cost-conscious viewpoint, the decision to wait for the attainment of a thermonuclear device made more sense than an impulsive leap into an MRBM deployment. A thermonuclear device would entail only about twice the cost of a fission device, would use about the same amount of fissile material, yet would produce a hundred-fold increase in explosive power. Given the fact that an early deployment of substantial numbers of low-yield fission warheads would have been unprecedented in the history of nuclear weapons, the decision of Chinese leaders would appear to have been dictated by the logic of a compromise between Maoist versus Liuist military strategies, rather than by the appeal of "quick fix" defenses against a burgeoning threat by American military power in Southeast Asia and Soviet nuclear power to the north, or by the prospect of the propaganda victories which such quick fixes might have won for China in her contest with the USSR for credibility and leadership in the Communist world. At the same time, advocates of delay may have wished to retain a focus of threat perceptions on the United States, against which short-range weapons deployed immediately may have seemed of less deterrent value than longer-range weapons with higher yields capable of striking American industrial centers. In short, the Chinese who made this decision remained interested in a strategy of deterrence for the long run rather than warfighting in the short run.

Indeed, the possibility that the Chinese might alter what had begun to look like a firm, undeviating course toward a thermonuclear MRBM-IRBM weapons system was soon discarded, when the June 1967 test (the seventh) proved to be of a 3-megaton thermonuclear device delivered by a TU-16 (see Table 3). Thereafter it could be assumed that, whatever the original decision may have been in May 1958, the military-technological rationale of thermonuclear weapons would govern future Chinese weapons development and deployment. The immediate target of development seemed to be a liquid-fueled missile similar to the Soviet SS-5/SKEAN IRBM, with a range of 2000 nm. But what would come after that, and how fast?

After the June 1967 test, the evolution of the Chinese program posed increasingly interesting questions about the relationship among

Chinese threat perceptions, internal politics and economics (including military technology), and strategic options. American debates about an "anti-Chinese" ABM system, and public predictions by Secretary of Defense Laird and others reinforced the notion that the Chinese were on an undeviating deterrent-strategy course toward an anti-American ICBM. Certainly, the December 1967 test (which probably was a failure, yielding only about 25 KT) and the next three aerial tests (interrupted by an underground test in September 1969) were delivered by TU-16 bombers with yields of 3 megatons, suggesting that the Chinese strategy for the short run would remain one of holding American allies in Asia (within a 2000-mile range) hostage with TU-16-delivered thermonuclear bombs, pending the day when a smaller warhead suitable for a missile would be available. At the same time, activity at the Shuangch'engtzu test range implied that the Chinese were striving for the ICBM as a direct deterrent against the primary American threat at the earliest date. Their beginning in 1965 to build a huge launching system at Shuangch'engtzu convinced American observers that they would proceed to an ICBM, with the first tests likely in 1967. Instead, the Chinese dismantled the facility in 1968-1969 and started building a larger one, completed in February 1970. Rather than an ICBM, however, the Chinese launched a space satellite in April 1970, using a two- or three-stage liquid-fueled vehicle, of which the first stage was probably an IRBM.

(U) In November 1970, the Director of Defense Research and Engineering in the Office of the Secretary of Defense stated that a Chinese ICBM test could come at any time.<sup>93</sup> American expectation of a Chinese ICBM was reiterated publicly thereafter by senior civil and military leaders in the United States. China's installation of a tracking station on Zanzibar<sup>94</sup> and the trip of the Chinese space-and-missile-tracking ship Weiian Yang Hung to the Indian Ocean<sup>95</sup> further reinforced this belief.

But other developments pointed to a possible shift in Chinese military strategy and weapons development after 1967. Despite delays in the revival of the aircraft industry during the Cultural Revolution, and the actual interruption of work at several airframe factories in Szechwan and Manchuria, series production of the TU-16 in 1968 offered

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the Chinese for the first time a reliable, if obsolescing, delivery vehicle with a 2000-nm-plus range. By 1970, Secretary Laird estimated in his annual report to Congress that the Chinese already had sixty and could produce two or three more per month, thus promising a force of perhaps 120 aircraft in 1972. Beginning in 1969, the Soviet build-up on the northern border raised the serious danger of a general-purpose-force offensive, a threat to China's security unlike the threat from the United States, which was tied down in a war in Southeast Asia. The number of Soviet helicopters tripled between 1968 and 1972. Ground forces doubled during that four-year period. Many new airfields were built, and many others were extended.

(U) As the Soviet threat continued to escalate, several outbursts of combat occurred along the border, underscoring China's lack of preparedness for modern conventional battle. On the other hand, it became clear to the Chinese in 1969 and 1970 that the Americans were serious about withdrawing their ground forces from the Asian mainland.

