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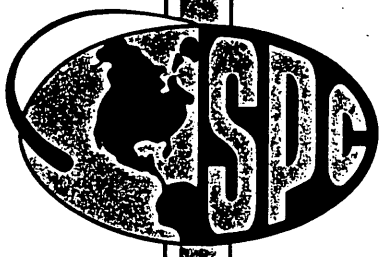

SYSTEM PLANNING CORPORATION

CHINESE PERCEPTIONS OF THE SOVIET-AMERICAN MILITARY BALANCE

FINAL REPORT

SPC 534

FILE COPY

March 1980

M. Pillsbury

#835

Prepared for
OSD/Net Assessment
The Pentagon
Washington, D.C. 20301

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INTRODUCTION AND SUMMARY

Since 1968, the Chinese government has put forward an interpretation of the Soviet-American worldwide competition which seems to have no counterpart in the United States or elsewhere in the world. The origin of this Chinese interpretation of the nature of Soviet-American relations is shrouded in mystery, but it apparently developed in response to events in late 1968 such as the Soviet invasion of Czechoslovakia and the United States abandonment of a declared policy of nuclear superiority over the Soviet Union and announcement of nuclear "parity" or "sufficiency" during and after the Presidential election of 1968.

The main components of this Chinese view are that (1) the two superpowers, the United States and Soviet Union, are each seeking military superiority over the other, (2) neither is able to attain this military superiority, (3) a stable balance of power is therefore not possible, (4) an arms race is under way which cannot be controlled, (5) the Soviet Union is the main source of a world war for which it is now preparing, (6) this coming world war may be postponed, perhaps indefinitely, by a number of measures aimed at restraining the Soviet Union, (7) if these measures fail, the inevitable world war will arouse the world's people to rise in revolution with the result that the United States and the Soviet Union will suffer "inevitable doom," followed by a "worldwide victory for socialism." The Chinese further assert that they will survive this world war, even if it is a nuclear war, partly because of the defensive power of China's militia combined with China's vast size and numerous cities. Finally, the Chinese assert that policies they call "appeasement" of the Soviet Union will hasten or expedite the outbreak of a world war.

How should we interpret these Chinese assertions? Should they be taken at face value? Do all Chinese leaders believe them? What are the

consequences of these assertions for American security interests? This report is the first--and therefore tentative--effort to examine these questions.

Some attention has been devoted to comparisons of Chinese and Soviet perceptions because American defense specialists may be more familiar with Soviet attitudes, especially with the Soviet concept of the "correlation of forces." As will be seen, however, Chinese concepts of military net assessment and their analysis of the contemporary world situation differ significantly from the Soviets'. Americans familiar with Soviet doctrinal writings about the correlation of forces, Soviet quantitative aids to military decisionmaking, and the so-called "cybernetic revolution" in military affairs will search in vain for Chinese versions of these concepts.

In fact, the Chinese approach to problems of war and national strategy has struck many--Americans and Russians alike--as so bizarre that some observers cannot resist strong sarcasm, exasperation, or the thought that "the Chinese must be liars" when reviewing Chinese commentary on the contemporary strategic situation. Chinese officials do indeed seem to be telling a "fairy tale" when they describe, for example, their view of how Soviet and American imperialism will not survive the next, inevitable world war, but that China will prosper and the future will be infinitely bright--unless there is a macabre play on the word "bright."

This study takes the Chinese at their word. It assumes that the version of the world they describe in their publications for the outside world and the way they talk to foreign visitors about strategic affairs bear a strong resemblance to the way they talk among themselves. There is fairly persuasive evidence of this from numerous internal Chinese government and party documents that have reached the West in the past decade. So, one can reply to the cynical, sarcastic observers that if the Chinese are liars they are liars to themselves as well. In effect, then, visitors to China ignore the premises of the Chinese strategic "fairy tale" at their peril. As sensitive an observer of the Chinese as Secretary of State Cyrus Vance is, he may have been surprised after his August 1977 visit when Vice Premier Deng Xiao-ping told a press conference of American publishers and editors in Peking that

"we" did not believe Secretary Vance when he claimed that the United States still had some measure of military superiority over the U.S.S.R. It is possible that the adverse press commentary that followed this Chinese challenge to Secretary Vance's credibility on the Soviet-American military balance could have been avoided if the American official party had handled the discussion of military affairs differently, perhaps more in tune with Chinese premises about strategic realities, while still presenting the same American facts and interpretations. This study is designed to examine precisely the types of strategic and defense issues that are understood quite differently by Chinese and American officials so that unnecessary misunderstandings can be reduced in the future and areas can be highlighted in which each side may have something to learn from the other.

As a guide to efficient use of this study, the following list of key findings provides references to the pages in the text where the issues are addressed more fully.

1. Chinese perceptions of the U.S.-U.S.S.R. military balance are very important. It is valuable to have the Chinese continue to portray us as roughly equal to the Soviets. A joint Sino-Soviet propaganda campaign denigrating American power would be detrimental to our image abroad. (See pp. 11-15.)

2. Chinese "perceptions" of the balance are really policy positions decided by the Chinese leadership and conveyed in precise, disciplined phrases. These perceptions or policy positions have shifted over the past decade, but it is difficult to know why. Until about 1968-71, China accused the U.S. and U.S.S.R. of forming a "monstrous anti-China nuclear conspiracy." This phrase never reappeared, and new phrases describing U.S.-U.S.S.R. "contending" and "fierce struggle" continue to be used. (See pp. 14, 45.)

3. Four more recent changes in Chinese perceptions were the mellowing of their opposition to SALT (now called insignificant rather than a dangerous fraud), the portrayal of the U.S.S.R. as more ambitious and adventurous than the U.S. in the struggle for superiority, the suggestion that certain measures can postpone the outbreak of a new world war between the U.S. and U.S.S.R.

which had earlier been called inevitable and coming soon, and a shift from a forecast that Soviet-American rivalry will be the cause of world war to the statement that the Soviets will be "the main source" of war. (See pp. 13-14.)

4. Going beyond these Chinese comments is difficult. Their strategic writings are unavailable, few of their strategic intellectuals are known in the West, and they have debated military strategy in bizarre historical allegories--all of which provide few opportunities for Western defense intellectuals to learn Chinese interpretations. (See pp. 16-18.)

5. Some Chinese views of the Soviet Union and the United States please American "hard-line" or "hawk" analysts: The U.S. practice of "appeasement" of the U.S.S.R., the Soviets as singleminded seekers of military superiority, the need to heighten vigilance against Soviet adventurism, opposition to technology transfer to the U.S.S.R. that amount to "feeding the Polar Bear chocolates," the need for civil defense and militia preparations, and the view of Western Europe as a target for Soviet intimidation by military build-up combined with a "detente" to lull the West into complacency about defense spending. (See pp. 18-20.)

6. Yet American "doves" will also find points in common with the Chinese: a suspicion that the U.S. is seeking military superiority in a wasteful arms race with the Soviets, insignificant efforts to control the arms race, the need to reallocate defense spending to international assistance programs for the less developed nations, the need to reduce conventional weapons expenditures and arms sales, and the view that military power is not as important as economic, social, and ethnic factors in determining national strength. (See pp. 20-21.)

7. Chinese crisis behavior, official statements, and defense programs suggest a view of deterrence different from both the U.S. and U.S.S.R. What is not contained in Chinese deterrence concepts is any automatic link between the balance of forces and the prevention of war. Small countries can deter and even defeat larger countries under certain circumstances. No level of assured destruction of an enemy's population and industry can assuredly deter him; his forces must be defeated on the ground. Hence, a

sizable share of Chinese strategic forces seem to be located deep inside China to be used only against invaders on Chinese soil, unlike Soviet or American practice. (See pp. 22-25.)

8. The Chinese deterrence concept assigns greater weight to emotional or psychological factors, stressing that a wide range of actions not limited to military power can deter aggression. The potential adversary must be agitated and upset rather than kept calm and stable during a crisis. Manipulation of the emotions of enemy leaders must play a key role in deterrence, not rational calculations alone. For example, in 1969 during the Sino-Soviet border clashes, Mao warned publicly "we must not show the slightest timidity before a wild beast" and undertook active defense measures to "agitate" the Soviets in a controlled fashion, stopping short of measures that would telegraph preparation of an offensive initiative. Paradoxically, failure to undertake this wider range of deterrent actions may cause a military superior side to fall victim to aggression. (See pp. 26-28.)

9. The Chinese do not advocate gratuitous provocation of the Soviet Union. They maintain trade ties and correct relations themselves, and advise the U.S. to do so as well. They do not advocate Soviet-American friction for its own sake. Rather, they urge that all nations respond appropriately to specific Soviet challenges by "giving tit for tat" and "upsetting its global strategic dispositions." These phrases constitute part of the Chinese prescription for avoiding world war, combined with calls to increase defense spending in Europe and Japan, and to constantly "expose" appeasement policies toward the U.S.S.R. by which is meant "settling for ease and comfort at the expense of principles." They attack those "who indulge in a false sense of security and deny the existence of a serious danger of war." (See pp. 28-31.)

10. The Chinese image of nuclear war focuses on factors that will operate after a nuclear exchange rather than on the state of the strategic balance before it begins. They seem to envision only a limited Soviet-American exchange rather than a spasm war exhausting all the weapons of both sides. Given this assumption of a survivable, somewhat limited nuclear exchange, the Chinese stress that four factors will shape the post-war world: the relative capabilities for protracted land warfare, especially the survival

of power projection forces, the organization and morale of the surviving militia and civilian defense, the degree of allied cooperation available in the post-war world, and skepticism about the actual degree of devastation that nuclear weapons would cause before the war terminated. These factors lead the Chinese to focus on their own need to maintain command and control of "hardened" conventional forces after a nuclear exchange and the need to prepare for protracted mobilization of the economy from regional headquarters. A rare public statement by China's Defense Minister in mid-1978 pointed out: "Active defense and luring the enemy troops in deep are the basic principles of our strategy.... We firmly believe that through long and arduous struggles we can gradually change the balance of forces between ourselves and the enemy, switch over to the strategic counter-offensive and win final victory." They probably project this approach on to the Soviet-American balance. (See pp. 32-35.)

11. Chinese criteria for assessing the Soviet-American balance of power are dependent on both their assessment of the nature of the post-nuclear war world and on their judgment that deterrence must be based as much on the psychological/emotional state of the adversary as on his rational calculation of the military balance. The Chinese have asked somewhat unusual questions about American military forces from time to time that make sense in this context. They have shown concern about the volunteer army, especially the morale of black volunteers in the land combat forces, perhaps reflecting their own concern with their minorities and a traditional infantry focus on morale seldom considered in American assessments of strategic nuclear forces. Similar concern has been expressed about the vulnerability of American sea lines of communication and the capacity of the Soviet navy to deny resources to the West, as well as the low priority Americans, Europeans, and Japanese give to civil defense and mobilization arrangements necessary for protracted warfare and the relatively low level of allied military cooperation, especially between U.S. and Japanese military forces. In sum, whether because of their unrevised Marxist-Leninist ideology, or the influence of Soviet advisers during their close cooperation with Soviet forces in the 1950s, or the continuing effect of traditional Chinese military thinking, China's leaders seem to take very seriously Soviet military

doctrinal claims about the possibility of winning something that could meaningfully be called victory in a Soviet-American nuclear exchange. This might well leave China alone to face a ruthless Polar Bear without an offsetting counterweight from a crippled United States. Such thinking may be reinforced by the personal experiences the Chinese leadership gained in four decades of protracted revolutionary warfare in which factors like morale, organization, militia, allied assistance, and superior "psychological" strategy were decisive in bringing these gentlemen to the positions they occupy today. One Chinese official told me in Peking that during their protracted war against Japan they had hoped for American assistance, but that morale would have collapsed if their forces had been psychologically dependent on receiving American supplies. (See pp. 36-42.)

12. In line with their concept of psychologically-based deterrence, the Chinese have been disseminating and popularizing an image of the Soviet Union as economically weak, socially divided, and beset with internal troubles including ethnic friction and the corrosive effects of Western music and jeans. They have told visitors that the U.S. PRM-10 study underestimated Soviet vulnerabilities and weaknesses. Such jabs at the Soviets suggest that the ultimate target of the Chinese is more the emotions than the rational calculations of the Soviet leaders who the Chinese say "bully the weak and fear the strong." This view contrasts with the view of those who seek to reassure a possibly "paranoid" Soviet leadership that they can trust the West and should participate in normal international life. Instead of reassuring the Soviets, the Chinese say that Moscow must be "tamed" whenever it misbehaves to dissuade it from increasing belligerence. The Chinese have mocked the argument that the Soviets may have a "defensive complex" because of invasions by Napoleon, Hitler, and the West. They do not excuse the Soviet military build-up as the result of bureaucratic inertia. They portray the Soviets as old-fashioned imperialists who need overseas markets and foreign resources. (See pp. 43-47.)

13. The Chinese at times seem to be suggesting a fundamentally different model of man than that which has dominated informed Western thinking about deterrence and defense. The frequent use of animal metaphors by the Chinese

to describe international life suggested that a review of new findings in biology might shed light on this implied Chinese model of man. Recent research did indeed suggest that a number of phenomena to which the Chinese leaders devote more attention than their Western counterparts may be at work in the area of strategic perceptions. Other recent findings in brain research also suggest that human brains may well function in a fashion closer to the Chinese version of strategic reality than conventional Western notions. Some implications for U.S. defense programs are spelled out in the final section. (See pp. 47-60.)

14. A classified briefing to provide supplementary evidence for this study is available upon request through appropriate channels.

I. HOW MUCH SHOULD CHINESE PERCEPTIONS MATTER TO THE UNITED STATES?

As a general principle, the United States would certainly prefer to have all other nations think well of it and to perceive American power as at least equivalent to that of our major rival, the Soviet Union. Nevertheless, some nations' perceptions of us are certainly more significant than others. It is clearly more important that the Soviet Union respect our national power than African nations or smaller nations in Asia and Latin America. Moreover, the way in which our major rival treats us and responds to our actions in the world is observed carefully by many third world countries. Thus, one could make a strong case that as long as the Soviet Union respects American power and openly portrays the United States as an equal power, then all other nations of the world will tend to go along with this Soviet perception. In other words, one answer to the question "How much should Chinese perceptions matter to us?" is that Peking's perceptions matter more than most nations but less than those of the Soviet Union. Some might want to include West Germany, Great Britain, France, and possibly Japan at the head of the list as higher priority "targets" for favorable perceptions of U.S. military strength. Others would argue that the Chinese not only tie down more Soviet forces than many nations with which we are allied, but also that the spectre of a Chinese-Russian rapprochement is so dangerous that much greater attention is due proportionally to what the Chinese think about the United States.

If it is safe to assume that Chinese perceptions of Soviet perceptions of American strength are an important determining factor in the way the Chinese assess us, then it would follow naturally that we should understand how the Chinese understand the Soviet Union. In reality, however, this tends to be even more difficult than understanding how the Chinese perceive us. The problem simply runs in a logical circle with no escape.

Assuming that some nations' perceptions of the United States matter more than others leads us to an interesting question. How should we choose a set of criteria by which to rank order the priority of importance to us of various national audiences of the world? One set of criteria could be the net contribution of a nation to our own national military or economic strength. A second set of criteria, not necessarily mutually exclusive with the first set, would be simply to list our friends and allies in order of importance to us, and try to "please them" more than other nations. A third possibility would be to rank order all nations on a scale of the perceived threat to our own interests in the future, whether in terms of their intentions toward us or their capabilities to harm us. We would then be most concerned about those countries' perceptions of us who could do us the most harm. The point here is that on any of these lists, according to several different sets of criteria, the People's Republic of China would rank high as a nation whose perceptions of our national strength matter.

There is yet a fourth set of criteria along which to rank importance of perceptions to our own security interests, namely the degree to which our own actions and statements can actually affect the perceptions of a foreign leadership. In other words, there may be some nations whose ideological rigidity or other cultural or historical differences from us make it impossible for them to ever change their perceptions of the United States' basic intentions, or military strength. The strategic perceptions of those predisposed to see us in a fixed way would hardly be affected by major changes in either our military programs or our public policies. From time to time we may concern ourselves with their perceptions of us, but there is little if anything we could do about their perceptions, except worry. At the other extreme of this hypothetical spectrum, we might imagine a national leadership which was very easy to influence to change basic premises about our national strength or other aspects of our behavior in the international arena. A nation whose view of us was malleable would invite our attention and concern if only because with a little bit of effort we could improve or enhance the positive aspects of our image, at least for a period of time.

A number of examples suggest that although China has frequently protrayed the United States in a rigid ideological fashion, it has sometimes moderated these statements over time in response to changing events. For example, a familiar Chinese refrain for almost eleven years has been the charge that the two superpowers are contending for military superiority in a wild arms race. More recently, the Chinese have slightly modified these charges to describe the Soviets as more ambitious, or adventurous, and offensive in their scramble for superiority in contrast to a defensive and cautious United States. Indeed, the Chinese have taken to chiding the American government for its failures to actively contend with the Soviet Union, such as the delay in the manufacture and deployment of the neutron bomb in 1978, which was widely criticized in the Chinese media. Perhaps more dramatic is a second example: the Chinese claim that another world war is inevitable, hinting it may occur soon. This view is derived by the Chinese from the writings of Lenin and Stalin, but it was dropped by the Soviet Union from its ideological repertoire over 20 years ago (after the demise of Malenkov). In the past few months, the Chinese too have altered their statements about the inevitability of a new world war in two ways. First, they have begun to argue--somewhat defensively--that they do not want a new world war, and that they hope it does not come. More importantly, they have suggested a set of specific measures which they claim can be used to "postpone" the inevitable war, perhaps for a very long time. To explain this change, they have quoted an idea from Lenin's writings that war will be an inevitable aspect of human existence as long as classes exist in human society. By citing Lenin the Chinese now suggest that the "inevitable war" which had been coming "soon" may in fact not occur for decades.

Two additional examples suggest how the Chinese can soften seemingly rigid ideological statements in accord with changing political events. In the initial Chinese forecasts of a new world war, it was stated clearly that the source of the war would be the contention between the United States and the Soviet Union, the two superpowers. More recently, however, the Chinese

have shifted to a position in which the Soviets would be "the main source of war," and some recent statements even suggest that the Soviets will be the sole source of the war. A similar shift in Chinese statements may be seen in the case of SALT. Initially, from 1970 until last year, the Chinese described the SALT negotiations as a "fraud" and "sham" by the Soviet Union and the United States to deceive the world and cover up their arms race. Since December 1978, the Chinese have dropped their objections to the SALT process and simply stated that a SALT treaty would be insignificant, and therefore, they have no objections to it. As with the other example cited above, the Chinese have not publicly changed their ideological statements of earlier years, but so softened them as to nearly reverse the effect of their original meaning.

How do these changing perceptions affect the defense interests of the United States? One way to appreciate the degree to which Chinese perceptions of the United States may matter to us more than we think is to imagine the consequences of a reversal in the current Chinese position. Whether brought about after a rapprochement with the Soviet Union or for other reasons, a major Chinese propaganda campaign arguing that the United States had become militarily inferior to the Soviet Union would have a negative effect on our worldwide reputation. From one point of view, it is bad enough at present when the Chinese portray the United States as defensive, declining, and practicing appeasement toward the Soviet Union in Africa, Asia, and the Middle East. It would be worse if the Chinese in world public forums portrayed us as intimidated by superior Soviet military power, and consistently described United States' routine actions or crisis activity as based on the weak, defeatist attitudes of a second rate power. Of course, one could argue that Chinese credibility would suffer if they adopted this interpretation. Hopefully, many of our friends would not believe them. Yet joint Chinese and Soviet assertions that the United States had become an inferior military power would certainly do little to sooth the anxieties of our allies about our own capabilities to support them.

To sum up, then, Chinese preceptions of the Soviet-American military balance do matter to some degree; they do change over time and are not

absolutely rigid; and it would not be in our interests for the Chinese to portray us to be inferior to the Soviet Union, especially if they were joined in this claim by the Soviets themselves after a Chinese-Soviet rapprochement. This conclusion does not mean we should take major actions to alter our military programs simply because such policy changes might affect Chinese perceptions, but it does imply that we should be aware of what Chinese beliefs are about the military balance and how our own actions and statements affect Chinese attitudes.

II. WHAT ARE THE OBSTACLES TO UNDERSTANDING CHINESE PERCEPTIONS?

In this discussion we can sort out three separate kinds of obstacles: those peculiar to China; those peculiar to the United States; and factors related to the state-of-the-art of research on perceptions of military affairs. Although advances will be made in additional research on the role of perceptions in national security, and additional understanding will be gained of the Chinese as we interact with them more frequently, it is difficult to be optimistic about the obstacles to understanding created by our own self-image and our own logical premises about military affairs.

A. CHINESE OBSTACLES

Specialists on Soviet military affairs frequently complain about the secrecy and mystery surrounding Moscow's intentions and capabilities, complaining that Soviet publications are guarded in their discussions of security issues and that it is difficult to understand exactly how Soviet debates are carried out in the media. Similarly, Americans who have engaged in dialogs with Soviet strategists in Moscow or with those who have visited the United States frequently complain about the lack of candor or ignorance on the part of these strategists concerning what their own military leadership is doing. These complaints may be well founded, but should be put in perspective with the problem of Chinese secrecy. There simply are no Chinese military journals available for analysis, and there is some doubt whether such journals exist at all in Peking in the same fashion as in Moscow or Western military institutions. More importantly, there is no identifiable Chinese group of strategists whose names are known in the West. Such analysis or conjecture about Chinese strategy as has been made in the West has drawn on unusual allegorical articles or historical metaphors which describe past

political debates in Chinese imperial courts in a fashion that seems bizarre to Americans. Moreover, Western defense intellectuals have few opportunities to learn current Chinese interpretations of defense issues. There have been few informal dialogs to exchange views on national security issues.

In those rare cases when Western defense specialists have had the opportunity to exchange ideas with their Chinese counterparts, it has become apparent that cultural and linguistic barriers exist which impede mutual understanding of strategic issues. For example, such elementary terms as "nuclear deterrence" have no exact Chinese counterpart. Chinese translate this term in ideographic characters whose meaning is literally translated "to restrain through terror" or "the power to force inaction by frightening." Thus, when a Chinese official condemns the concept of "nuclear deterrence," saying it is based on fear or "blackmail," he is speaking more about intimidation by military power than the Western concept of mutual deterrence in which rational calculations prevent war--without the emotions of fear or fright. Similarly, the Chinese term for "strategic" conveys the connotation of actual war plans rather than the Western notion of strategic which connotates nuclear, global, crucial to national survival, and long term in importance. Other linguistic and cultural impediments to understanding may complicate an already tenuous channel of communication between Chinese and Western strategists.

There is little ground for optimism about an early improvement in the situation. Many years may pass before there is a dialog between American and Chinese officials at the level of intensity of the SALT negotiations with the Soviet Union. There has been little progress in identifying the names and positions of strategic thinkers in China. In recent months there has been even less public debate in the Chinese media over national security issues than was the case four or five years ago when at least different points of view were evident.

Even if there should be improvement in these matters, there would remain the problem of bizarre Chinese formulations and metaphors which do not seem to carry the same meaning in the minds of Western readers in

translation away from the original Chinese cultural context. Western defense specialists often seem either mildly amused or condescendingly confused about Chinese animal metaphors in strategic analysis, such as frequent references to paper tigers, man-eating tigers, wolves, polar bears, and running dogs, which populate Chinese strategic discourse in sharp contrast to the cold clear acronymns of Western logic.

B. AMERICAN OBSTACLES

Any American assessment of Chinese attitudes towards strategic weapons must begin from a foundation of our own experience and "realities" in this area. It would probably be easy to understand Chinese attitudes if there were exact counterparts to various Chinese viewpoints in the United States. Yet there seem to be no American counterparts to the unique Chinese perspective on Soviet-American strategic relations. Rather, the Chinese seem to "blend" particular ingredients of American analysts from different sides of the public debate.

C. AMERICAN COUNTERPARTS TO CHINESE PERCEPTIONS

A review of the writings of American analysts who might be loosely labeled" "Hawks" or "hard-liners" suggest that many aspects of their descriptions of American policy and the nature of Soviet strategic policy would be approximately the same as the Chinese have defined it. First, the Chinese media has argued for over a decade that the Soviets are seeking superiority in military force and world domination or political hegemony, claiming Moscow at the same time seeks to deceive the Western powers about its true intentions by declaring the importance and irreversibility of detente. Some American analysts agree with this interpretation, and others would agree with the Chinese advice that all opponents of the Soviet Union should increase their defense spending and heighten their vigilance in preparation for the possibility of Soviet use of force either by proxy or directly.

A second familiar Chinese charge is that some Western leaders, not excluding President Carter, are possessed of a "Munich mentality" and desire to appease the Soviet Union by making political concessions to it which can only increase the Soviet appetite for further gains at the expense of the West. Chinese officials have pointedly reminded American visitors that it was the Munich Pact which showed Stalin that the Western countries were unreliable as counterweights to Hitler's growing power, leading to the Nazi-Soviet Pact. Several American analysts have warned that a Sino-Soviet rapprochement may be brought about if the Chinese decide that the West lacks the will and capacity to offset Soviet power.

A third Chinese warning has been to beware of technology transfer to the Soviet Union and increased trade with the Soviet Union which the Chinese refer to as "feeding the Polar Bear chocolates," and the Chinese have published historical studies to suggest how World War II broke out after American and British technology and capital supported Hitler's rearmament efforts. The fourth Chinese viewpoint with reverberations among American analysts is the need for a "damage limitation" strategy against the Soviet Union to include major efforts in civil defense and militia preparations, including instructions to the population about how to evacuate and survive a nuclear attack. A fifth Chinese interpretation that seems related to Americans identified as "hard-liners" may be the Chinese description of Western Europe as a target for Soviet efforts at political intimidation by a build-up of Soviet conventional forces in Eastern Europe, combined with varied initiatives and diplomatic maneuvers that the Chinese characterize as deceitful efforts to lull the Europeans into complacency and to reduce their defense budgets and military preparedness.