(U) At the same time that these threat perceptions were shifting, internal political changes were under way. As early as September 1968, the imposition of an end to the Cultural Revolution brought signals from senior Chinese military leaders that a détente with the United States might be useful, and talks resumed in Warsaw in early 1969. The radicalism of Maoist analysis and administrative style was being curbed by sober military leaders and by civilian Party professionals who, upon returning, wished to rationalize and stabilize China's internal polity in the face of what they perceived to be a serious military threat abroad.

(U) Recognizing that their greatest weakness in military resources lay in a shortage of armor and artillery plus mechanized infantry, the military high command attempted to create tank traps, trenches, and other physical obstacles across the borders with Mongolia by assigning hundreds of thousands of former Red Guards to new Production and Construction Corps units. As an interim measure, along with the construction (beginning in 1969) of a network of underground shelters for passive defense against Soviet air attack, these defensive efforts

might buy time. But a decision about the utility of the 1969 inventory of nuclear weapons would have been in order.

By 1967, China had accumulated enough Pu239 from its Yumen reactor (about 450 pounds per year) to produce about 180 20-KT weapons.<sup>96</sup> Plutonium first appeared in weapons tests in December 1968. Thereafter, its availability made it a candidate for application to the situation which faced China along her northern borders. In short, in the absence of well-equipped conventional forces, plutonium offered the Chinese the technologically feasible option of shifting to ADMs (atomic demolitions), tactical nuclear weapons, and Strategy Three.

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Such a shift, however, might entail a temporary setback for the ICBM program, assuming (as did most senior American officials in 1970-1971) that the ICBM had been the priority goal for the development of delivery systems. Once again, as in 1958 and in 1965, there appeared to be a need to decide between the dictates of the immediate threat and plans for long-term weapons development.

In the 1958 and 1965 strategy debates, as we have seen, Maoist arguments for Strategy One apparently had prevailed, evidently to be implemented by Lin Piao and his followers. However, in each of those cases, there were compromises with professional advocates of the "quick fix" response to immediate threats. As pointed out earlier, these advocates were traditionalists, who had little faith in the power of "people's war" as an interim strategy against invasion and therefore preferred the offensive-defensive. Before 1965, Soviet and American threats had remained tolerable in the sphere of conventional weapons, while the American buildup in nuclear strike forces had more than justified an emphasis on the Chinese nuclear weapons R&D program. As a sop to the professionals, tank and aircraft production had received temporary priority in 1958.

But by 1965, Lo Jui-ch'ing undoubtedly reflected the viewpoint of many colleagues when he tried to place even greater emphasis on air-defense and conventional modernization for war preparedness against a perceived American *conventional* threat from the south. In his arguments in May and August 1965, Lo argued in favor of striking the "enemy in his lair" -- a thinly veiled appeal to the rationale of

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preemption, the traditionally preferred strategic defense of the professional military in China.

The buildup of Soviet ground forces and offensive air forces along the border in the summer of 1969 must have signaled to Chinese leaders that the balance of forces and options there was shifting away from the emphasis on nuclear forces. At least one (British) student of the subject has argued that Soviet generals were already convinced in mid-1969 that a Soviet nuclear attack on China might prompt a counterattack against Far Eastern cities of the USSR.<sup>97</sup>

Finally, the power of Lin Piao and his Fourth Field Army party had been seriously compromised by the events of the Cultural Revolution. While their previous following had been strongest in the Canton Military Region and in the General Rear Services, the air force, certain elements of the navy, and the General Political Department, the events of the Cultural Revolution had left these representatives of the Fourth party strewn across various military regions, their strength and influence deeply eroded in bureaucracies such as the General Political Department, the top (Maoist) leadership of which had been purged in August 1967. By the autumn of 1969, traditionalists such as Hsü Shih-yu, commander of the powerful Nanking Military Region and leader of the Third Field Army party, were purging those air force officers who had given them the most trouble in the name of Maoist ideological objectives.

During 1971-1972, arguments in the Chinese press about the importance of electronics versus heavy industry suggested that the issue of economic development had again been injected into debates over strategy. Reports of increasing attention to large-scale maneuvers, employing extensive close air support, and of the return of growing numbers of military men from civil to military functions as the new Party committees assumed office at provincial levels, underscored a shift in China's internal power balance away from the radicalism and preoccupation with ideology that had characterized the Maoist perception of means and ways during the previous decade. As if to confirm this shift, Communist bankers in Hong Kong reported in September 1971 that it was no longer fashionable to analyze issues in "right/left" terms. Instead,

the "cost/returns" approach would now be the fashion -- an admission, in effect, that Liuist systems-analytical methods had been revived (although in the name of Chairman Mao!).