In light of these five areas of apparent overlap in Chinese and American "hard-line" attitudes, it is not surprising to find occasional words of slightly awkward admiration for the Chinese viewpoint from firmly anti-Communist authors. There is, however, another side of the story. Some Chinese interpretations are shared by American "Doves" and arms control advocates who wish to reduce the American defense budget and ensure stable deterrence through significant mutual reductions in armed forces. "Doves"

seem to be less familiar with Chinese views because they misperceive the Chinese as vehemently anti-Soviet and therefore assume them to be completely analogous to their American "Hawk" counterparts. But the Chinese are not nearly so "hawkish" as some Americans believe. Ironically, some of the most ardent advocates of arms control limitations and defense budget reductions by the United States would find support for their views in China. American "Hawks" usually couple their anxiety about Soviet efforts to achieve military superiority with a concern for inadequate American defense spending or the lack of American will to resist Soviet encroachments. The Chinese, however, have claimed since 1968 that the United States is also seeking military superiority over the Soviet Union. Chinese accounts have portrayed a kind of "action-reaction" arms race between the two superpowers in which each tries "wildly" to catch up with the other's advances. One portion of the speech by the Chinese Foreign Minister to the United Nations session on disarmament in mid-1978 condemned both superpowers for their vast waste of resources which could better be allocated to the developing nations of the world. Some American analysts believe that the United States is seeking military superiority and they blame the "military-industrial complex" for this alleged national security policy based on profit and greed. One recent example of this approach is an Institute for Policy Studies report entitled "Dubious Spectre: A Second Look at the Soviet Threat," which describes a number of American strategic weapons programs that "will almost certainly spur further arms spending on the other side." The report states that "if U.S. defense strategy in the early 1960s had its excesses, today's strategy has gone berserk. . . . From the Soviet viewpoint, a glance at official U.S. literature could reveal signs of U.S. 'superiority-seeking' as well." While thus agreeing with the Chinese in suggesting that the United States is giving the appearance of seeking military superiority, the pamphlet obviously departs from them when it concludes that "nothing that the Soviets are doing in military construction or deployment can lead one to conclude that they are achieving, or will soon achieve, strategic superiority."

Dovish American authors on strategic policy questions share other points in common with the Chinese, in addition to a belief that the United States

is seeking military superiority in a wasteful arms race with the Soviets. Chinese spokesmen have frequently described the SALT agreements as inadequate or insignificant controls on the arms race, and have urged that conventional weapons must also be limited, especially because of the larger proportion of defense budgets allocated to their production which rightfully belongs in international assistance programs for the developing nations. Another Chinese theme reminiscent of American dovish analysts has been that military power as such is not as important as economic, social, and ethnic factors in determining national strength.

A number of Chinese statements can be classified neither as hawkish nor dovish, but unique approaches to be discussed in the next section.

III. WHAT ARE THE KEY DIFFERENCES IN AMERICAN AND CHINESE ATTITUDES TOWARD DETERRENCE?

We may usefully review evidence about Chinese strategic thinking from a number of different sources. The most important of these are Chinese public statements about Soviet and American military affairs, China's own conduct toward the Soviet Union and the United States in political-military crises, and Chinese defense programs. None of these sources provides a comprehensive account of Chinese strategic doctrine nor can we be sure whether China has developed a set of strategic premises comparable to Soviet and American doctrinal writings. This problem of a relative shortage of written materials from China, in contrast to the availability of Soviet military writings in the West, is in part compensated for by the information gained through political crisis interactions that the United States and China have shared since 1950. The U.S. gained valuable insights into Chinese strategic behavior during the Korean War, the two Taiwan Straits crises, and the near-involvement of China in Vietnam in 1965 and 1966. We have also had a chance to closely observe Chinese crisis behavior in the Sino-Soviet border clashes of 1969, the Chinese attack on Vietnamese-held islands in January 1974, and the Chinese "punishment" penetration of 1979. Perhaps in contrast to our knowledge about Soviet patterns in the use of force, we know more about the Chinese through what they do than through what they write.

A. SOVIET AND AMERICAN VIEWS OF DETERRENCE

Chinese crisis behavior since 1949 and Chinese official statements suggest a view of deterrence quite different from that held in either the Soviet Union or the United States. Before reviewing the Chinese position, it is appropriate to summarize the differences in Soviet and American strategic thought on nuclear deterrence. A number of specific criteria by

which to measure the effectiveness of American nuclear deterrent forces have been set out in annual Department of Defense reports. These criteria have been generally accepted and even popularized in many articles and books on military affairs. In addition to these criteria, there is a corollary American premise that nuclear war would be mutual suicide, an assumption that has entered the realm of unchallengeable "common sense." Thus, U.S. military forces should only be sufficient to inflict unacceptable damage on the Soviet Union after "riding out" a first strike by Soviet forces. This principle is well-known, even though a debate among specialists has continued for nearly two decades about exactly "how much is enough" with respect to an optimally effective deterrent.

Nevertheless, the American public is less aware of Soviet attitudes and might be surprised to read Soviet statements explicitly attacking the concept of mutual deterrence. The Soviets not only have never set any finite limit on the necessary level of strategic forces required to achive "assured destruction" with a second strike, but also Soviet writings state that "imperialism" is inherently aggressive, and its nature "remains as before" except that Soviet military might now inspires fear and a recognition of risk on the part of the "imperialist" leadership. American leaders are portrayed by the Soviets as having become "realistic" and "sober-minded" only because of the development of Soviet military forces in the past decade. For example, Georgy Arbatov, Director of the Institute for the Study of the USA and Canada, wrote in February 1974, "Of course the concept of deterrence itself cannot be defended. It is a concept of 'peace built on terror,' which will always be an unstable and a bad peace." In another example, according to Pravda, February 24, 1977:

> The experience of history has shown that the "balance of fear" policy has never contributed to the preservation of peace and a strengthening of international cooperation but has always whipped up militarism, the arms race, and the preparation of war, and in the final analysis led to military conflicts.

Similarly, in an article in International Affairs, June 1976, a Soviet specialist argued:

> Under the scientific and technical revolution the "balance of fear," as a guarantee of peace, cannot be insured for any length of time by the same level of weapons in terms of quantity and quality. That is why peace based on a "balance of fear" and "mutual deterrence" is doomed to a constant arms race and is not insured against the danger of military conflicts breaking out. Consequently, in the broad prospect the policy based on an absolute view of military strength and a "balance of fear" cannot be a guarantee of lasting peace.

While some Soviet authors have criticized the concept of mutual deterrence, there is no shortage of Soviet comments about how to dissuade the "imperialists" from aggression against the Soviet Union or elsewhere:

> The lesson of history teaches that imperialism heeds only force. . . . the Party relies not on the peace aspirations of the imperialists but on the real correlation of forces, on the economic and defense might of our country. The greater the combat ability of the armed forces of our country, the more powerfully they are equipped, the better the personnel are trained, then the more peace there will be on earth. [From a speech by Marshal A. A. Grechko, at Kazan, Komsomoleps Tatarii, January 9, 1974.]
>
> Imperialism normally retreats when faced by a superior force. [From D. Tomashevsky, Lenin's Ideas in Modern International Relations, Moscow, 1974.]
>
> The correlation of forces in the world has charged in favor of socialism and to the detriment of imperialism. The community of socialist states and their armies is growing and developing. Imperialism no longer has a military advantage. [From an article by Defense Minister A. A. Grechko, Problemy Mira I Sotsializma, March, 1975.]

Soviet official spokesmen state that Soviet military strength is the main source of restraint on "imperialist" desires. Writing in Kommunist, January 1978, Defense Minister Ustinov concluded:

> Despite the obvious successes of the policy of peace, the threat of war, although it was pushed back, has not been removed. Imperialism was and remains a source of aggressive war.

Nevertheless, in the past two years, the Soviet leadership has publicly and repeatedly denied that it is seeking military superiority over the United States. According to President Leonid Brezhnev,

> As for the Soviet Union, it believes that an approximate equality and parity is sufficient for defensive needs. We do not set ourselves the goal of achieving military superiority. We know also that this very concept becomes pointless in the presence of today's huge arsenals of already stock-piled nuclear weapons and means for their delivery. [From Pravda, May 4, 1978.]

B. THE CHINESE VIEW OF DETERRENCE

The Chinese not only have rejected the Western concept of mutual assured destruction as an effective basis for nuclear deterrence, they also claim that Moscow is seeking nuclear superiority, using deception to lull the West into complacency. They have put forward an alternative means by which the Soviet Union can be restrained from military aggression. Before examining this Chinese prescription for effective deterrence, it will be useful to emphasize what is not contained in the Chinese deterrent concept. First, the Chinese do not seem to see any logical link between the balance of military forces and the prevention of war. In fact, the Chinese have frequently described historical examples of how small countries have deterred--or even defeated--larger powers. Second, the Chinese have never defined any level of "assured destruction" of an enemy's population and industry as a criterion for an effective nuclear deterrent. Rather, Chinese statements stress that defeat of the enemy's military forces can be the necessary "retaliation" against an enemy attack. Moreover, in their own force posture decisions the Chinese have shown a concern for defeating enemy forces rather than inflicting damage on enemy territory by such means as "hardening" some of their conventional forces and locating a significant percentage of their nuclear missile force deep within China so that the missiles could not reach Soviet territory, but only be used against invading forces inside China, thereby deliberately limiting the size of their nuclear retaliatory strike force in order to strengthen their warfighting capability for damage limiting purposes.

Neither American nor Soviet strategic concepts suggest the desirability of targeting up to one-third of strategic offensive forces against targets within our own national boundaries to defend against a land invasion. If the Chinese leadership does not see a numerical balance of power or a mutual assured destruction of population and industry as effective criteria for nuclear deterrent forces, what do they believe makes for an effective nuclear deterrent?

Perhaps the sharpest contrast between Chinese and Western concepts of how to deter war is the relative weight to be assigned to emotional or psychological factors compared to cognitive or rational calculation. Whereas both American and Soviet writings on nuclear strategy stress that no leader would rationally or deliberately choose to start a war knowing he would fail to achieve victory or cause unacceptable damage or national suicide, the Chinese emphasize the emotional or psychological factors which can lead to war or prevent it. In the Chinese view, it is the emotional feelings that the aggressor has about the potential victim that either invites aggression or deters it. Thus, a wide range of actions not limited to quantitative or qualitative improvement of military strength can deter aggression. Paradoxically, then, if a potential victim of aggression possesses military superiority but fails to undertake this wider range of deterrent actions aimed at the psychological and emotional aspects of the enemy leaders, then the militarily superior side may still fail to deter attack. The concept of an emotionally-based deterrent to war--even for a superior power--is not a recent invention of the Chinese Communist Party, but dates back to the earliest strategic writings in China's long history.

The recognition that it may be emotion rather than reason which deters a national leadership from war may be the single most surprising difference between Chinese and Western strategic doctrine. Unfortunately, the widespread assumption in the West that a national decision to go to war must be based on reasonable grounds, not "irrational," emotional ones, makes the Chinese approach to deterrence difficult to comprehend or accept. For example, American descriptions of optimum crisis management focus on the need for stability, calmness, and rational decisionmaking throughout the period

of crisis--for both sides. The crisis will end when patterns of calm routine and dispassionate reason reassert themselves in international relations. Yet the Chinese approach to deterrence and crisis management has been one of emotional manipulation--to agitate and upset the adversary in order to deter him. Chapter 6 of Sun Tzu's Art of War on the enemy's weaknesses and strengths advocates that:

> Although the (enemy) troops are estimated to be many, of what benefit is this superiority in respect to the outcome? I say that victory can be created. For even if the enemy is numerous, I can prevent him from engaging. First, determine the enemy's plans and you will know which strategy will be successful and which will not; agitate him and ascertain the pattern of his movements. Determine his dispositions and so ascertain the field of battle. Probe him and learn where his strength is abundant and where deficient.

The Chinese government most dramatically implemented Sun Tzu's advice in the Spring of 1969 in response to a large Soviet build-up of the previous two years. Not only did Chinese border forces participate in an armed border incident with Soviet troops who had both local and overall superiority, but in the following months Chinese continued to agitate the Soviets in a variety of ways designed to upset them "emotionally" at a time when Western doctrine would have counseled a "cooling off" period and a return to "reason." In defiance of Western logic, the Chinese repeatedly provoked Soviet forces. Chairman Mao announced, according to Chinese press statements on June 10, 1969, "We must not show the slightest timidity before a wild beast." Only a few days earlier the Chinese press had published an unusually frank and pessimistic warning to the population that the Soviets were preparing to launch a war against China which might involve nuclear weapons. The Chinese press reported a "chauvinistic clamor" in the Soviet Union for war against China and described military preparations along the border, border exercises, "massive" new conscription, and new troop deployments in the Far East. Chinese public statements on May 24 and June 2 concluded with a new quotation from Mao proclaiming that China would fight to the finish. In spite of the provocative rhetoric, and the frequent assertion that "the slightest timidity before the wild beast" would invite attack, the Chinese were

careful to move no military forces toward the Soviet border, nor did they raise the level of readiness or alert of any of their forces. Likewise, no rallies, air raid drills, militia training, strategic stockpiling, or military exercises took place at this time. The tacit premise of these Chinese crisis actions seemed to be to "agitate" the Soviets, but in a strictly limited fashion. The image deliberately created was that China was preparing an active defense, but that no offensive initiatives were under consideration.

These psychological deterrence measures practiced by the Chinese in June 1969 are now being preached to United States a decade later. In English translation, this Chinese advice is that the United States should "give tit for tat" in response to Soviet challenges against American interests around the world, and that American actions must "tame the Polar Bear" rather than "appease" him with political concessions, increased trade, and technology transfers. Many Western analysts have dismissed this Chinese advice as a self-serving effort to embroil the United States and the Soviet Union in a military conflict or otherwise poison the atmosphere of detente. Yet the Chinese have not encouraged the United States to downgrade its relations with the Soviet Union as such, but rather urged Washington to reply to specific Soviet challenges in more assertive fashion, and the Chinese press frequently cites American and European media commentary to support its views. The Chinese do <u>not</u> advocate that the United States should break off diplomatic relations, reduce trade, or otherwise provoke the Soviet Union in the absence of any specific challenge. Chinese officials strongly deny any desire to exacerbate Soviet-American tensions per se.

The Chinese distinguish between gratuitous provocation of the Soviet Union--which they do not advise and do not practice themselves--and giving "tit for tat" when called for. Soviet officials, and a few American analysts, however, continue to put forward the view that these Chinese arguments are selfishly motivated, transparent efforts to embroil the United States in dangerous difficulties with the Soviet Union so that China will have additional time to develop its own military strength. Chinese officials have denied these allegations, pointing to their own correct relations with the

Soviet Union, which include increasing trade over the past five years, returning a captured helicopter crew with what amounted to an apology, and permitting a small armed Soviet group to withdraw from China in May 1978 without hostility, while still missing no opportunity to lambaste Soviet policy in the United Nations or other public arenas when opportunities are presented to embarrass the Soviets for allegedly aggressive or exploitative behavior.

We can understand the emotionally-based strategy of effective deterrence through giving "tit for tat" by keeping in mind the second major difference in Chinese and Western concepts of deterrence. This is the element of time. The Chinese assert that apparent Soviet strengths in military forces will not be decisive in the final outcome of the war. They say time will expose Soviet weakness and can either delay Soviet attack or make possible a Soviet defeat. But because of this crucial role of time, the Chinese stress that the West should "break-up the timetable" of intended Soviet strategic moves by challenging Soviet influence in third countries with strategic value, by denying allies to the Soviets, and by always keeping in mind the internal weakness of the Soviet society, economy, and ethnic balance. For example, one senior Chinese official told me in Peking in May 1978 that, as he understood PRM-10 from American newspaper accounts, the White House study had underestimated Soviet vulnerabilities and weaknesses. He praised PRM-10, however, as a good first step in the direction of reducing what he called groundless American "fear" of the Soviet Union.

The Chinese seem to believe that disseminating and popularizing a view of the Soviet Union as economically weak, socially divided, and beset with ethnic difficulties will encourage increased resistance to Soviet efforts to expand its influence. The ultimate target is more the emotions than the rational calculations of the Soviet leaders, because the Chinese say they prefer a Soviet leadership that feels anxious, insecure, and vulnerable. There could hardly be a sharper contrast between those in the West who seek to reassure a "paranoid" Soviet leadership that it can trust the West and should participate in normal international life and the Chinese vision of a Soviet "bully" who must be punished and tamed whenever and wherever it

misbehaves in order to dissuade it from ever increasing belligerence toward the civilized community.

Within the past year, the Chinese have announced three new measures for deterring offensive measures by the Soviet Union and thereby postponing the next world war, but even when questioned, Chinese strategists decline to mention the contribution of the American nuclear deterrent to postponing war. To date, the Chinese have never suggested that an American nuclear deterrence force which is "essentially equivalent" to Soviet nuclear forces will deter aggression. The new measures for postponing world war were proposed by the Chinese Foreign Minister in his speech to the U.N. General Assembly on May 24, 1978, and later supplemented by an editorial in People's Daily, September 19, 1978. According to this important editorial:

> In the face of the increasing threat of war from the Soviet Union, the pressing tasks of the people of all countries are: (1) to heighten their vigilance, increase their self defense capabilities and make earnest preparations against the possible war of aggression.... This, of course, does not mean that a new world war will break out tomorrow. When everyone is prepared for the worse, the warmongers will have to think twice before unleashing their war....
>
> (2) to constantly upset the global strategic dispositions of the two superpowers, Soviet social-imperialism in particular, and wage tit for tat struggles against superpower hegemonism. The monstrous claws of the Soviet Union must be defeated wherever it perpetrates aggression and expansion. As the Soviet Union scrambles for strategic outposts in Asia and Africa, the people of various countries must wage active struggles to curb its aggression and expansion and upset its timetable for war.
>
> (3) to constantly expose and combat the appeasement policy. This is the notion and practice of seeking compromises, conciliation and concessions and settling for ease and comfort at the expense of principles. In the face of Soviet war threats, using trade, supplying credit and technology as the means of containing Soviet hegemonism can only sow the seeds of trouble in the future. It is expediting the outbreak of a new world war.

The Chinese Foreign Minister supplemented this statement with a warning to

those who would "put blind faith in peaceful negotiations and the so-called 'balance of terror.'" He said that the Soviet Union is:

> The most dangerous source of a new world war and is to be its chief instigator. Yet, there are some people in the West today who are cowed by Soviet military threats or are afraid of war, or who indulge in a false sense of security and deny the existence of a serious danger of war.

IV. IF DETERRENCE FAILS, WHO WILL SURVIVE IN THE POST-WAR WORLD? HOW WILL THE WORLD WAR BE FOUGHT?

There is sufficient evidence available from Chinese sources to suggest the Chinese image of a future nuclear world war differs sharply from both American and Soviet assessments with respect to at least four factors: the decisive role of militia and civil defense; the importance of protracted land warfare after a central nuclear exchange; the amount of allied military support in the post-attack world; and the potential degree of devastation that nuclear weapons will cause. In short, the Chinese focus on factors that will operate after a nuclear exchange rather than on the state of the strategic balance before war begins. In words reminiscent of Stalin's era, Chinese assert that, after the "inevitable world war," mankind will survive, imperialism will collapse, and socialism will be victorious. In the words of the Chinese Foreign Minister at the U.N. last year, "The future of mankind is infinitely bright." In contrast, some American opinion polls have shown that the view is quite widespread that nuclear war will mean the end of all life on earth. Leonid Brezhnev has also publicly stated that nuclear war would be suicide for the planet. What is the basis for this Chinese calculation?

At the outset, let us note that the Chinese image of a general nuclear world war seems to be so strikingly different from the American perception that it requires temporary suspension of disbelief to grasp what the Chinese may be saying. Chinese public assessments of world war omit a number of considerations that Soviet and American analyses have emphasized heavily. First, there has been no Chinese public discussion of alternative scenarios for nuclear exchange. As far as can be seen, the Chinese media has simply ignored the idea of a Soviet counterforce strike against non-urban U.S. targets, which has been described in the Western media for almost five years. Similarly, the Chinese have never discussed Soviet fears of an American

preemptive strike. There have been no comments about possible escalation to a nuclear exchange from a deep crisis in a regional conventional war.

While ignoring the kind of crude, quantitative, static measures of strategic forces that characterize the American SALT debate and American assessments of the strategic balance, the Chinese have focused their attention on factors seldom if ever mentioned in American and Soviet commentary. This had led many Soviet and American analysts to remark privately that "the Chinese don't understand nuclear war" and to adopt a condescending attitude toward presumed Chinese "peasant" leaders ignorant of advanced nuclear technology and weapons effects. It is more likely the case that the historical experience of the current generation of Chinese leaders in guerrilla warfare and in nearly forty years' struggle against Japanese occupying forces and revolutionary warfare against the Nationalist government have strongly influenced the Chinese assessment of nuclear war.

The first major premise of the Chinese image of world war is simple: warfare will not be a blind, mindless exchange of nuclear arsenals, but rather politically motivated and controlled. The Soviet war aim will be to continue to seek "hegemony" because of its economic needs for access to markets and resources in the strict Leninist sense of "imperialism." The Chinese call the Soviets "social imperialists" in the sense that Moscow has restored capitalism in a formerly socialist state and created an economic structure which "demands" hegemony over foreign markets and raw materials. Logically, then the Chinese believe the Soviets would attack China--or the United States--only to achieve economic gain. They frequently assert that Moscow's aim is to "turn China into a colony," and to do this the Soviet ground forces would have to occupy China, especially areas with high production value or important resources.

An obsession with Soviet war aims in a nuclear conflict leads the Chinese to stress civil defense, mobile land forces, militia, and damage limiting strikes against Soviet ground force concentrations within China. In the past year, the Chinese Defense Minister and his associates have called in public speeches for increased attention and improvement of civil defense

forces around economically important targets. At the same time, Chinese officials have commented privately about the need for "joint action" against Soviet forces and the benefits of cooperation against the Soviets during wartime. When American visitors have followed up on these ambiguous and tantalizing remarks, the Chinese have protested that they do not intend to become "dependent" on allied support which they do not see as having been decisive during World War II in their long struggle against the Japanese. One Chinese official reminded me in Peking in May 1978 that it was "many years" before the United States chose to come to China's assistance against the Japanese occupying force. He said Chinese morale would have collapsed if the Chinese leadership had been psychologically dependent on American promises of military support and that sustaining morale is the essence of protracted warfare.

Two sharp distinctions between the Chinese plans for post-nuclear combat and Western analyses are the Chinese focus on maintaining command and control of conventional forces after a nuclear exchange and the need to mobilize the economy for a long-term war from strategic bases in the face of invading land forces. In a rare public statement, the Chinese Defense Minister pointed out in mid-1978:

> In modern war, there is not much difference between the front and the rear and the various areas may be cut off from each other. Hence the need to build the vast rear areas into strategic bases capable of supporting a prolonged war and fighting on their own. The people's air defense must be strengthened so that in the event of a war it will be possible for us to preserve our strength, keep our losses to a minimum, avoid disorder and successfully turn the nation from a peacetime to a wartime system of life and work.... Active defense and luring the enemy troops in deep are the basic principles of our strategy for winning the future war against aggression.... We must adhere to the principle of protracted warfare, for we firmly believe that through long and arduous struggles we can gradually change the balance of forces between ourselves and the enemy, switch over to the strategic counter-offense and win final victory.

An essential premise of the Chinese assessment of the consequences of nuclear war is that the detonation of large numbers of nuclear weapons will not, in

President Brezhnev's phrase, obliterate the planet. Rather, the Chinese have downgraded the importance of nuclear weapons for nearly thirty years. One of the most picturesque of these efforts to minimize the importance of nuclear weapons is a quotation from Chairman Mao, first stated in 1958, which recently came to light:

> I maintained that modern weapons were not as powerful as the big sword of China's Kuan Yun-ch'ang.... Not very many people were killed in the two World Wars, 10 million in the first and 20 million in the second, but he had 40 million killed in one war. So, how destructive were the big swords! We have no experience in atomic war. So, how many will be killed cannot be known.[1] [From Mao Miscellany, 1974, p. 109.]

This Chinese image of a worldwide nuclear war has specific implications for their effort to assess the Soviet-American military balance of power. The single most important difference in the Chinese assessment is a focus on the post-nuclear-exchange world. Chinese strategic logic suggests attention should be devoted to a subject usually ignored in Western discussion: what happens after the second strike? They do not believe it will be the end of history.

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[1]These views of Chairman Mao contrast sharply to the images of nuclear weapons effects held by Chinese soldiers captured in the Korean war. Interviews of these prisoners by Herbert Goldhamer revealed exaggerated notions of the destructiveness and long term radioactivity of even a single nuclear blast.

V. HOW SHOULD THE SOVIET-AMERICAN MILITARY BALANCE OF POWER BE ASSESSED?

Because the Chinese have different criteria for effective measures to deter the outbreak of nuclear war, and because they have a different image of the nature of nuclear war, it is hardly surprising that their criteria for assessing the Soviet-American military balance differ from our own. For example, the Department of Defense Annual Report for 1980 describes a number of tests of effectiveness for American strategic forces and general purpose forces which would be quite alien to the Chinese.

The Annual Report of the Secretary of Defense for 1980 warns against using static indicators of military balance to judge the adequacy of American forces:

> Simply counting up tanks, or ships, or aircraft, or missiles is not a sufficient basis for determining the relative effectiveness of two opposing forces. Successful defense and deterrence, which are what we seek, depend on a great deal more than the results of these static comparisons. If U.S. forces are relevant to some specific contingencies and can defeat a specific enemy, presumably they contribute to credible deterrence, no matter what static comparisons might show about particular force elements.... Since the Soviets have insisted on equality as the basis for arms control agreements, we must insist on equal aggregates and common ceilings as the principal ways of measuring and symbolizing that equality. But to be driven in our force planning by perceptions of the military balance based on static indicators, and to seek (or grant) equality in every measure across the board, is to ensure the misuse of U.S. and allied resources. We are not interested in symmetry with the Soviet Union, at least not from the standpoint of defense.