(U) It was in this context of shifting styles of analysis and goal definition, a shifting internal political power distribution, and shifting threats that the Politburo met in the early summer of 1971. While reportedly studying the issue of political succession, they undoubtedly addressed the field of strategy as well, since the Bangladesh, Soviet, and American threats were then acute. Possibly based on technical plans already agreed upon on November 18, 1971 (plans that may have had their first intimation in the September 1969 25-KT underground test), the twelfth nuclear test, coming nearly a year after the eleventh, employed plutonium to yield a 20-KT blast. The January and March 1972 tests also were lower-yield tests, suggesting a renewed Chinese interest in tactical nuclear weapons. Certainly, these would be of greater interest to ground-oriented and East-Asian-region-oriented commanders than would the longer-range ICBMs. For tactical nuclear weapons might make up for weakness in conventional arms, especially artillery (which had been underproduced during the 1960s), until more armor and artillery could be brought into the inventory and the entire PLA could be upgraded with mechanized armored personnel carriers.

Needless to say, the shift of steel production for military purposes to artillery and armor might imperil development of alternative military hardware such as naval vessels. Beginning in 1962, the Chinese had manufactured destroyer escort (DE) and patrol craft and an average of one "R" class submarine per year.<sup>98</sup> They were credited with a capability of producing two per year. In 1965 one "G" class submarine was produced, possibly from Soviet-supplied components. Although the Cultural Revolution slowed down production of the fifth DE and patrol craft, production increased after 1968.

For reasons of cost, strategic threat preferences, and technology, however, it appeared that an SLBM system as a partial alternative to a large ICBM force might be delayed for several years. On cost grounds, since ICBM R&D costs had been all but paid by 1971 (while SLBM R&D was still in its infancy), and since submarines would also divert

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crucial steel from ground-force uses, the Chinese could probably produce a sizable IRBM/ICBM force after 1968 for a fraction of the costs involved in launching an armada of SLBMs. It has been estimated that a force of 50 ICBMs in hard emplacements, 100 IRBMs in soft sites, and 300 medium-range jet TU-16s would cost the Chinese about \$4.7 billion.<sup>99</sup> In contrast, 41 Polaris submarines cost the United States about \$13 billion. In terms of strategic threats, the 36 submarines available to the Chinese in 1970 provided an adequate defensive-offensive force for conventional use in Asian waters and *looked* like military power even if their noise levels might afford American and Soviet ASW technology an easy mark. To improve the technology of current Chinese submarines enough to overcome adversary ASW techniques would demand a major breakthrough in Chinese R&D. It would also involve a change in missile design and presuppose a shift in strategy in favor of a naval orientation and away from either air- or ground-force emphasis. China's problems with the technology of solid propellants in early 1973 further challenged the belief of some American analysts that an SLBM force could be operational by 1976-1977. For all these reasons, it seemed unlikely that even those in China who favored R&D in global nuclear weapons would support a shift to SLBMs in the early 1970s, although a nuclear-powered attack submarine was reported under construction in April 1971.<sup>100</sup>

(U) In mid-1972 it was still too early to be certain of the reasons for the continuing delay in China's testing of an ICBM. As far as technological capability was concerned, the March 1971 launching of China's second satellite convinced competent analysts that the Chinese could launch an ICBM at any time. Secretary Laird estimated at the time that they might already have begun reduced-range testing of the ICBM in late 1970. Predictions still called for a deployment of 10 to 25 liquid-fueled ICBMs by the mid-1970s. But it could not be denied that the shift in emphasis within the PLA to a modernizing ground force with a regional security warfighting capability (instead of a large nuclear force with a global deterrent capability) represented both a possible alternative thrust for Chinese weapons systems development and a return to the rationale of Strategy Two or Strategy Three.



V. FINDINGS

A review of the main findings of this inquiry into the relationships of external threats, internal political-economic constraints, and nuclear weapons choices in the eyes of Chinese leaders reaffirms the well-known law of technological momentum: Once started, a technological plan tends to develop a bureaucracy and therefore a life of its own, temporary compromises over threat perceptions and internal political controversy notwithstanding.

The Chinese weapons program began from a pre-1958 base of assumptions and compromises, which included belief in the utility of the Soviet model of economic and weapons development. Hence, the primary emphasis on Chinese general-purpose-force modernization under a presumed Soviet nuclear umbrella; the choice of the U-235 development route (possibly reflecting a Soviet preference for slower progress on the part of China); and installation of facilities relatively close to the friendly borders of the USSR. Certainly, the economics of uranium location, electric power requirements, and the proximity of heavy industry must also have influenced the choices of test and production centers -- both unrelated to decisions about weapons deployment. But the early assumption of Soviet friendship clearly had profound consequences for later developments.