Chinese official statements about the military balance in Europe and the Soviet-American strategic balance have used static indicators in

different ways, only partially agreeing with the Secretary of Defense. With respect to the strategic balance, the Chinese have conceded that the Soviets are "gaining military supremacy," but they have stopped well short of asserting that the Soviets have achieved such strategic superiority. Instead, the Chinese have quoted a number of American official spokesmen during the last five years to suggest that the United States will certainly match Soviet increases in strategic forces to the degree necessary to maintain an overall strategic balance. In contrast to their detailed description of the European balance, the Chinese have not published detailed analyses of the Soviet-American strategic balance, but asserted simplistically that there is an "action-reaction" arms race between Moscow and Washington. The most unusual aspect of this Chinese formulation is the assertion that there can never be a true "balance" of strategic forces. According to the Chinese Foreign Minister's presentation to the United Nations in October 1974:

> As far as balance is concerned, it has always been relative and temporary whether in nature or in human society, while imbalance is absolute and constant. In the real life of today, there is in fact "no balance of power" between the two superpowers. Instead, each side is desperately trying to outstrip and overwhelm the other, and the wildest arms race is on.

In one of China's longest discussions of arms control and the nuclear balance of power, People's Daily asserted on December 27, 1974:

> Each side strives to restrict its opponent but none is able to do so in the end. Sometimes their strength seems about the same, but this is only a temporary and relative phenomena; the basic situation is imbalance. It is also impossible to reach a balance.

Chinese descriptions of the European balance of power, however, have been detailed and explicit. In the past year, for the first time, the Chinese have published a number of charts and maps of Warsaw Pact and NATO military forces. Since at least the Spring of 1978, the Chinese have explicitly claimed that the Soviet Union possesses "vast superiority" or "overwhelming superiority" in conventional forces in the European theater. The evidence presented by the Chinese for this conclusion is of two types.

First, they selectively reproduce quotations from European magazines and newpapers which mention "Soviet superiority" in Europe without further detail. Second, since mid-1978, the Chinese have published accounts of the MBFR negotiations and special "background" articles on the European balance of power which describe Soviet superiority in terms of static indicators like numbers of tanks, artillery, and armor divisions. It is significant that the Chinese accounts of both the Soviet-American strategic balance and the European military balance do not use "dynamic" indicators. They do not pretend to forecast which side would "win" a war, nor have the Chinese gone beyond simple descriptions of static force indicators to describe either alternative scenarios of conflict or possible outcomes.

In summary, the Chinese stop short of concluding that the Soviets have "overall superiority" in either the strategic balance or the European balance. Moreover, their commentary on Europe describes the military balance there as a "stalemate" which has forced the Soviets to turn their attentions to other areas of the world, namely Africa, the Middle East, and Southeast Asia. In this way, the Chinese public statements on the military balance can be used as the basis to call for increased defense efforts against the Soviet Union, on the one hand, while not spreading an atmosphere of pessimism or defeatism in the face of overwhelming Soviet power, on the other hand.

The private comments of Chinese officials are more sophisticated than these simplistic, static comparisons of the military balance. Chinese military and civilian officials overseas clearly follow closely the published details of defense preparations by the Soviet Union and the United States, and they openly discuss these matters with foreign visitors. From these conversations, one can infer several major criteria used by the Chinese for measuring military forces which are usually neglected in American force assessments. These criteria follow logically from the Chinese concepts of an emotion-based deterrence strategy and from their expectations about a post-nuclear attack world. They are also consistent with the commentary by Sun Tzu on how to estimate and take advantage of enemy strengths and weaknesses.

It is difficult to infer from their published statements what force effectiveness criteria the Chinese may use. Although the Chinese have frequently quoted from and criticized the remarks of American Secretaries of Defense at press conferences and various Defense Department reports over the past decade, the Chinese media has never directly challenged or even mentioned the criteria by which the United States (or the Soviet Union) determines the size and capabilities of its armed forces. One can only infer from the questions that Chinese officials raise with Americans and Europeans in private what they probably believe to be appropriate tests of effectiveness. These private discussions and the evidence available from China's own force posture suggest that the Chinese may give special attention to one criterion often neglected in Western analyses: the survivability and sustainability of conventional forces after a surprise nuclear counterforce attack. The Chinese seem to be asking "who will rule the post-war world with what surviving land, sea, and air forces?" In other words, the Chinese concept of protracted warfare apparently leads them to value highly the relative balance between the forces that will survive a central nuclear exchange.

China seems to practice what it preaches. Unlike Soviet and American conventional forces, the Chinese have devoted considerable resources to hardening their ground, sea, and air forces in caves and tunnels. They have also discussed for years their plans for decentralizing the national administrative system in wartime to set up a series of self-sufficient economic and military regions to carry on a protracted war of resistance and an eventual counterattack.

This Chinese emphasis on ensuring the survival of conventional forces and a national system of command and control in order to enable both regular forces and the militia to carry out a multi-year war of resistance stands in sharp contrast to the criteria established for American strategic forces and conventional forces. For example, the 1980 Annual Report of the Secretary of Defense departs from this Chinese concept of integrated strategic and general purpose forces. It divides American forces into "three basic levels: strategic nuclear, theater nuclear, and non-nuclear," and a different

set of planning criteria are applied to each level. For example, American strategic forces must "survive in adequate numbers and types after a well-executed surprise attack on them by the Soviets"--a criterion which is decidedly not applied to U.S. general purpose forces, which are explicitly based on the assumption of having to "halt more or less simultaneously one major attack," with Europe as the most plausible and demanding locale for its occurrence, and one lesser attack elsewhere.

In one conversation, A Chinese military official expressed surprise at learning for the first time from American publications that only our strategic retaliatory forces were protected against nuclear attack. This seemed strange because, from a Chinese perspective, it is precisely the American projection forces such as airborne divisions, Marine Corps, tactical aviation units, aircraft carriers and accompanying naval aviation, and the associated mobility forces and command and control capabilities which will clash with their Soviet counterparts after a central nuclear exchange to determine the fate of the post-war world. Although the Chinese have apparently published nothing about these unusual criteria for measuring the Soviet-American military balance, they have consistently sought to collect information and convey subtle concern about them. The four criteria are:

- What is the morale of the Black American volunteers in the American land forces? When they have been recruited "for money" and possess their "African heritage," will they be able to defend European soil?

The Chinese analytical premise here may reflect concern with their own minority peoples in a traditional infantry leadership focus on morale, ethnic friction, and the adequacy of material benefits for soldiers--factors seldom considered in American assessments of the strategic balance.

- Will the Soviets be successful in establishing forward bases on American strategic sealines of communication? Will American and European critical resources be susceptible to interdiction by the Soviet Navy from these new forward located bases after a central nuclear exchange?
- Why do American officials take so lightly the need for civil defense, an organized militia, and command-and-control and national organizational arrangements necessary for a protracted war against the Soviets after a nuclear exchange?

- What are the prospects for allied military cooperation in Europe and between the United States and Japan in the event of worldwide war with the Soviet Union?

In this regard, the Chinese have since 1972 urged the strengthening of the NATO military alliance and closer security ties between Washington and Tokyo, a major Chinese policy shift from its earlier shrill opposition to "Japanese militarism" and "NATO warmongers." In fact, the Chinese have attempted to transmit a sense of alarm to the Japanese leadership about Soviet intentions and capabilities, and they have lectured the West German, British, and French defense ministers about the need for increased defense spending to meet the expanding Soviet threat. "We do a lot of work for you," a senior official told me in Peking.

These four questions from the Chinese all have in common a concern with the same problem. Who will survive a world war between the Soviet Union and the United States? At least some Chinese officials seem to be impressed with explicit Soviet doctrine about the possibility of winning something that could meaningfully be called victory in a central nuclear war. Chinese anxiety is probably not based on any sympathetic or emotional attachment to the survival of the United States. Rather, the nightmare for the Chinese would be the possibility of a Soviet-American nuclear exchange which did not destroy both superpowers, but rather left sufficient Soviet military power intact so that China would face a maimed, but ruthless Polar Bear with no offsetting counterweight from a now crippled or destroyed United States. This anxiety on the part of the Chinese cannot be assuaged by any reference to static indicators of the balance of strategic forces--it is rather the image of the way in which the "victor" will use his forces and attempt to intimidate his adversary during the war itself that affects perceptions of the outcome. In other words, "essential equivalence" of the strategic forces of the two superpowers, even in its theoretically pure state, does not directly address Chinese concerns derived from their own experience of five decades of revolutionary warfare. A slight going-in superiority of one superpower's strategic forces in central war could be negated by many other factors, the most relevant of which to the Chinese may well be the same

factors they found to be crucial in their own experience with warfare--morale, political organization, militia, civil defense, allied assistance, successful negotiating tactics, and, above all, superior strategy for protracted conflict.

VI. ISSUES WORTHY OF EXPLORATION

A. THE ORIGINS OF CHINESE STRATEGIC PERCEPTIONS

The Chinese perceptions of the Soviet Union described in the previous chapter differ sharply from the conventional wisdom of many Americans, and it is useful to keep some of these differences in mind. The Chinese have described and explained the Soviet military build-up of the past fifteen years in stark terms. They see the Soviets preparing for war and seeking to obtain the world's resources with the help of their ever increasing military power. In contrast to some Americans, the Chinese do not excuse this Soviet build-up as some sort of "defensive complex" derived from the painful history of Russia in which not only Napoleon's army but also Hitler's 200 divisions and the smaller Allied Expedition of 1919 all sought to conquer an unprepared Russia. The Chinese have offered no excuses for the Soviet build-up based on the tragedy of Russian history, nor do the Chinese even mention the American view that bureaucratic politics or even bureaucratic inertia are somehow behind this military build-up.

Similarly, Chinese press commentary and private conversations give little credence to the idea that a powerful military-industrial complex in Moscow is somehow able to lobby the political leadership. The Chinese do not suggest that the world outside the U.S.S.R. can "strengthen the hands of the moderates" in Moscow by making concessions to preserve detente, and they laugh derisively at the idea that there are Hawks and Doves in the Soviet Politburo. The Chinese analysis of Soviet "social imperialism" does not admit the possibility that there is much of a struggle for resources between the military and spokesmen for light industry and consumer goods. In the Chinese analysis, the Soviet economy "needs" the world markets and world resources that it is seeking to dominate by attaining political and military

almost daily the new evidence of joint Soviet-American plans to "collude" against China and all revolutionary people in the world. The 1967 Mideast War was described as the product of Soviet-American "collusion," as was the plan to build an anti-China ABM system in the United States and in the Soviet Union. Then, after the Soviet invasion of Czechoslovakia and other events such as the United States shift to strategic "sufficiency" rather than strategic superiority over the Soviet Union, Chinese official statements began to describe "fierce contention" between the two superpowers. The SALT negotiations thus were transformed from "collusion" at the 1967 Glassboro summit to a "fierce struggle" for nuclear superiority under the guise of arms control. Similarly, while the 1967 Mideast War had been caused by Soviet-American "collusion," the 1973 Mideast War was called the result of Soviet-American struggle in the region.

Because, to this day, neither the Chinese nor any Western analyst has fully explained this change in China's "perception" of the Soviet-American strategic relationship, it would seem prudent to approach the question of Chinese perceptions with both skepticism and open-mindedness about possible future changes. To put it simply, we know very little about how or why the Chinese have decided to perceive the Soviet-American relationship.

This leads to an issue for further exploration: What can we learn about the formation of national strategic perceptions both in general and as applied to China? How do nations change their "minds"? Which aspects of the Chinese strategic view will probably remain most resistant to new evidence from the "objective" world of facts? Which Chinese perceptions may be the most amenable to change? How vulnerable have the Chinese been to misperception? Have the Soviets ever successfully manipulated Chinese perceptions of the United States or the strategic balance?

Looking ahead we may also ask: Are there areas in which the Chinese might change their assessments of the Soviet-American strategic relationship? To answer any of these questions well, we need to understand more about the process by which the Chinese leadership reached its present assessments. For example, by what process have the Chinese concluded that the Soviet

About fifteen years ago, a number of outstandingly popular books by Robert Ardrey, Konrad Lorenz, and Desmond Morris argued that aggression and territoriality were prominent among lower animals, thus popularizing the notion of man as a "killer animal" whose "instincts" require the use of force to defend specific territory. Other biologists and many anthropologists were quick to refute these notions, however, and to discredit the use of biological research as a significant means of better understanding human conflict behavior. The anthropologists pointed out that in very primitive societies territory is rarely if ever the cause of war; instead the reasons for hostile action usually include raids for females, personal disputes between individuals, including minor insults, and resource distribution.[1] Earlier, "An Anthropological Analysis of War" by Bronislaw Malinowski had pointed out that aggressive feelings are seldom a component of primitive modes of warfare nor do aggressive feelings usually lead to war. Both biologists and anthropologists have also pointed out that many species and individuals pass through each other's territory without aggressive challenges. Thus, neither territoriality nor "aggressive instincts" should be seen as biological imperatives.

The failure of these popular studies of the territorial imperative, aggression, and man as a "naked ape" have tended to obscure newer, more significant biological findings which seem particularly interesting in light of the Chinese approach to strategic perceptions and deterrence. Indeed, it is difficult to escape the notion that Chinese commentary on national security issues depends heavily on animal metaphors and a fundamentally different conception of international life than is found in the American textbooks of defense policy.

I have selected several themes from Chinese commentary on Soviet strategy and Soviet-American relations, then reviewed the recent scientific literature relevant to these Chinese themes. The results are suggestive: there seems to be some support for certain Chinese premises about national

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[1]Alexander Alland, The Human Imperative, Columbia University Press, New York, N.Y., 1971, p. 129.

security behavior in the recent biological findings. What follows, however, certainly "proves" nothing other than that biological research may be a more fruitful field of national security research than the early oversimplifications about aggression and territoriality had suggested.

We noted earlier that the Chinese view of deterrence includes notions of emotional manipulation to agitate and upset the adversary in sharp contrast to American authors' emphasis on calm, highly rational calculations. As Colin Gray has written:

> The idea that a rational opponent (that is, one who is likely to assess the prospective costs and benefits of his actions) will be deterred from military adventure by prohibitively high losses . . . is the very bedrock of contemporary deterrence theory and practice.[1]

Although the Western concept of deterrence is based on the use of primitive, violent threats to ensure the survival of a nation, it is a strange assumption that rational men must engage in rational decisionmaking in a deep crisis for deterrence to work. The assumption of rationality and the corresponding neglect of emotion seems out of touch in the 20th century, which has seen the development of understanding of "non-rational" human motivation from Sigmund Freud to new studies of the brain. It may be costly to hope that any crisis between the Soviet Union and the United States will necessarily be characterized by high levels of rationality and cool calculation. It is more likely that powerful emotional/psychological forces will be at work. Yet, in Western studies of deterrence, when non-rational factors have been raised at all, one finds only comments like Herman Kahn's recommendation that a nation should have enough retaliatory forces to deter a rational opponent and then add additional forces in order to deter "even the irrational and irresponsible," implicitly and illogically assuming that the logic of rational motivation will work against the irrational as well.[2]

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[1]Colin Gray, "The Urge to Compete: Rationale for Arms Racing," World Politics, January 1974, p. 210.

[2]Herman Kahn, Thinking About the Unthinkable, Avon Books, New York, N.Y., 1964, p. 112.

region will generate certain emotions. In fact, the pituitary gland is an intimate part of the limbic region, and if a portion of it called the amygdala is electrically stimulated in placid, domestic animals, they are aroused to extreme states of fear or frenzy; a house cat will cower in terror in front of a small white mouse. Similarly, malfunctions in human limbic systems can produce rage, fear, or sentiments without apparent cause, as in nervous breakdowns. The question may be posed: How can studies of the neuro-biology of emotions and the limbic system be relevant to improving our understanding of the psychological or emotional aspects of deterrence? Three tentative answers suggest themselves: First, an understanding of the role of emotion could be vital to the process of crisis management. We would like to know enough about the likely emotional responses of the Soviet leadership to possible American actions in a crisis so as to avoid provoking them into emotional states (such as an "irrational" rage) that would result in the inadvertent failure of deterrence. For example, are there certain types of verbal threats, certain challenges to fundamental Russian cultural values, certain figures of speech or even specific military moves that would provoke nonrational responses in the Soviet leadership in ways that Americans are unlikely to anticipate? To answer this question would clearly require more knowledge about Russian "emotional makeup" than one would normally expect to find in a conventional JCS war plan. Has anyone thought through the emotional implications of alternative packages in the SIOP? Of alternative targeting strategies? Of destruction of Soviet command structures? Of encouraging the Chinese to attack the U.S.S.R.? One could hypothetically imagine the range of emotional responses that could run from a numb, shocked indifference to a paralyzing panic to an enraged lashing out to even a lethargic and deep depression.

A second possible role for studies of emotion in deterrence and crisis management could be to support and reinforce the "strategic neo-cortex" by training and preparing for the anticipated emotional responses that the Americans who constitute the National Command Authority may almost certainly be expected to face. A number of approaches may be worth examining here, including interviews to determine the "emotional" aspects of past crises or

preparation of a briefing paper for NCA participants on "Anticipating Emotional Responses During Crisis." Some types of laboratory simulations may also be useful, and could be performed with non-American subjects as well to compare any cultural differences in emotional response to crisis.

Third, studies of the role of emotion in national security policy may provide a kind of vulnerability assessment of American values and our national command structure to emotionally-targeted provocations likely to be faced in deep crises. What are the likely sources of deliberate, nonrational, or emotionally-based "provocations" by the Soviets or other potential adversaries? Can we reduce the element of surprise in these possible provocations? If we take seriously the advice of Sun Tzu cited earlier about the need to "upset" the enemy and "disrupt" him and render him "uncertain," what are the chances that these techniques will actually be used against us in a deep crisis? Can we prepare for them? The prerequisite is clear--more knowledge about the nature of emotions and their role in defense decisionmaking.

It is by no means clear that the state-of-the-art of psychobiology can provide this knowledge at present, but crisis management is not the type of national security problem that is likely to disappear in the near future. In any event, if we wish to avoid inadvertently triggering the kind of emotional response in an adversary that would wreck deterrence, as well as to avoid being emotionally manipulated ourselves, it will pay to keep abreast of findings in psychiatry, psychobiology, and the evolution of the brain in some more systematic fashion. A brief annex to this study describes a number of findings in these fields and in the new field of sociobiology. It offers some suggestions about the possible relevance of such biological research to the area of national security planning.

The potential role of emotions in deterrence theory is only one example of a significant parallel between Chinese views and new findings in biology. A second example may be found in the new field of sociobiology--behavioral observation of animal social life--concerning the phenomenon of social dominance. Just as the psychobiologists direct attention away from the

"rational" aspects of deterrence, so do the sociobiologists present data which--at least by implication--calls into question how "rationally" nations may really perceive the international balance of power.

We know that many defense specialists can make detailed rational calculations of whether the Untied States or the Soviet Union is superior in a particular field of military weapons. Also, "rational" disagreements exist between reasonable men about the weight to be given to different aspects of the overall military balance between the two nations. Yet, leaving aside all these detailed calculations, there is also considerable evidence that the mass public, perhaps including many political leaders, makes up its "mind" on the basis of other "indicators." For example, much of the world seems to have believed that the Soviets were militarily superior to the U.S. between 1957 (Sputnik) and the Cuban Missile Crisis (Soviet dramatic retreat under threat).[1] Could the nature of the psychobiological mechanism at work in humans that determines which nation is superior or "dominant" (or whether there is an equal balance of power) have anything to do with the animal world?

There is certainly some highly suggestive material from the new field of sociobiology from which to infer that both animal communication patterns and the complex of behavior called social dominance systems may be related to human perceptions of the international balance of power, as mediated by the brain. In the first place, there seems to be no example in nature of a balance of power system based on equality of two co-equal leaders. Instead, dominance systems seem to be the rule whenever animals possess social interaction. The degree of dominance of the single leader may vary from what sociobiologists call a tyrant or "despot" to a more tolerant "controlling animal," but the idea of parity between two powers seems to be an invention of the American Strategic neo-cortex. Perhaps not by accident, the Chinese commentary on SALT frequently quotes Chairman Mao that there is no permanent balance and absolute balance in nature, only temporary and

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[1]Herbert Goldhamer, Reality and Belief in Military Affairs: A First Draft, (June 1977), The RAND Corporation, R-2448-NA, February, 1979, p. 1.

relative balance. More specifically, Mao wrote, "They may reach some agreement, but I wouldn't take it as something solid. It is transitory and deceptive too. In essence, rivalry is primary."[1]

If so, what does this mean to the study of how the strategic Soviet-American balance of power is perceived today? One point seems clear: in spite of the rational calculations of specialists in military affairs, other kinds of data may be relevant (and perhaps decisive) in determining perceptions of the military balance. If we assume that the state of a rough balance between Soviet and American power is only a temporary, transitional phase that is not reinforced by "natural" perceptions of a single dominant power, then the following hypothesis may be worth entertaining: at some point in the future, if there is a crisis between the Soviet Union and the United States that is perceived as a "test of strength" between these two dominant-seeking individuals, and further, if the United States "loses" this "test"--however insignificant the real value of the stakes during the crisis may be--then in "minds" of a number of observers, something important, perhaps irreversible, will have happened to the role and status of the United States, even if not a shot is fired, even if all the indicators of Soviet and American military power do not change before and after the "test," even if the United States does not verbally admit what has happened, and even if the Soviet Union does not overtly claim any "victory." Still, in the complex "minds" of the world of perceivers, including many in Moscow and Washington, the Soviet leadership will be seen to be standing a little taller, their heads a little more erect, their gaze a little more relaxed, their self-assurance strengthened, perhaps with better grooming--all in contrast to the American leadership, will will "look" ever so slightly different. Of course, the record will still show that the United States maintains its claim to "essential equivalence" and this will be true in one

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[1]"Chairman Mao's Theory of the Differentiation of the Three Worlds Is A Major Contribution to Marxism-Leninism," Editorial Department of People's Daily, November 1, 1977, issued by Foreign Languages Press, Peking, 1977, p. 66.

idiom of communication, at the neo-cortex level; but at another, perhaps deeper level below rational, abstract thought, Americans will be perceived and will begin to act submissively. To quote directly again from Sociobiology:

> Hierarchies are formed in the course of initial encounters between animals by means of repeated threats and fighting. But after the issue has been settled, each individual gives way to its superiors with a minimum of hostile exchange. The life of the group may eventually become so pacific as to hide the existence of such ranking from the observer--until some minor crisis happens to force a confrontation.

Until now, American defense planning has taken place in rational, calculated terms. If we are to live in a world of "essential equivalence" with Soviet military power, perhaps we should attempt to learn as much as we can about what "essential equivalence" really means at all levels of the "mind." Chinese references in the last three years to the threat of the ambitious Soviet "Polar Bear" and the need to "tame him" and "give tit for tat" may not be mere quaint, cute metaphors from an exotic culture distant from our own, but a real warning in a language much older than ours.

APPENDIX: PSYCHOBIOLOGY, SOCIOBIOLOGY, AND NATIONAL SECURITY STUDIES

This annex briefly highlights recent findings by biologists which have at least suggestive implications for the fundamental premises on which are based several important defense programs. At risk of overstatement, the Chinese views of deterrence and the international world described above call into question some basic premises about the nature of man and, specifically, about the nature of human conflict. New biological research does not prove the Chinese correct, nor does it tend to confirm the premises held by many in the West. On balance, it seems more supportive of Chinese premises than not, however, and it certainly raises doubts about the adequacy of any model of human decisionmaking in conflicts that would rely fully on purely rational thinking. The research reviewed below seems to be most relevant to the following areas of national security studies:

- How do people know which nations are superior to or dominant over others?
- What kind of "displays" do nations use to communicate their intentions about the possible use of force?
- What kind of communication arrangements may be adequate to terminate a major war in which the participants are about to destroy each other?
- Does the human brain somehow operate in ways that make it unwise to base planning on rational calculations in situations of nuclear war? If so, what if anything can be done to plan around these findings about the human brain?

Professional specialists in defense studies may wish to follow the progress of psychobiologists and sociobiologists in the years ahead to see how these and other questions are addressed by these new field of intellectual enquiry.

Before we survey several systems of animal communications and the operation of various dominance hierarchies, including the repertoire of "dominance signs" communicated by those who have achieved hegemony and the access to resources that hegemony brings, we should examine the evidence that links the human brain to these practices of the animal world. The evidence is not conclusive, and we must keep in mind not only how recent this brain research is, but also what impressive leaps have been made in the past two decades in animal observation and behavioral biology. For example, as late as 1950 a total of only 50 man-months of observation of baboons and other primates in the wild had been accumulated; by 1966, the total had reached 1500 man-months and several cross-species comparisons of primates had begun.

Perhaps the most suggestive evidence linking human brains to animal dominance systems has been the series of knife cuts made in the amygdala of the most dominant rhesus monkey in a colony and in the reptilian complex of squirrel monkeys by Paul D. MacClean. In both cases, the monkeys lost their capacity to maintain aggressive displays and the other requirements of dominance. The squirrel monkeys ceased to display aggression when challenged, and the dominant rhesus monkey slid to the bottom of the dominance hierarchy. If it is the reptilian complex which carries the perceptual equipment required to "see" the world in terms of the dominance systems and to recognize and to generate the signs of "dominance seeking" and "submission acceptance," then it is only a little step to take to acknowledge that the working remnants of the age-old reptilian complex, which has been shown to operate in the human brain, may have some degree, perhaps an important degree, of influence on human perceptions of dominance and submission and the types of communication "displays" that symbolize these arrangements from an earlier stage of human evolution.

What exactly is the "reptilian complex" of the human brain? This name has been used by biologists to suggest that the biochemistry and even the known functions of a small part of the human brain and all mammals' brains closely resemble the whole brain of reptiles which have almost no limbic system or neo-cortex. In other words, the reptilian complex is assumed to

originate millions of years ago, before the evolution of mammals with their limbic systems, not to speak of the enlarged neo-cortex of monkeys and men.