Once the plan was agreed upon, progress in warhead development was quite phenomenal. Various senior officials in the United States have not hesitated to praise the efficiency of the Chinese administration of the program; China developed a fusion weapon within two-and-a-half years after the first explosion of a fission weapon, the shortest gap between the two tests for any of the five nuclear powers (see Table 3, p. 58).

Although the choice of delivery systems necessarily reflects the realities of technological capability (including warhead weight and yield), threat perceptions and internal political and economic constraints tend to have a greater impact in that sphere than they do in the design of warheads, where the natural tendency is toward ever smaller weights and ever greater yields. Once the Chinese R&D program

had obtained an explosive device, in October 1964, its yield-to-weight ratio began to drop dramatically. By June 1967, the efficiency of war-head design had progressed to 3 megaton yields; but the choice of mixes among alternative delivery systems had clearly not been decided, as the controversy continued over issues of internal politics and external threats.

On the one hand, deeply rooted differences between what we have called Liuist and Maoist analytical methods, goals, and means, as summarized in Table 1, imposed severe ideological constraints -- economic, political, and military -- on delivery systems choices. Maoists tended to favor an organization of military power that would enhance their chances of creating the new Communist man, an organization that would emphasize the mass mobilization and nonmilitary roles of the regular forces and the militia while developing a small nuclear weapons force for a strategy of global deterrence and deception, and would delay the evolution of a regional or even global warfighting capability (Strategy One). Liuists tended to favor an organization of military power which would enhance the internal corporate power of and loyalty to the Party as a disciplined structure with centralized control over economic and military development. Such an organization would emphasize professionalism and professional military roles geared initially to coping with regional warfighting requirements (Strategy Two).

On the central-regional and interregional axes of internal political power, however, such ideological differences were necessarily translated into more ambiguous perceptions of advantage and disadvantage, of political and economic costs and returns. For example, it seems clear that Ho Lung and his First Field Army party were captured, during the early part of the decade, by the lure of massive nuclear production and test facilities destined for that party's geographic base (Sinkiang and Lanchow military regions). Starting out with almost no military defense industry, those two regions promised eventually to be able to compete with other wealthy regions for a fair share of budgets and policy positions at the center. For similarly parochial reasons, many regional military and civil leaders would have welcomed (or opposed) the nuclear weapons program in principle.

Of greater importance to regional versus central leaders was the design of specific delivery systems. Given the tendency for regional leaders to become "centralist" and Liuist in outlook *within their own regions*, Maoists were acutely aware of the dangers of a large, modernizing standing army -- the trend under the Soviet model prior to 1958. For such an army would tend to reinforce the relative independence of the wealthier military regions, and to isolate the armed forces from the peasant masses. Should such military power be matched by additional political power (in the event of the Party's loss of control), China might again be threatened by warlordism, a phenomenon that had occurred repeatedly in past dynasties for precisely those reasons -- the simultaneous rise of a large standing army in metropolitan China and the weakening of civilian control by reason of rebellion, military coup, or other catastrophes.

On the other hand, an excessively large ICBM force entailed equally unacceptable consequences for Maoists, Liuists, and regional leaders alike. For such a force, if achieved too soon, would be undesirable from the Maoist viewpoint because it might foster an enormous military-industrial complex under absolute centralized control, a complex that could dominate the rest of the economy, especially the investment sector. Such power in the hands of a central elite would also threaten to erode the power of regional leaders, who would have to sacrifice their own plans and resources. Finally, although the Liuists might welcome central control over such a military-industrial system, it would not conform to their notions of the priority of economic development. Indeed, it would probably preclude their creating a force whose more immediately important mission, in 1958, was to attain an East Asian regional war-fighting capability.

In pursuit of this last goal, some Liuists and regional commanders might have been expected to opt for the earliest acquisition of *tactical* nuclear weapons plus an abundance of mechanized, armored, artillery and air-defense forces, all designed to emulate the Soviet model while enhancing the regional power of the recipients (Strategy Three). In short, many regional leaders would probably have been satisfied to join the global nuclear club with tactical weapons *after* their regular forces had been thoroughly modernized for either internal security or border defense.

The compromise strategy and delivery system development program which evolved in the 1960s reflected a mixture of these interests and preferences. According to Mao's own views (he once was reported as saying that the Chinese only needed about 20 ICBMs), a small nuclear elite force would be adequate for purposes of China's participation in the global game of great-power deterrence and political deception; but such a force would have to be a homemade product, totally divorced from Soviet control or influence. While this force was under development, especially in the early R&D phase, certain elements of the regional warfighting force posture would be favored. Because Mao personally seemed to have little concern about the American threat on the ground, he stressed modernization of air defense and naval coast defense, a priority effort likely to be welcomed by commanders of coastal military regions. For ground defense, the militia and a relatively impoverished ground force could employ "people's war," should an invasion occur.