The importance of the reptilian complex to national security studies has been made evident by a series of experiments by Paul D. MacClean which seem to demonstrate that many processes once thought to be located in the neo-cortex are in fact related only to the much older reptilian complex. MacClean has shown that aggressive behavior, territoriality, the daily pattern of repetitive or ritual activities of animals, and the establishment of social dominance hierarchies are all related to the reptilian complex. When surgery is performed on this region, these functions can be eliminated from animal behavior without affecting other types of behavior.

The relevance of these findings for humans is not to suggest that we are completely controlled by reptilian urges to establish dominance hierarchies through aggressive displays. The human brain is composed of 85 percent neo-cortex, presumably quite capable of overriding any such reptilian drives. It does seem to be true, however, that both the limbic system and the reptilian complex play some role in human behavior, which had been thought to be purely under "rational" control. Some cases of brain tumors and "psychosurgery" have suggested that violent aggression may be sharply reduced by changes in these two areas.[1]

One implication of the structure and function of the reptilian complex (and limbic system) of the human brain may be to highlight how recent research on animal behavior may be related to the process of human perceptions of conflict.

Brain research is, however, in an early phase and can yield only tentative ideas at present. For example, the techniques of making knife cuts and electrically stimulating the brains of unanesthetized animals began a century ago, but were limited to superficial structure that typically did not produce influence-motivated behaviors in any way. By 1940, new techniques permitted stimulation of deeper structures, and by the mid-1950s the

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[1]Vernon Mark and Frank Ervin, Violence and the Brain, Harper and Row, New York, N.Y., 1970.

"dual mechanism model" focused on the hypothalamus as the source of motivation. Only after 1970 was the primacy of the hypothalamus challenged. One formulation in 1967 hypothesized a "cognitive brain," largely in the neocortex, and an "emotive or motivational" brain.[1] The tripartite concepts of Paul D. MacClean, discussed above, date only from 1973 and are not mentioned in some texts published in 1977-1978.

The findings suggested by the last few years of brain research would permit a hypothesis as follows: the human brain clearly operates with the neo-cortex, the limbic system, and the reptilian complex in some combination, as yet undetermined. The human brain is therefore able--not necessarily, but possibly--to regress to its earlier mammal-like or reptile-like modes of operation. (There is some evidence that suggests this may happen at least in human dreams if not at all times.) If so, then many patterns of animal communications and animal behavior located in brain areas that humans also possess may, under certain conditions, be reflected in human communication and human behavior. In other words, if by coincidence, any human behavior closely resembles animal behavior, the new brain research may show how the two behaviors are generated by related neurobiological process.

What are some of the areas of national security relevant to biology? Clearly, conflict studies focus on the phenomenon of rivalry and dominance among nations. Two recent books on how wars begin suggest that nations frequently possess differing estimates of each others' military capabilities and that wars often begin in an effort to establish where a nation really fits in a hierarchy of power with its neighbors.

Rivalry is primary in systems of animal dominance, too. These hierarchies are formed in the course of initial encounters by means of threats and ritual fighting until the issue is settled. Then, each individual yields to his superiors with a minimum of hostile exchange, and the actual rank order in the hierarchy may be invisible to a human observer until a

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[1]J. Konorski, Integrative Activity of the Brain, University of Chicago Press, 1967.

crisis over access to resources (a food squabble) forces a confrontation. In a few species, such as the wolf and the rhesus monkey, the identity of the leading male is revealed clearly by his posture, body movements, and measured scrutiny of others in his view.[1] In some species, such as bumblebees, harsh punishment may be used; but in others, such as chickens, mere pecking may maintain the pecking order.

A rich variety of signs exists in some species to denote status, indicating to other animals "the past history of the displaying individual and its expectation of the outcome of any future confrontations."[2] Some baboon males allow dominant males to ritually mount them in a receptive female posture to show their submission. More than signs are at stake: in the paper wasp species, dominant females demand the greatest share of the available food, but when a female slips in rank, her ovaries also decrease in size. In animal species such as labrid fish, in which individuals can change sex in response to social status, the male suppresses the tendency of the females to change sex by aggressively dominating them, but when he dies, the dominant female in the group immediately changes sex and becomes the new harem master.[3] In other words, status is not achieved or displayed for its own sake. Many examples suggest that the dominant animal receives specific benefits relative to the animals who accept and display their subordinate status.

The main advantage of being dominant seems to be to displace the subordinates from food, from mates, and from nest sites. For example, the farm expression "get the hind teat" is quite accurate. During the first hour of their lives, piglets compete for teat positions that are maintained until weaning. The three most forward teats in one study provided their piglets about 80 percent more milk than the rear-most or "hind" teats,

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[1]Stuart A. Altmann, Editor, Social Communication Among Primates, University of Chicago Press, 1967.

[2]Edward O. Wilson, Sociobiology: The New Synthesis, Harvard University Press, 1975, p. 281.

[3]D. R. Robertson, "Social Control of Sex Reversal in a Coral-Reef," Science Vol. 177, pp. 1007-1009.

which results in heavier weight by weaning. Cats too have teat dominance struggles. The main benefit of being subordinate, on the other hand, seems to be the chance to wait until next year, in some cases literally. European black grouse observe a seniority system on their display grounds, and similar seniority ranking devices exist in some wasp and monkey species. In general, however, the subordinates suffer whatever the fate of those with less resources may be in a harsh environment. In the meantime, the dominant animal not only enhances his survival and that of his offspring, he also leads a less stress-filled existence.[1]

The benefits of subordination may be little more than escape from further punishment in status quarrels, of course, but animals seen to "know" when to yield by giving "appeasement" signals to terminate a struggle for status. Although it is not true--as Konrad Lorenz prematurely asserted in On Aggression--that these struggles within species never result in death, there are many examples of status conflicts quickly terminated after a "decision" has been reached by mutual "perception." (See figures of rattlesnakes, cichlid fish, iguanas, oryx antelope, and Norway rats.)

The contrast is sharp between these animal "communication arrangements" and American preparations for nuclear deterrence in which there are apparently no provisions for "war termination" signals, let alone any agreed, perceived threshold at which "dominance" will be established by one side or the other. Animals do sometimes kill each other in these conflicts, but not for lack of intra-war communication arrangements.[2] Indeed, it may be that in some species, superior communication arrangements themselves help to establish dominance over other species. Workers of two ant species fighting at a food site have been observed to "settle the issue" when the species that first recovers from its disorganization after dispersal relocates the odor trail, reassembles its workers, and thereby gains control

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[1]Edward O. Wilson, op. cit., pp. 287-291.

[2]George Schaller, The Serengeti Lion: A Study of Predator-Prey Relations, University of Chicago Press, 1972.

of the feeding site.[1] Ants communicate in several ways, including chemical transfers, but it is not yet known how one ant species carries out a more rapid post-attack recovery than another.

[1]Edward O. Wilson, "Competitive and Aggressive Behavior," in J. F. Eisenberg and W. Dillon, Man and Beast: Comparative Social Behavior, Smithsonian Institution Press, 1971; B. S. Tremper, "Distribution of the Argentine Ant in Relation to Certain Native Ants of California," Doctoral Dissertation, University of California, Berkeley, 1976.

REFERENCE SOURCE FOR ANIMAL FIGURES

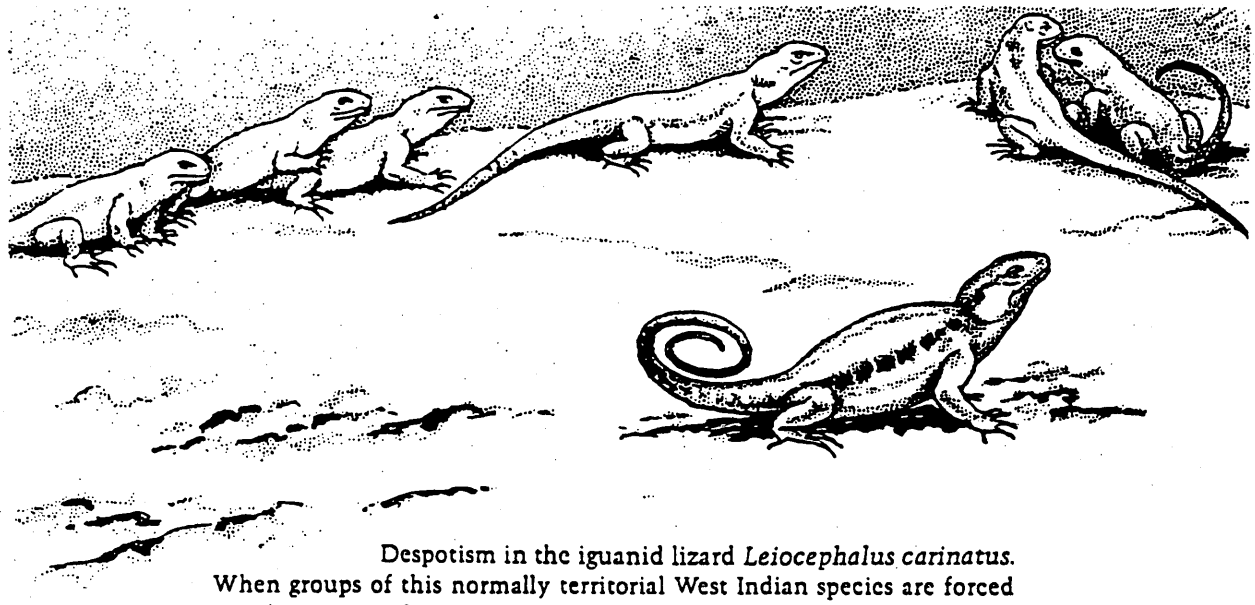
Figure 1. Domination Among Lizards
Source: Edward O. Wilson, Sociobiology: The New Synthesis, Harvard Univ. Press, Cambridge, Mass., 1975, p. 297.

Figure 2. Postures of Dominance
Source: Ibid., p. 191.

Figure 3. Loss of Dominance
Source: Gordon J. Mogenson, The Neurobiology of Behavior, John Wiley & Sons, New York, N.Y., 1977, p. 253.

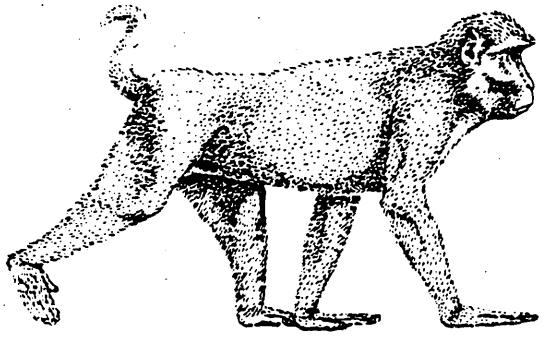
Figure 4. Threat Communication
Source: Edward O. Wilson, "Animal Communication," Scientific American, September, 1972.

Figures 5, 6 and 7 Fighting for Dominance: Submission Displays Enable the Loser to Terminate Conflict and Survive
Source: Irenaus Eibl-Eibesfeldt, "The Fighting Behavior of Animals," Scientific American, December 1961.

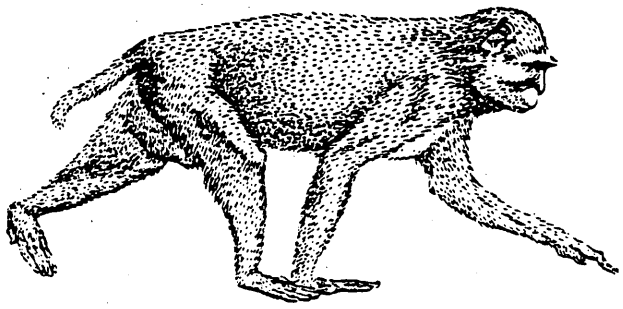


Despotism in the iguanid lizard *Leiocephalus carinatus*. When groups of this normally territorial West Indian species are forced together, one individual (*foreground*) dominates all of the others by tail curling and other threat signals, as well as by fighting. (From L. T. Evans, 1953.)