Such a combination of primitive and modern force postures and strategies might satisfy no one completely, but it would at least ensure that Mao's primary desire for a relatively weak regular army, with the internal role of a great "school of revolution," would not be thwarted by excessive modernization and specialization. Furthermore, Mao could argue that available technology did not permit a better combination of resources.

Between 1958 and 1966, such a mixture of externally oriented modern and internally oriented primitive forces provided for a strategy of global deterrence and deception matched by a very limited defensive warfighting capability around China's borders. At various periods, that strategy would evoke eloquent and sometimes startling outbursts of opposition from leaders who felt that the mix was too risky for China's immediate security, even though it might satisfy long-term Maoist ideological objectives at home and abroad. Lo Jui-ch'ing's opposition to the strategy has been discussed in Section III. The Soviet Union's opposition to and divergence from the strategy is outlined in the same Section, including its principal fear that Mao's reliance on the bluff of low-cost wars of liberation to create buffer

zones around China's borders might escalate into a general war involving nuclear weapons.

In late 1966 or early in 1967, the forces of internal opposition, and shifts in both technology and external threats, combined to demand a new look at a program that had survived nearly a decade without significant change, although it had suffered serious interruptions due to the withdrawal of Soviet advisers and to economic setbacks. In early 1967, border defense regional commanders and their representatives on the Central Committee's Military Affairs Committee began a steady stream of statements on the theme of war preparedness as a justification for postponing the Cultural Revolution in their regions. Chou En-lai expressed constant concern for the impact of the GPCR on industrial productivity. As if to sustain these internal efforts to subdue the instability then rampant in China, the USSR had been increasing both its general-purpose and its strategic forces along the northern border since 1965. By 1967, central and regional commanders were warning Maoists that the Soviet threat was indeed serious. Simultaneously, it was announced that the original raison d'être of nuclear forces, the American military threat, was to be withdrawn from Japan and Okinawa. Finally, Chinese advances in warhead technology had produced a plutonium device offering the possibility of shifting the program to tactical nuclear weapons.

As a result, Chou En-lai could have marshaled persuasive arguments for altering the mixture of weapons systems and strategies that had prevailed until 1966. By mid-1968, his advocacy of a combination of medium-range bombers and more rapidly modernizing general-purpose forces would have reassured many opponents of the strongly Maoist orientation, for it could have served the multiple purposes of countering the growing Russian threat, which was increasingly an offensive, general-purpose-force military posture; reaching a temporary détente with the United States; relieving the depressed Chinese economy of further development, and especially maintenance, costs for an ICBM program; and placating internal regional leaders, who must have felt inadequately supplied to cope with either an American or a Soviet conventional invasion.

Between 1968 and 1971, it would appear that trends did undergo a subtle alteration, with greater emphasis on low-yield tests, unprecedented combined-arms maneuvers with close air support, a return to Liuist (now Chouist) specialization and professionalization, and a focus on East Asian regional security and warfighting, all reminiscent of the pre-1958 perception of priority threats and "correct" internal administrative style.

While these developments were under way, however, expenditures on nuclear warheads and space program delivery systems nevertheless appear to have continued at high levels. That a final decision on a new strategic mixture of weapons had not been reached by mid-1972 may be deduced from the continuing internal power struggle in Peking and the regions, a struggle which remained so acute that the regime could not hold its National Day celebrations in October 1971, nor its May Day or Party Birthday celebrations in May and July 1972. Indeed, it seems likely that the purge of Lin Piao in the autumn of 1971 was associated with the nuclear weapons issue as well as with many other issues in contention. That Lin had sponsored and guided the evolution of the Maoist program from 1959 to 1971 is beyond doubt. What remains speculative is the particular aspect of that program over which Chou En-lai and Lin Piao disagreed.

As long as regional military commanders remain as powerful as they had become by 1968, it is possible that the ICBM program will suffer a slowdown while combined-arms improvements receive greater attention. The emphasis on air defense is likely to remain high. In brief, we should not be surprised if a shift in emphasis in strategic planning and threat perceptions, both external and internal, were to result in a revived concern for ground-force modernization, an increase in armor and artillery production, and a focus on tactical nuclear weapons together with a sustained emphasis on production and deployment of IRBMs instead of ICBMs. Should such a program reverse the trend of the past decade, the Chinese intercontinental threat would wane until a time when another round of debate might once again shift the focus of China's high command from Asian regional concerns to more distant military threats.

NOTES

1. For two studies on the transfer of military technology to general economic development, see Daniel L. Spencer, "Military Transfer of Technology," Howard University, Washington, D.C., 1967; and "Effects of National Defense on Developing Economies," Center for International Studies, Massachusetts Institute of Technology, Cambridge, June 1968.
2. See James W. Barnett, "What Price China's Bomb?" *Military Review*, Vol. 47, August 1967, pp. 16-23.
3. Chinese military and political factions are analyzed in a forthcoming study by William W. Whitson, *Chinese Military and Political Leaders and the Distribution of Power in China, 1956-1971*, The Rand Corporation, R-1091-DOS/ARPA, 1973.
4. An analysis of Chinese threat perceptions will be published in a forthcoming study by William W. Whitson, *China's Internal Politics, External Threats, and Allocations of Military versus Propaganda Resources, 1965 to 1971*, The Rand Corporation, R-1090-ARPA, 1973.
5. See Alice L. Hsieh, *Communist China's Strategy in the Nuclear Era*, Prentice-Hall, Englewood Cliffs, N.J., 1962, p. 111.
6. The differences in analytical methods between Liu Shao-ch'i and Mao are perceptively analyzed by Gordon White in an unpublished paper entitled "A Comparison of the Generational Codes of Mao Tse-tung and Liu Shao-ch'i," prepared by him while a student of Professor A. L. George, Stanford University, in 1969.
7. See Stuart Schram, "Mao Tse-tung and Liu Shao-ch'i, 1939-1969," *Asian Survey*, Vol. 12, No. 4, April 1972, p. 286.
8. See Mao Tse-tung, "Sixty Articles on Work Methods," January 1958, translated in part in the *China Quarterly*, No. 46, 1971, pp. 228-229.
9. For an excellent analysis of Mao's economic goals, see Dwight H. Perkins, "Mao Tse-tung's Goals and China's Economic Performance," *Current Scene*, January 7, 1971, pp. 8-11.
10. A discussion of "field-army parties" will be found in Whitson, *Chinese Military and Political Leaders*.
11. Speech delivered to the second session of the First National People's Congress, July 21, 1955, in *Current Background*, No. 347, August 23, 1955, p. 27.

12. Speech delivered to the second session of the First National People's Congress, July 27, 1955, *ibid.*, pp. 29-30.
13. See Mao Tse-tung, *On the Protracted War*, Foreign Languages Press, Peking, 1954, pp. 16-22.
14. See "Report on the Draft Military Service Law," a speech given at the second session of the First National People's Congress, July 16, 1955, in *Current Background*, No. 337, July 20, 1955, pp. 3-4.
15. See Liu Shao-ch'i, "Political Report to the Eighth CCP Congress," 1956, Supplement to *People's China*, October 1, 1956, p. 1.
16. Edgar Snow, "Interview with Mao," *The New Republic*, February 27, 1964, p. 17.
17. Cf. Mao Tse-tung's statement, "To be attacked by the enemy is not a bad but a good thing," Mao Tse-tung, *Selected Military Writings*, Foreign Languages Press, Peking, 1963 (hereafter cited as *SMW*), pp. 130-131.
18. See Liu's speech to the Peking Institute of Geology in May 1957, cited in *Collected Works of Liu Shao-ch'i*, Vol. 2, pp. 417-426.
19. Quoted in Schram, "Mao Tse-tung and Liu Shao-ch'i," *op. cit.*, p. 289.
20. *Ibid.*
21. *Ibid.*, p. 291.
22. According to Edgar Snow, Mao had decided by January 1965 that Liu would have to be dismissed because of differences with Mao over substantive policy and administrative style.
23. Quoted in Schram, p. 282.
24. See Liu Shao-ch'i, "On the Intra-Party Struggle," in Boyd Compton, *Mao's China: Party Reform Documents, 1942-44*, pp. 188-192.
25. Liu Shao-ch'i, "The Class Character of Man," in *How To Be a Good Communist*, 1st ed., Foreign Languages Press, Peking, 1951, pp. 118-119.
26. See Liu Shao-ch'i, "Political Report to the Eighth CCP Congress," Supplement to *People's China*, October 1, 1956, p. 1.
27. "The Origin of Machine Guns and Mortars," in *Chinese Law and Government*, IASP, Winter 1968-69, Vol. 1, No. 4, p. 73.