FIGURE 1. DOMINATION AMONG LIZARDS



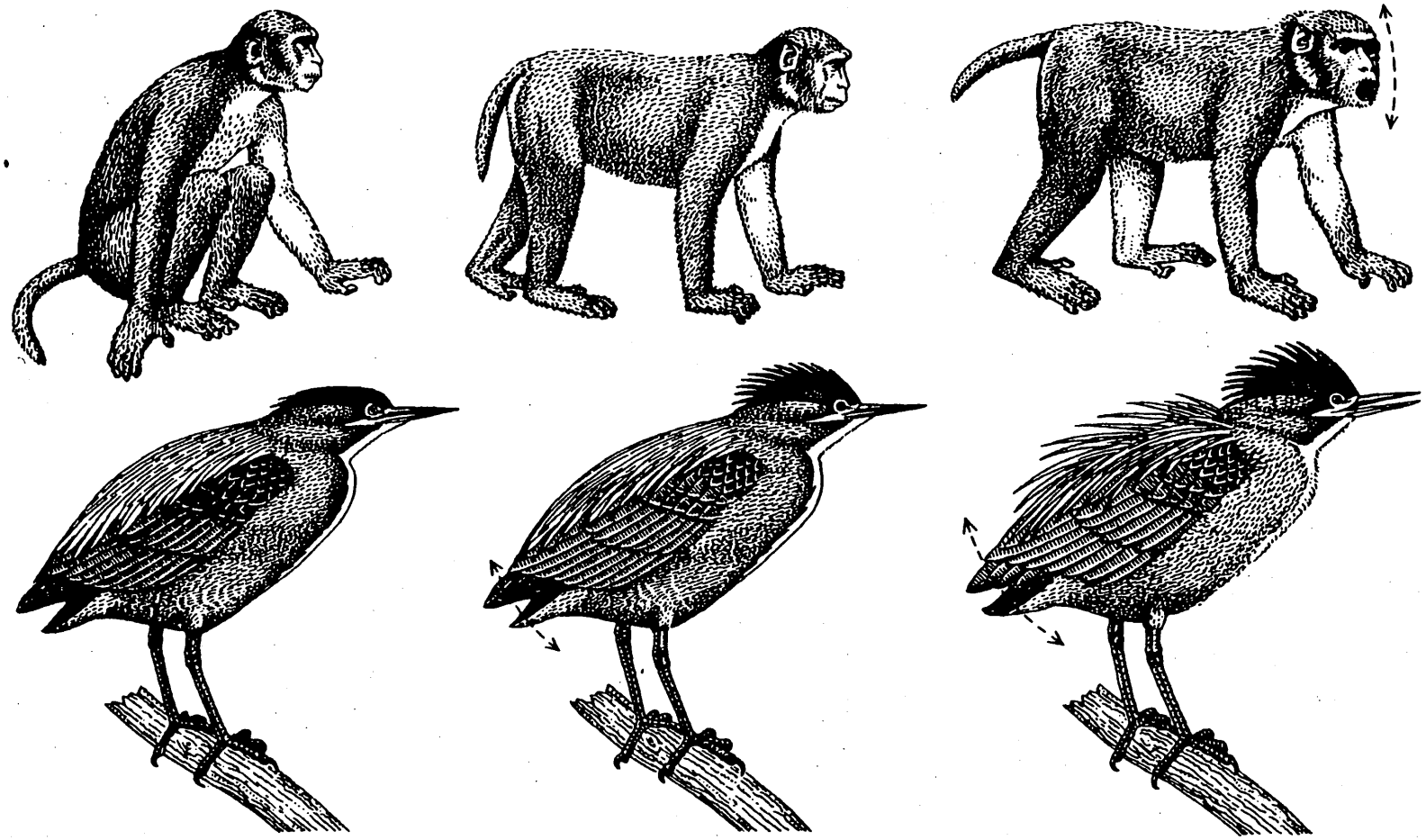
WALK OF DOMINANT MALE



WALK OF LOW-RANKING MALE

Metacommunication in rhesus monkeys includes status signals. The postures and movements of individuals indicate the rank they occupy in the dominance order. (From Wilson et al., 1973; based on S. A. Altmann.)

FIGURE 2. POSTURES OF DOMINANCE



AGGRESSIVE DISPLAYS by a rhesus monkey (*top*) and a green heron (*bottom*) illustrate a major principle of animal communication: the greater the magnitude to be communicated, the more prolonged and intense the signal is. In the rhesus what begins as a display of low intensity, a hard stare (*left*), is gradually escalated as the monkey rises to a standing position (*middle*) and then, with an open mouth, bobs its head up and down (*right*) and slaps the ground with its hands. If the opponent has not retreated by now, the monkey may actually attack. A similarly graduated aggressive display is characteristic of the green heron. At first (*middle*) the heron raises the feathers that form its crest and twitches the feathers of its tail. If the opponent does not retreat, the heron opens its beak, erects its crest fully, ruffles all its plumage to give the illusion of increased size and violently twitches its tail (*right*). Thus in both animals the likelier the attack, the more intense the aggressive display. Andrew J. Meyerriecks of the University of South Florida conducted the study of heron display and Stuart A. Altmann of the University of Chicago conducted the rhesus display study.

FIGURE 4. THREAT COMMUNICATION

REFERENCE SOURCE FOR ANIMAL FIGURES

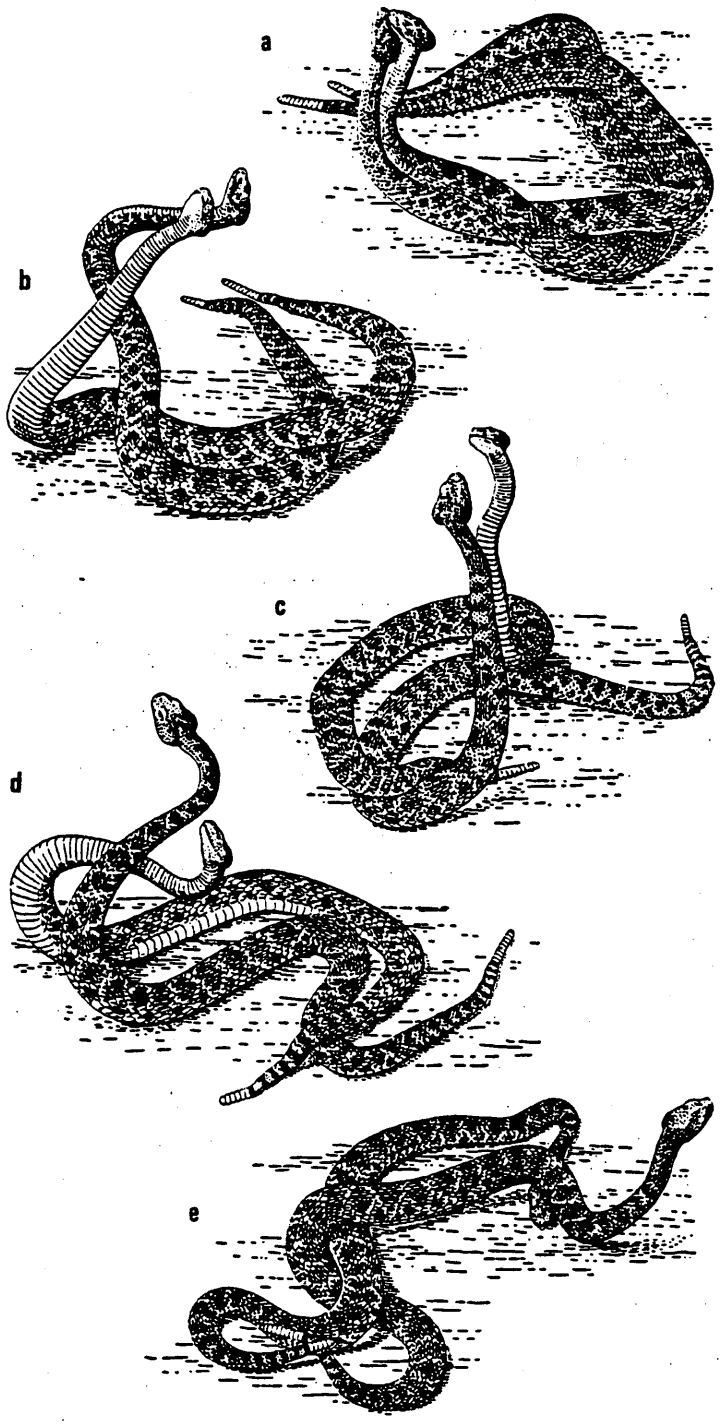
Figure 1. Domination Among Lizards
Source: Edward O. Wilson, Sociobiology: The New Synthesis, Harvard Univ. Press, Cambridge, Mass., 1975, p. 297.

Figure 2. Postures of Dominance
Source: Ibid., p. 191.

Figure 3. Loss of Dominance
Source: Gordon J. Mogenson, The Neurobiology of Behavior, John Wiley & Sons, New York, N.Y., 1977, p. 253.

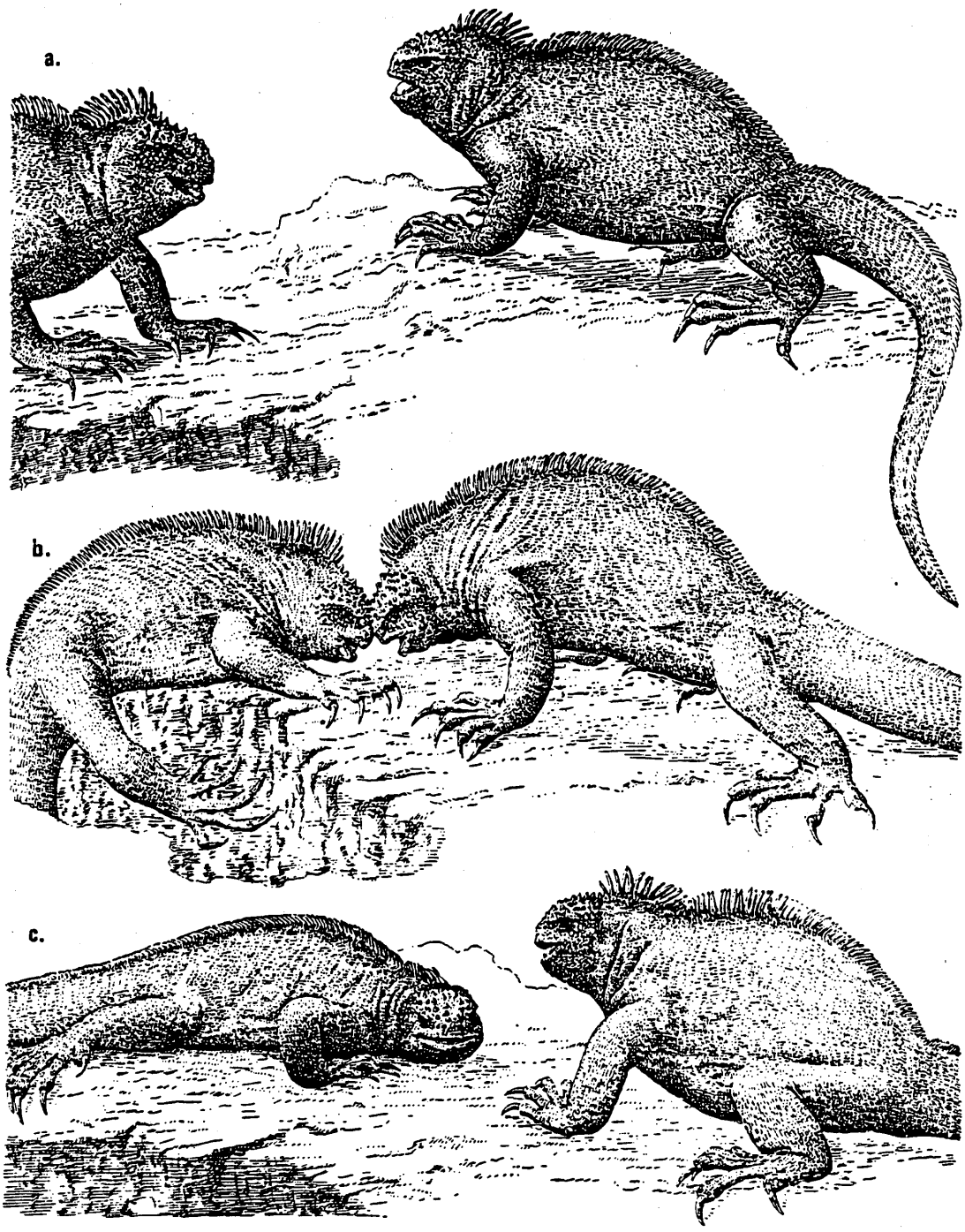
Figure 4. Threat Communication
Source: Edward O. Wilson, "Animal Communication," Scientific American, September, 1972.

Figures 5, 6 and 7 Fighting for Dominance: Submission Displays Enable the Loser to Terminate Conflict and Survive
Source: Irenaus Eibl-Eibesfeldt, "The Fighting Behavior of Animals," Scientific American, December 1961.



RATTLESNAKES (*Crotalus ruber*) perform the combat dance shown in these drawings based on a study by Charles E. Shaw of the San Diego Zoo. The rivals move together (*a*) and then "Indian wrestle" head to head (*b*). Sometimes they face each other, weaving and rubbing their ventral scales (*c*). Finally one lashes out and throws (*d*) and pins (*e*) the other.

FIGURE 5. FIGHTING FOR DOMINANCE: SUBMISSION DISPLAYS ENABLE THE LOSER TO TERMINATE CONFLICT AND SURVIVE



MALE MARINE IGUANA (*Amblyrhynchus cristatus*) of the Galápagos Islands defends his territory against intruding males. As the rival approaches (*a*), the territory owner struts and nods his head. Then the defender lunges at the intruder and they clash head on (*b*), each seeking to push the other back. When one iguana (*left at "c"*) realizes he cannot win, he drops to his belly in submission.

FIGURE 7. FIGHTING FOR DOMINANCE: SUBMISSION DISPLAYS ENABLE THE LOSER TO TERMINATE CONFLICT AND SURVIVE

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Comparison of Chinese, Soviet and American approaches to nuclear deterrence suggests Chinese have unique perceptions of which factors are significant in assessing the military balance of power.

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