28. For a useful recent survey of Maoist strategic thought, see Ralph L. Powell, "Maoist Military Doctrines," *Asian Survey*, Vol. 8, No. 4, April 1968, pp. 239-263. See also A. L. Hsieh, *Communist China's Military Policies, Doctrine, and Strategy: A Lecture Presented at the Japanese National Defense College, Tokyo, September 17, 1968*, The Rand Corporation, P-3960, October 1968; and S. M. Chiu, *Chinese Communist Revolutionary Strategy, 1945-49*, Center of International Studies, Research Monograph No. 13, Princeton, N.J., 1961.
29. For Mao's 1938 comments on the limited usefulness of Russian experience and the need for greater intellectual flexibility in formulating strategy, see *SMW*, pp. 79 and 80.
30. Mao has persisted in this classification of military thought: "Strategy" is the study of the laws of war as a whole; "campaigns" are the study of "theater operations"; and "tactics" are the study of battles. See *ibid.*, p. 81.
31. See *ibid.*, pp. 95-98, for these views. They are repeated in succeeding lectures and articles.
32. *Ibid.*, pp. 99-102. By November 1938, Mao had occasion to emphasize a third stage: the stalemate, which divided the enemy attack from the Red Army counterattack.
33. *Ibid.*, p. 107.
34. *Ibid.*, pp. 109-111.
35. *Ibid.*, p. 114. Mao cautioned that a specific geographical location for the terminal point could not be fixed.
36. *Ibid.*, pp. 116-119.
37. See *ibid.*, pp. 122-130, for Mao's analysis of the five encirclement campaigns in Kiangsi.
38. *Ibid.*, p. 154.
39. *Ibid.*, p. 141.
40. *Ibid.*, pp. 153 and 159. In his November 1938 speech to the Sixth Plenum of the Sixth Central Committee, Mao contradicted himself, stating first (*SMW*, p. 277) that guerrilla warfare should be primary during the first phase (the strategic withdrawal and the stalemate), and later (p. 279) that it was primary only during the stalemate phase.
41. *Ibid.*, p. 142.

42. Interviews with Chang Kuo-t'ao in Hong Kong, 1968.
43. See Mao, *SMW*, pp. 161-164. It should be noted that one informant told the author that, when he visited Yen-an in the summer of 1937, Yeh Chien-ying, an old friend, had said, "We are finally bringing the old man around to our viewpoint."
44. See *ibid.*, p. 164, for Mao's concern with the "forms" of regular versus guerrilla warfare.
45. *Ibid.*, p. 165.
46. *Ibid.*, pp. 167-172.
47. *Ibid.*, p. 175.
48. See Powell, "Maoist Military Doctrines," *op. cit.*, pp. 243ff., for a useful survey of recent Maoist statements.
49. See Mao, *SMW*, pp. 109, 112, and 134.
50. *Ibid.*, p. 143.
51. For his use of this phrase in an excellent study drawing contrasts between Chinese and Viet Minh revolutionary strategy, see Chalmers Johnson, "The Third Generation of Guerrilla Warfare," *Asian Survey*, Vol. 8, No. 6, June 1968, p. 441.
52. See Mao, *SMW*, pp. 277-278.
53. *Ibid.*, pp. 349-350.
54. For a more extensive listing of Chinese elite objectives, both internal and external, see Whitson's forthcoming *China's Internal Politics*, R-1090-ARPA.
55. See *The New York Times*, October 17, 1964.
56. *Ibid.*
57. See "Statement of the Chinese Government, July 31, 1963," *People's Daily*, July 31, 1963.
58. Defense Intelligence Agency (DIA), *Military Production in Communist China* (U), July 1968, Washington, D.C. (Secret), pp. 50ff.
59. See Hsieh, *Communist China's Strategy*, pp. 154ff., for a discussion of this period of cooling Soviet support for the Chinese program.
60. See "Soviet Government Statement, September 20, 1963," *Pravda*, September 21, 1963.

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61. See *People's Daily*, August 2, 1958.
62. See *Survey of China Mainland Press (SCMP)*, No. 1736, March 21, 1958, p. 2.
63. For P'eng Teh-huai's summary report of this conference, see *SCMP*, No. 1822, July 30, 1958, p. 1.
64. For P'eng Teh-huai's later (July 1959) criticism of Maoist economic errors during the Great Leap, see *The Case of P'eng Teh-huai, 1959-68*, Union Research Institute, Hong Kong, 1968, pp. 1-15.
65. For an excellent account of the dilemma confronting central leaders in their search for surpluses after the 1960 withdrawal of Soviet aid, see Audrey Donnithorne, "The Internal Development and External Relations of China with Special Reference to the Future of Sino-Soviet Relations," *Australian Outlook*, Vol. 23, No. 2, August 1969, pp. 144-157.
66. See Leonard Beaton and John Maddox, *The Spread of Nuclear Weapons*, Praeger Publishers, New York, 1962, p. 123.
67. It has been estimated that the three gaseous diffusion plants in the United States, if operated at full capacity, would annually consume more than 52 billion KWH, approximately the total electricity consumption of Australia in 1970. (See *The Military Balance, 1970-71*, Institute of Strategic Studies, London, 1970, p. 123.)
68. See DIA, *Military Production*, p. 37.
69. For an excellent early study of Chinese missile options, see Deane N. Morris, *Technical Aspects of Possible Chinese Medium-Range Ballistic Missiles (U)*, The Rand Corporation, RM-3356-PR, January 1963.
70. Ibid.
71. See, for example, Hsieh, *Communist China's Strategy*, p. 38.
72. See Edwin F. Jones, "Cultural Revolution: In Search of a Maoist Model," in *People's Republic of China: An Economic Assessment*, A Compendium of Papers Submitted to the Joint Economic Committee, Congress of the United States, May 18, 1972, U.S. Government Printing Office, Washington, D.C., 1972, p. 52.
73. See Harriett E. Porch, *A Look at the Aviation Strength of China (U)*, The Rand Corporation, RM-5723-ISA, May 1969 (Secret/PI/NOFORN), p. 61.
74. See Barnett, in *Military Review*, August 1967, p. 20.

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75. For candid descriptions of low morale in the PLA at this time see Chester Cheng, *The Politics of the Chinese Red Army*, The Hoover Institution on War, Revolution and Peace, Stanford, California, 1966.
76. Evolving Chinese perceptions of external threats will be discussed in the author's forthcoming R-1090-ARPA.
77. See DIA, *Military Production*, pp. 19-22.
78. See John A. Berberet, *Science and Technology in Communist China*, General Electric Co., RM 60 TMP-72, Santa Barbara, Cal., December 1960, p. 123.
79. See *Military Production*, pp. 39-41.
80. See C. A. Nable, "Chicom Metallurgy Technology" (U), in *Chicom Metals Production*, Foreign Technology Division, Air Force Systems Command, FTD-TA-64-43, November 1964 (Secret), pp. 5-6.
81. For this information and an unclassified version of Table 3, see Charles E. Murphy, "Mainland China's Evolving Nuclear Deterrent," *Bulletin of the Atomic Scientists*, January 1972, p. 29. >
82. Ibid.
83. For an effective analysis of the strategy debates in China in 1964-65, see Harry Harding and Melvin Gurtov, *The Purge of Lo Jui-Ch'ing: The Politics of Chinese Strategic Planning*, The Rand Corporation, R-548-PR, February 1971.
84. DIA, *Military Production*, p. 39.
85. Ibid., p. 47.
86. Ibid., p. 19.
87. See Jones, "Cultural Revolution," op. cit.
88. For three of the most widely used studies of economic constraints on Chinese weapons development, see: Stanford Research Institute (SRI), *NINE-X Deployment Study (DEPEX): Report to the Secretary of Defense* (U), Appendix, Vol. 1, Office of the Deputy Chief of Staff for Military Operations, Department of the Army, October 1, 1965 (Secret Restricted Data); SRI, *Alternative Communist China Threat Postures and Annual Costs, 1967-1985* (U). Technical Report No. 5205-15, 1965 (Secret Restricted Data); *Chinese Reaction Study, Summary Report* (U), also known as "The Montgomery Study," Office of the Secretary of Defense Study Group, August 10, 1967 (Secret Restricted Data). }

89. (U) I am indebted to D. E. Emerson of The Rand Corporation for his 1968 survey of the foregoing studies and for making Figs. 2 to 6 available. The dotted line in Figs. 3, 4, 5, and 6 show the projection of a Rand JOSS program, which conforms closely to the SRI projection. Figures 3 to 6 show a level of feasible military expenditures for nuclear weapons only, approximately 5 to 12 billion yuan less than the shaded area in Fig. 2.
90. (U) See Murphy, *Bulletin of the Atomic Scientists*, p. 31, for American intelligence community predictions that Chinese 1000 nm MRBM deployments would begin in 1967-68 and would attain a force posture of 80 to 100 missiles by the mid-1970s.
91. (U) See SCMP No. 4011, August 29, 1967, pp. 7-9.
92. (U) See SCMP No. 4218, July 16, 1968, pp. 1-3.
93. (U) Murphy, *Bulletin of the Atomic Scientists*, p. 32.
94. (U) See F. S. Hoffman, "Chinese Trying To Get Ceylon Port Facilities," *The Washington Star*, March 20, 1971.
95. (U) Ibid.
96. (U) Murphy, *Bulletin of the Atomic Scientists*, p. 29.
97. (U) Interview with Professor John Erickson, who discussed the Sino-Soviet border situation with Soviet generals in late 1970.
98. (U) *Military Production*, p. 26.
99. (U) Murphy, *Bulletin of the Atomic Scientists*, p. 33. Assuming that a Chinese submarine had 16 SLBMs, each SLBM would cost approximately \$20 million, or twice the average unit cost of each of 450 ICBM/IRBM/TU-16s.